

# **Understanding Views on Sentience and Conservation: A Study of Emotional Experiences with Wildlife**

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## **Authors' Contributions**

AR, AL, KR, ND, and LJ designed the project and co-wrote the manuscript.

## **Running Title**

Views on Sentience and Conservation

## **Keywords**

Sentience; conservation; biodiversity; wildlife; coexistence

## **Word Count**

9328

## **Article Impact Statement**

This paper identifies and measures “human perceptions of animal sentience,” instilling an emotional approach to reflections on wildlife interactions, conservation, and biodiversity.

## **Acknowledgements**

The researchers would like to thank Professor Jennifer Schauer, the Environmental Studies program, Professor Tara Pisani Gareau, our fellow Senior Research Seminar classmates, and our participants for their contributions to our study.

## Introduction

The relationship between humans and non-human animals has evolved throughout history and varies between cultures, communities, and individuals. Specifically, how people view and value non-human sentience has been a topic of research among scholars. Jane Goodall was one of the first experts to dismantle the popular concept of the dichotomy between humans and animals by proving that tool-use, culture, and emotional connection are not unique to humans. She suggested that those who have spent considerable time with animals recognize that our non-human companions and wildlife possess sentience. She articulated that, “once you are prepared to admit that animals are sentient and cannot only know emotions like happiness, sadness, fear, but especially they can feel pain — then, as humans with advanced reasoning powers, we have a responsibility to treat them in more humane ways than we so often do” (Jane Goodall Institute, 2019). Because humans play a large role in non-human animal conservation, the extent to which humans understand and experience sentience among non-human beings may impact the future of conservation and the future of human-wildlife interactions and coexistence. In recent years, experts have called for the dismantling of traditional binaries between humans and non-human animals. Özdemir suggests we break the binary between humans and non-human animals and between humans and nature with governance frameworks like “One Nature.” Such a paradigm calls for humans to move beyond anthropocentric ways of thinking and operating within the global ecosystem. This begins with recognizing animal sentience (Özdemir, 2020, p. 645). This topic becomes increasingly important as humans encroach on natural habitats, increasing the interactions between humans and wildlife and the risk of continued loss of biodiversity.

## **Problem**

As humans continue to encroach upon natural habitats, the planet is experiencing an unprecedented loss of biodiversity and need for conservation. Biodiversity represents a crucial “life-supporting safety net” that is being stretched dangerously thin (Diaz, 2019). A 2019 UN report argued that biodiversity loss is as equal a threat to human existence as climate change, and that one million species are currently facing risk of extinction (Diaz, 2019). We must act to protect our biodiversity, and we recognize that conservation is of the utmost importance for this end. The first step in solving any problem of this scale is to understand its foundation, and the foundation of wildlife conservation is the relationship between wildlife and humans, which is determined by interactions. While existing research explores the relationship between sentience, attitudes, demographic factors and wildlife management, it has not explored the connection between how human understanding of animal sentience influences behavior and treatment of wildlife (Cornish et al., 2018; Dolby, 2020; Larson et al., 2016; Manfredi, 2020; Wallach, 2018). Understanding this connection will be essential to improving conservation practices.

## **Purpose**

Through this study, we aim to develop a deeper understanding of how people feel, relate to, and think about nonhuman sentience and emotions. We also aim to discover how humans are impacted by their emotional experiences with wildlife. Delving into human emotional experiences with wildlife will provide insight into how these interactions can impact treatment of animals, attitudes, and action for conservation. Ideally, meaningful human engagement with animal sentience could motivate humans to change their behavior towards wildlife and improve conservation to protect precious biodiversity. It is crucial for humans to connect to non-human

sentient beings in order to recognize our common place on Earth. Within this community setting, we want to foster meaningful reflections about human-animal interactions that will influence participants' own lives. In our call for written narratives, we are hoping to have an immediate effect on both the researchers and the participants. Building off of Richardson's ideas, the researchers believe that the writing process will initiate discovery for the participants, inspire connection between human participants and sentient life, as well as produce meaning and create new awareness of reality in the process (Richardson, 2001). The researchers acknowledge that writing cannot be untainted from the life experiences of those who conduct the research. We embrace such a frame here and position the narratives of us, as the authors, and our participants as a creation of our social realities and a reimagining of those truths (Richardson, 2001). Writing connects us to ourselves and to community (Richardson, 2001, p. 137), and this we hope is part of our story. We hope to create a community where participants can learn and gain emotionally from each other, and that can potentially expand beyond our research. Similarly, we, as the researchers, will have an active presence in the Facebook group to ensure the researcher-participant relationship is less one-sided, and more community based, which will create trust and familiarity, and encourage continued participation and engagement among participants (Contreras, 2019). Asking participants to explore their relationships and interactions with animals will give us insight into how people view animal treatment and conservation, and the emotional motivations behind such views.

### **Personal Narratives**

It can be assumed that all authors behind a research publication are of the same opinion regarding the topic discussed in the literature. While that can be the case, we feel it is important

to acknowledge and share the personal perspectives of all researchers involved, herein. Each author brings unique experiences, education, and emotion to the table. Sharing these perspectives creates a more open and personal connection between the researchers and the readers. In their work, Treves and colleagues include a section where they acknowledge and share their varying opinions and viewpoints on the topic of preservation. The authors share that, while they all are passionate about the subject and are contributing intellectual content to the article, they are not all perfectly aligned in their views of non-human animal rights (Treves et al., 2019). Similarly, we hold varying opinions and beliefs on the topic of non-human animal sentience and conservation. Thus, Treves and colleagues have inspired this section, which we have chosen to dedicate to the personal narratives of the researchers.

Jeffery believes that deconstructing the deeply-rooted, hierarchical relationship between humans and non-human animals is essential. Eliminating these preconceived notions of human superiority and leaning into the sentient nature of all beings will allow all species to coexist on Earth in a compassionate manner and reduce the severe habitat disruption and subsequent biodiversity loss we currently face.

Douglas argues that sentience is the strongest connection shared between humans and non-human animals; thus, it is the duty of humans to recognize that shared sentience is in direct conflict with anthropocentrism, which has driven the destruction of natural habitats. While concepts of sentience may be too abstract and foreign for some individuals to openly embrace, Reilly agrees with Douglas that attitudes towards human-animal relations must be reconsidered by the common population for real conservation to occur. Reilly feels that anthropocentrism is so deeply ingrained in today's societies that individuals may need time to acclimate to the shifting

paradigm, or else they may reject these ideas outright. Thus, Reilly feels that the best approach is to ease people into these discussions, especially if they are unfamiliar with the topics.

Lynch is compelled to deconstruct dominant species categories and work against the human exceptionalist framework. Inspired by the work of Kirksey and Helmreich (2010), Lynch hopes to bring in perspectives of equality, replacing the language of nonhuman species with multispecies understanding. Additionally, it is imperative to advance our Western public understanding of animal sentience beyond utilitarian valuation of species, and towards an understanding of multispecies as good to live with, and among (Kirksey and Helmreich, 2010).

Richards believes that the binaries that exist separating nonhuman animals from humans are harmful for all species. It is in all species best interest that such binaries and hierarchies are dismantled because all lives have inherent value. Richards hopes that engaging in critical and enriching conversations about animal sentience is an important step in breaking down these traditional barriers.

### **Trends in Existing Literature**

The existing body of research explores the role of values, attitudes, and direct interactions on the relationship between human and nonhuman creatures, citizen monitoring, and conservation practices. There are a variety of trends especially salient to future research on the role of sentience in motivations for better treatment of wildlife. Numerous studies highlight the importance of compassion in human attitudes towards wildlife, reporting emotional variables as the strongest predictor of wildlife management of house sparrows; and, that human empathy toward animals and stronger feelings about sentience may lead to better treatment of animals (Larson et al., 2016; Cornish et al., 2018). Empathetic treatment of animals extends to

conservation, as researchers reported that compassion strengthens approaches to conservation (Wallach et al., 2018). In her work, Dolby examines the changing nature of her students' nature with empathy through her curriculum focused on empathy towards non-human animals and had her students journal about their experiences with the material and their feelings about animal sentience. As the students were exposed to more information about humans' historic treatment of animals, they began to feel more compassion and empathy towards them (Dolby, 2020). Relevant studies suggest that human-nonhuman interaction is a strong motivating factor in empathetic actions. Citizen monitoring plays a large role in developing a human-wildlife relationship, and existing groups can provide important data analysis (Scott et al. 2020; Larson et al., 2016). In Larson and colleagues' examination of citizen wildlife stewardship, their analysis of experiential factors supports the belief that experiences with wildlife strengthen affective and emotional responses to wildlife stimuli (Larson et al., 2016). Through a survey of citizen scientists, Larson and colleagues were able to determine that citizens' personal experiences with wildlife influence whether they pursue lethal or nonlethal management of invasive house sparrows (Larson et al., 2016). The changing nature of human-wildlife interaction, via decreasing prevalence of hunting and fishing, can also serve as evidence of increasing mutualism between species, as found by Manfredo and colleagues (Manfredo et al., 2020).

### **Similarities and Differences**

Several of the sources we examined had similarities with our vision for our study design. Dolby's work focuses on how environmental education can incorporate empathy towards non-human animals through expanding research and knowledge about non-human animal sentience, emotion and cognition. In this case study of students at Purdue University, participants observed the lives and behaviors of companion animals, then wrote from that animal's

perspective (Dolby, 2020). Dolby's emphasis on empathy in her study and her use of college students as participants are two things we'd like to mirror in our study. Wallach and colleagues argue for the implementation of compassionate conservation, a form of conservation in which all non-human animal subjects are treated as sentient beings and are seen for their intrinsic value (Wallach et al., 2018). The authors studied various cases of animal conservation and critique the ways they ignore animal sentience and act with an anthropocentric set of goals (Wallach et al., 2018). While we will not be analyzing current conservation efforts, we will be investigating the relationship between views on non-human animal sentience as it relates to attitudes towards conservation. Manfredi and colleagues, through their analysis of sociocultural values on wildlife conservation, define value systems through material culture, stories, value systems and more (2020). This study assesses the impact of values towards non-human animals on wildlife conservation belief. Our study will seek to similarly assess how views on wildlife sentience impact perceptions of wildlife conservation through stories, photos, and other such mediums. In our data collection period we aim to foster a warm and accepting environment for the participants in our discussion group where they will be invited to truly explore their thoughts and feelings about animal sentience. Similarly to Dolby, we will encourage participants to put themselves in the other being's place and try to interpret and receive their energy and emotions. We will prompt the study participants to thoughtfully reflect upon their interactions with nonhuman wildlife animals. We want to call attention to the unique energetic bond that is shared between two sentient beings. We will encourage our participants to bring an ever present awareness of consciousness that all living creatures possess. We hope that this heightened awareness can lead to more meaningful discussion, reflection, and continued mutually beneficial



interactions between our study participants and any nonhuman wildlife animals they may encounter.

There are several key differences between our study and the literature we examined, particularly in the methods and the specific emphases and purposes of the various studies. Cornish and colleagues included survey questions that specifically focused on attitudes towards domestic animals, including dogs, cats, cows, and pigs (2018). Similarly, Dolby's work focused specifically on domesticated, companion animals (2020). In our study, we will focus more on human interaction with wildlife in their natural habitats than on interactions with and attitudes and behaviors towards companion animals. Domesticated animals have inherently closer relationships with humans than wildlife, therefore our study is concerned with human-wildlife relationships as wild animals are directly threatened by biodiversity loss and conservation. A significant amount of literature on animal sentience focuses on human perception of animal sentience in domesticated animals, as is seen in the aforementioned studies. It is important to note this trend as it reveals a gap in the literature pertaining to animal sentience in wildlife as opposed to domesticated animals. Our research seeks to shed light on this trend and delve into the less studied topic of human perceptions of wildlife sentience. Further, Manfredi and colleagues, while providing important historical context on changing views and values regarding wildlife conservation and the determinants of these values, included a sample size of approximately 43,000 participants across the U.S. (2020). Our sample size is much smaller and interpersonal to provide in-depth understanding of this topic within our community, rather than on a national scale. Our participants will also be chosen based on our own connections, which differs from several of the other studies. Larson and colleagues recruited participants from pre-existing citizen science groups (2016). Similarly, Cornish and colleagues selected

participants through convenience sampling, as the researchers surveyed attendees to an animal welfare symposium (2018). In both studies, participants had already demonstrated a significant interest in animals and animal wellbeing, which impacted results (Larson et al., 2016; Cornish et al., 2018). Our study will be from a more mixed background of people with various interests, not just limited to people who already show special interest in animals.

### **Areas for Further Study**

While the literature on wildlife covers both a range of subtopics and considerable depth in specific areas, significant gaps persist. Specifically, there is much to be studied on the perception of animal sentience by human beings, how this impacts human-animal relationships, and what effects this has on conservation efforts and awareness. Larson and colleagues' analysis of experiential factors supports the belief that experiences with wildlife strengthen affective and emotional responses to wildlife stimuli (Larson, et al. 2016). This study opens up an area for research on the role of understanding and appreciation of sentience for the formation of emotional dispositions and attitudes toward wildlife. The work of Cornish and colleagues similarly creates the potential for further research on what exactly motivates people to connect to animal sentience (2018). While the researchers examine demographic factors that influence attitudes, such as age, gender, and occupation, there may be a number of other unexplored factors influencing attitudes towards animals, and this leaves a large gap in the research. Further, while the researchers note that the attitudes towards animals that they are studying can influence how animals are treated, they do not actually study this connection, thus leaving another important gap to be filled (Cornish et al., 2018). We also want to encourage our study participants to adopt a more emotional and personal approach to their interactions with animals, something that hasn't

previously been attempted in other research. We will prompt the study participants to thoughtfully reflect upon their interactions with nonhuman wildlife animals. We want to call attention to the unique energetic bond that is shared between two sentient beings. We will encourage our participants to bring an ever present awareness of consciousness that all living creatures possess. We hope that this heightened awareness can lead to more meaningful discussion, reflection, and continued mutually beneficial interactions between our study participants and any nonhuman wildlife animals they may encounter.

### **Research Question**

What motivates participants to connect to animal sentience, and how could this motivation lead to better treatment of wildlife? We hope to add to existing literature by filling the gaps concerning the emotional impact of wildlife interaction and actionable effects this has on human beings towards conservation and wildlife habitat protection. Ideally, we will identify patterns and trends in wildlife interactions that demonstrate effective ways to encourage conservation efforts and empathetic action on behalf of animals.

### **Methods**

#### ***Participants***

Participants include the members of the research group and individuals recruited by the group. Participants, all over the age of 18, were recruited through a non-random convenience sample using the personal networks of the research group members. We recognize that this sample is not the strongest for a typical research study, but believe that its unique makeup of mostly Boston College students actually strengthens our sample, the responses we receive, and

our participants' overall experience with the study. Boston College students are unique in their ability to reflect, communicate, and empathize with others. All Boston College students are required to complete the Core Curriculum which fosters critical thinking skills and the ability to compassionately communicate ideas. Moreover, the Jesuit values promulgated throughout Boston College place a strong emphasis on service to others and working to make the world a better and more just place. With these values instilled into every Boston College student, we feel confident that participants in our study will have a great ability to tap into their emotions and the deeper motivations behind their thoughts and actions. While participants may be unfamiliar with concepts of sentience, biodiversity, and conservation, we feel confident that their skillset and values will allow them to embrace these concepts readily. Thus, we hope that these qualities, found in most students, strengthen our study and cultivate deep and meaningful conversations and connections between our study participants.

### ***Instrument***

Our platform for data collection is a group discussion board hosted by Facebook. Participants were encouraged to post stories of interactions with wildlife accompanied by pictures and videos of the interactions. We suggested that participants include information about how close they were to the animal(s), what kind of animal(s) they interacted with, and how they felt during the interaction. Participants were prompted to reflect upon their emotional connections to animals, their perceptions of animal sentience, and their perception of the emotions of the animal(s) involved in the interaction. Similar to the Dolby study, we encourage participants to empathize with animals to the point where they are visualizing what it would be like to experience the world from that animal's perspective (Dolby, 2020). We want them to question not only what it was like for them to experience the animal's presence but also what it

was like for the animal to experience their presence. Furthermore, we will not impose date restrictions on the experience that participants choose to share. Participants are encouraged to reflect on a meaningful interaction from any point in their lives, so long as it evokes sentience.

### ***Consent Procedures***

When participants agreed to participate in the study, they were individually sent the consent language via Facebook Messenger and instructed to read it. Upon requesting to enter the group, they were instructed to sign their name in a box confirming that they reviewed and agreed to the consent language. Signing their name in this box granted access to the group. Every participant is required to do this. If a participant did not agree to these terms, they would not be able to join the group. The consent message can be found in Appendix A.

### ***Confidentiality***

Information shared within the Facebook group will not be entirely confidential as members in the group will have access to other participants' submissions. Participants were made aware of this upon entering the group via the consent notice and agreed to these terms before publishing information to the group. Data collected from the Facebook group was not shared to other social media platforms and was strictly be used for data analysis purposes.

### ***Sample***

We used a non-random convenience sample of adults. The study was open for anyone above the age of eighteen to access and participate. A large majority is expected to be within the Boston College undergraduate student community, by nature of being a convenience sample. We plan to use personal connections in spreading knowledge of the study to connected individuals and, employing the characteristics of a snowball sample, we intend to encourage participants to promote the study to others.

### ***Data Collection Methods***

Participants were invited via text, email, word-of-mouth, and social media to post their wildlife interactions to the Facebook group. Participants were asked to share narratives, photos, videos, or audio files and prompted to reflect on the emotional experiences of their wildlife interactions. A common barrier for citizen science research is sustained engagement and commitment of participants (Paleco et al., 2021). We aim to address this challenge by offering multiple project entry points as well as multiple ways to participate at different levels of commitment in the Facebook group (Paleco et al., 2021). Examples of participation beyond posting include interacting with other posts through likes and comments, watching live stream videos hosted by the researchers, and referring other participants to the group. Data collection began on October 14, 2020 and concluded on April 14, 2021.

### ***Data Analysis***

An essential part of our data analysis method is co-creation, which allows our study to build a rich narrative between the participants and the researchers (Bönish-Brednich, 2018). Bönish-Brednich emphasizes that unconventional methods of narrative ethnography are in tension with the need for ethnographic research to be taken seriously as a social science (Bönish-Brednich, p. 9, 2018). While yet, a narrative best captures the emotions expressed by participants regarding their wildlife interactions, and is most true to the nature of sentience. Furthermore, our methods follow an intuitive analysis approach as opposed to analytical coding of the data. Bönish-Brednich affirms that while “it is tempting to turn stories into data and devalue the act of deep listening and narrative contemplation,” the process of ordering stories into narratives is best guided by a qualitative approach that does not lose the emotions in the

participant's stories by dissecting them (Bönish-Brednich, p. 10, 2018). Our analysis emphasizes intuitive wisdoms while employing research convention when appropriate.

The data was assessed using a series of qualitative questions that consider the emotions and sentience behind the submitted photographs, videos, and audio recordings. Questions that guide our data analysis include: what type of wild animal is shown? What is the context of the photo? What does the composition of the photograph say about the relationship between the person and the animal? What captions and stories are included? What emotions do the participants convey and what is their perceived emotion of the animal? Is this their only experience or are they frequently in contact with wildlife? Finally, we examined common themes and words that show up in the posts. If we notice any other kinds of trends that we didn't anticipate, we are open to changing our method of data analysis.

### **Research Intentions**

As researchers, it is important to us to consider what sentience means in the context of our study and as Environmental Studies scholars. In our reflections on sentience, we came up with our own interpretations of this phenomenon. Sentience is the understanding that animals have souls, and feeling that connection between us. Furthermore, it is being open to receiving the emotions of other beings. Sentience allows space to connect and feel the energy of another being, and recognize that all beings are connected by our lived experience on earth. Finally, sentience means encouraging people to be reflective and open about the emotions and individuality of other animals, which can spur interest in conservation and environmental protection. As researchers, this study has opened our eyes to non-human animal sentience in our own interactions with wildlife, and our goal is for participants to engage in similar reflection.

It is crucial for humans to connect to non-human sentient beings in order to recognize our common place on Earth. Understanding human relationships with other sentient beings can allow us to discover how we can better share our planet and protect precious species. These relationships, built on sentient interactions, are key to the empathetic treatment of wildlife and survival of biodiversity on our planet. Our research intends to instill an emotional approach to considerations of interspecies interactions and caretaking of our natural world. In conducting this research, we hope to produce meaningful outcomes that benefit the participants, the researchers, and wildlife. Through this study, we aim to gain a better understanding of the ways human feelings about animal sentience and emotion can impact the treatment of wild animals and perspectives on conservation. We also want to foster meaningful reflections about the emotional experiences in human-animal interactions in a community setting. Asking participants to explore their relationships and interactions with animals will give us insight into how people view wildlife treatment and conservation, and the emotional motivations behind such views. We hope that participation in this study will encourage ongoing reflection and awareness of animal sentience in participants' personal lives.

As we progressed through this novel research process, we found ourselves frequently fraught with confusion and uncertainty. According to Contreras (2019), such feelings are a normal part of the process, but can often lead researchers to become disillusioned . Papers depicting researchers as infallible and conquering any obstacle are not representative of the full research experience, and are actually misleading (Contreras, p. 162, 2019). Thus, we embraced our feelings of doubt and equivocal natures, and even made such expressions to our participants to expose our vulnerability. Doing so helped us feel less pressure to find all the answers right away, and allowed us space to watch the narratives in our Facebook group naturally develop.



While this was an uncomfortable process, it allowed us to break out of the strict modes of conduct that we had previously clung to, like Richardson (2001), in her ethnographic work, it humbled us. Moreover, communicating our feelings of unease with participants helped further develop their relationship to us as the researchers, which ultimately promoted their engagement with the process, and strengthened the community feel we were hoping to create.

As Borda explains, participatory action research challenges many existing norms of academic research (2006). We embraced this attitude to push the boundaries of typical qualitative research methods, and produce a community-based research project that embraced morality, emotions, and sentience. Rather than restrict ourselves and our ways of thinking to the traditional frameworks, we used both our heads and our hearts, as Borda and Richardson recommend, to connect more deeply with what motivated us in this project (Borda, p. 29, 2006; Richardson, p. 34, 2001). As such, we deliberately employed our personal moral responsibilities to guide our processes towards affecting positive change in the world around us (Borda, 2006). Thus, we used our research to build an interactive community that could explore the important ideas of human-animal relationships and their implications for wild animal conservation. Furthermore, we rejected the common role of researchers as detached and separated from the participants' experience (Contreras, 2019). Instead, we played an active role in the community to tear down the sharp distinctions between researchers and participants, and instead treated both as thinking and feeling actors in one unified community (Borda, 2006).

As humans are naturally social beings, we are hard-wired to connect to others. Despite the fact that it is often overlooked, the connection that humans make with non-human animals is an essential part of our life experience and should be explored further. We share our planet with a plethora of other inhabitants, from buzzing bees to roaring lions, each of whom have an equal

claim to this space. The interactions between humans and these co-inhabitants of the planet thereby form the community of the Earth. To protect this community and make it stronger, it is essential that we fully embrace the emotions shared between humans and non-human animals when we interact. Sensing feelings and emotions between beings creates the opportunity to build not only awareness of each other’s sentience, but also meaningful relationships which can spur people to take action to protect animals. We hope through our research we will be able to pull these experiences out of the participants, and by allowing them to pour their emotions into reflections, understand how these feelings can snowball into conservation efforts.

### Results

Because a non-random convenience sample was used, there is a relatively diverse group of participants in this study. There were a total of 44 participants in the study. This included 22 homosapiens and 22 non-human animals of various species. These animal species included a woodpecker, humpback whale, snapping turtle, elk, black bear, whale, seal, bunny, seagull, sea turtle, deer, mallard, bison, swan, mountain goat, terrapin turtle, duck, monkey, turkey, frog, sea lion.

The participant population was almost entirely female with 21 females and one male. Seventeen participants were college students and five were not. Thirteen of the participants attend Boston College and four attend a college or university other than Boston College. Each human participant posted once in the Facebook group.

Table 1. Participant demographics and media type.

#### Gender

Females	21
Male	1

#### College Student

Yes	17
No	5

#### Media Type

Photo	17
Video	3
None	1

#### College Attended

Boston College	13
Other	4

### ***Trends***

#### ***Trend 1: Key words about animal sentience***

Because studies in this area of research have investigated human acknowledgement of animal sentience, a chosen theme for analysis was the use of the word sentience or a related acknowledgement of non-human animal emotion within the described interaction. Fourteen, or 63.63%, of the participants commented on the perceived emotions of the animal or animals they encountered. The study was almost entirely composed of female human participants which may correlate to the majority of participants making sentience-related comments. Cornish and colleagues found that females were more likely to engage emotionally with non-human animals (Cornish et al., 2018). However, no participants explicitly used the word sentience in their narrative. Therefore, comments on and related to perceived emotion and spiritual interspecies connection were considered under the theme of sentience.

#### ***Trend 2: Key words about human emotional experience***

Three of the 22 participants (13.63%) who left narrative posts reported feeling empathy for animals who were facing some sort of struggle or barrier presented by human activity in their habitat. Three of the participants reported feeling curious about the wildlife animals they interacted with and of these three two reported that their curiosity led them to reflect critically on

human interactions with wildlife animals and their habitats. There were several participants who indicated that they felt apprehensive or fearful about their interactions with wild animals. Three participants of the 22 total indicated that they felt nervous or fearful around animals but two of the three reported ultimately having positive feelings about the interactions.

### ***Trend 3: Transformative effect of experience***

Because previous studies suggested that personal experiences with wildlife have the power to change humans' perspectives and actions toward other species, the researchers investigated the transformative nature of the participants' experiences (Larson et al., 2016; Dolby, 2020; Scott et al., 2020). Of the 22 descriptive narratives, 8 participants (36.36%) explicitly described a transformative effect from their experience with wildlife, 7 participants (31.18%) included no reference to a transformative effect of their experience, and the remaining 7 participants (31.18%) included implicit references to the experience's contribution to their new perspective. Six of the eight transformative experiences involved a human's interaction with a species the participant does not see or interact with on a regular basis. As this research was conducted in the midst of the COVID-19 pandemic, two of the explicitly transformative experiences include references to the importance of connection with other species during this period of isolation. Five of the eight transformative experiences included explicit references to personal action toward conservation. One transformative experience helped a participant feel personally connected to wildlife. There was an overwhelming trend in participants' experiences causing reflection on multispecies coexistence. Of the combined 15 explicitly and implicitly transformative experiences, 9 included a reflection on coexistence and the effects of human disturbance of other species' habitats or vice versa. One participant was inspired to think differently about multispecies experiences, and re-evaluated the luxury of maintaining shelter.

The 7 participants who did not report on the transformative nature of their wildlife experiences showed few commonalities. The species encountered and locations of these narratives were varied. One participant ponders why a snapping turtle returns to their yard on an annual basis. “Here’s my thought: maybe she chooses our lawn because we have the only natural lawn in the neighborhood!?! No fertilizer. No pesticides. No anything.” Another participant remarked on a seals’ ability to coexist with humans in La Jolla: “ I swam in the water and was honestly surprised by the seals’ lack of hostility and seemingly disregard for humans swimming in such close proximity,”. The participants are able to acknowledge and reflect on their experiences with other species, but do not report any evidence of a changed attitude or perspective following the interaction. 3 of the 7 participants that did not remark on transformation are students of Environmental Studies.

#### ***Trend 4: Species Type***

Of the 22 descriptive narratives, 13 posts (59.09%) focused on an interaction with a threatened or rare species that the participant does not commonly encounter in their everyday life. These species included a sea lion, humpback whales, bears, an elk, a deer, sea turtles, bison, mountain goats, a terrapin, seals, swans, and a turkey. Of these 13 posts featuring interactions with rare animals, 6 posts (46.15%) also explicitly described a transformative effect on the participant from the encounter. One participant said their interaction with a sea lion reaffirmed their motivation to protect wildlife and leave animals alone “to do their thing.” Another participant was reminded of the importance of conservation and the coexistence of humans and nonhuman animals after their interaction with swans. Moreover, two participants that wrote about their interactions with humpback whales described the encounters as making them reflect on the human impact on the environment and the cruel treatment of whales in captivity, and

described feeling inspired to continue their conservation efforts. Of the 9 posts featuring interactions with more common animals, 2 posts (22.22%) also described a transformative effect on the participant from the encounter. Thus, narratives about encounters with rare animals were 2.07 times more likely to discuss a transformative impact than encounters with common animals.

- a. 13 of the 22 posts (59.09%) also included a reflection on coexistence, the human impact on the survival of the species, and/or the effect of human or nonhuman animal's presence as a possible disturbance to the other. Of the 4 posts that focused on coexistence, all four (100%) were connected to interactions with rare animals. In one post about mountain goats, the participant shared that the experience made them "realize that human beings coexist with animals as we share the same earth with them." In another post, a participant that interacted with bison explained that the encounter made them "think that coexistence with animals is possible." Of the 6 posts that dealt with the human impact on nonhuman animals, 3 of the 6 (50%) posts were connected to rare species. One post about sea turtles reminded a participant about "the impact that human actions can have on various species." One participant's post about mallards reflected on how humans could have a positive impact on the species' survival, by working together to provide undisturbed habitats for the mallards to survive the winter more easily. Of the 4 posts that considered whether a human or nonhuman animals' presence would disturb the other, 2 were connected to encounters with rare animals. One participant remarked on their surprise that seals they encountered were accustomed to being near humans and did not seem disturbed. Therefore, interactions with rare and common animals were equally likely to have the participant reflect on the human impact and the idea of humans and nonhuman

animals sharing a space. However, of the 13 posts that reflected on these topics as well as coexistence, 9 posts (64.28%) were from interactions with rare animals.

***Trend 5: Composition of Photograph***

How did proximity affect how they felt about the animal? Did it evoke respect, fear?

- a. Woodpecker: “He didn’t seem to mind me standing so close, quietly mesmerized while watching him happily woodboring away; he seemed rather proud to show off his power-pecking abilities. I felt that this woodpecker actually liked the audience, so I followed him and filmed him while naming him Walter.”
- b. Elk: “I had my most direct experience when I ran by the herd of males on a run. A large male looked up from where he was grazing about 30 feet away from me, and just watched as I admired him. I snagged a quick picture, and then let myself sit and just exist in the same realm as him for a few minutes, before he returned to his grazing and I returned to my run. It was a moment of silence and a moment of connection that I am grateful for this past year.”
- c. Black bear cub: “We witnessed him climb up a tree, and he stayed up there for the majority of the day. We were very apprehensive to go anywhere near the tree because we knew his mother was likely nearby and could get very protective/aggressive... We watched from the house as the cub climbed down to eat the berries. It was a touching moment where we felt we were interacting with the cub from afar, while keeping a respectful distance.”
- d. Whales:

- i. “The most remarkable experience was with a group of whales which come through our waters in March and April each year. Seeing these huge animals really puts how small we are into perspective.”
  - ii. “There we drifted while being surrounded by Humpbacks for three hours.”
- e. Seal: “At this cove on the water, many seals gathered around to sunbathe. I swam in the water and was honestly surprised by the seals’ lack of hostility and seemingly disregard for humans swimming in such close proximity. The seals were sunbathing, swimming, climbing on the rocks, enjoying the sun, etc... I was standing super close to two seals who seemed to get in an argument with each other yet did not even bat an eye at me. Pretty neat how accustomed animals can get to being near humans”
- f. Bunny: “It wasn’t moving at all even when I came close to it, and it wasn’t blinking/it’s eye wasn’t moving. I began to get worried and consider the possibility that the bunny was frozen to death, which scared me and made me feel so sorry for it. I would not consider myself an animal lover by any means, and normally am more afraid to get close to any wild animals. Perhaps the fact that this bunny was so defenseless is what made me not feel threatened by it but rather thinking of ways to try to help it.”
- g. Deer: “I looked outside the window of my house and saw a deer staring at me and stomping. It was a really amazing experience to see the deer recognize and interact with me.”
- h. Bison: “On my way there, I stopped my car to take a look at this group of bison. I watched them for a while, and enjoyed being in their presence. They didn’t seem to notice me, and went about their day grazing and walking around.”



- i. Goats: “I got a bit nervous as they came close to us to cross the path. They did not seem to mind the fact that there were people all along the path, as long as we did not get too close.”
- j. Sea Lion: “On one expedition we encountered a sea lion sprawled on a bench resting. I sat on the bench opposite, about 6 feet away. It looked up, identified me as a non-threat and went back to sleep. I couldn’t help but notice a personality to him, like how you feel when you’re napping on the couch and someone walks in so you look up before grumpily go back to snoozing.”

45.45% of posts referenced human proximity to wildlife species. Several of these posts featured an aspect of respect in their mentions of proximity. This in turn shows evidence of coexistence in these wildlife interactions; that is, people and animals sharing a space peacefully. Moreover, this shows positive signs of a willingness in the future to coexist with animals. This is a key finding of our research, and is a very positive indication that interactions with wildlife may contribute to conservation of biodiversity.

## **Discussion**

### ***Trends in Keywords about Sentience***

The theme of sentience and related keywords were very present in the data that was collected. Instead of asking specifically about understanding and perception of animal sentience, open questions were posed to allow participants room to share perspectives and experiences freely. Cornish and colleagues published important results illuminating the demographic trends in perspectives on animal sentience by surveying a collection of participants with specific questions on animal sentience (Cornish et al., 2018). The results of this research build upon those

findings by illuminating the verbage used to describe non-human animal emotions and sentience and reinforcing their results regarding a correlation between females and emotional connection with non-human animals (Cornish et al., 2018). Fourteen of the twenty-two participants wrote about the perceived emotions of the animal in some capacity indicating an acknowledgement of non-human animal sentience. In other words, more than half of the participants included comments relating to animal sentience when asked to share a narrative about a wildlife interaction. These perceived emotions ranged “calm” to “aggressive” and the posts included words such as excited, relaxed, frustrated, unphased, content. Of the posts that included these keywords and sentiments, the species of the animal ranged from local, backyard beings to international, rare species indicating that species likely had no impact on whether or not the participant included comments on sentience. Many of the species are found in the United States, but locations also included Switzerland, Bermuda, Brazil, and the Galapagos. None of the participants, however, used the word sentience indicating that perhaps they experience animal sentience without having learned about the formal concept. Dolby argues for the expansion of environmental education specifically related to empathy and animal sentience which we also recommend as many participants were not as well informed on conservation and the emerging literature on sentience (Dolby et al., 2020). Education specific to this topic being given prior to conducting a study such as this may have implications on results and terminology used.

### ***Trends in human emotion***

The data collected shows that humans experience a broad range of emotions when interacting with the lives and sentient spirits of wildlife animals. When participants reported feelings of empathy for non-human animals they felt were struggling in some way, they mentioned how the animals' struggle made them think critically about human and non-human

animal interactions and/or conservation. This finding reflects the work of (Wallach et al., 2018) in which the authors state that summoning compassion is important when thinking critically and ethically about conservation. Interestingly, the compassion several of the participants felt invoked a sense of duty to conserve the lives and well-being of wildlife animals. The majority of participants expressed positive feelings in their narratives recounting their experiences with wildlife animals. This trend is exciting but not necessarily surprising. Moreover, such findings affirm that citizen science groups provide emotive experiences through educating participants on important environmental topics (Paleco et al., 2021).

### ***Trends in Transformative Narratives***

The results found in this study are consistent with previous study's findings that experiences with wildlife have the ability to motivate human actors toward empathetic actions toward wildlife and affective and emotional responses to wildlife stimuli (Larson et al., 2016; Dolby, 2020). Larson and colleagues found that experiences with house sparrows positively affected participant's treatment of the species, which is supported by the overwhelming portion of experiences that our study found to be particularly transformative. Dolby found that writing an essay from the perspective of an animal they had previously observed contributed significantly to their environmental education and empathetic connection to animals (Dolby, 2020). Our study contributes to Dolby's work by showcasing the power of experiential reflection on human's conceptions of and connections with other species. Fifteen of the 22 (68.18%) participants either implicitly or explicitly referred to the transformative nature of their wildlife interaction, suggesting that increased frequency of human-wildlife interactions has the potential to improve treatment of other species. Participant 16's statement captured the sentiment of many of the group's members: "They were very calm and seemed quite content just hanging out

on the mountain. This experience made me realize that human beings coexist with animals as we share the same earth with them. In particular, references to coexistence were highly prevalent. This may be due to human's dominance in the natural world, often leading to separation of species. When homo sapiens are encouraged to interact with other species in their typical environment, they are able to deconstruct the dominant nature-society ideological divide. Acknowledging the value of multispecies, as introduced by authors Kirksey and Helmreich(2010), in our shared environment is a crucial step towards just preservation (Kirksey and Helmreich, 2010). An overwhelming majority of the explicitly transformative experiences occurred between homo sapien and a species they interact with rarely. This may suggest that species interactions are more powerful when they contrast typical interactions. For example, Participant 2 wrote about their experience with humpback whales: "The day was one I will forever remember with the transcendent sounds of whales breaching nearby and the reality of what we've done to these waters sinking in,". The participant reported that the experience had a direct impact on their work and contribution to conservation initiatives. Additionally, charismatic experiences with animals may have the potential to be more transformative. Participant 11 connected with a deer: "It brought me closer to wildlife and I felt more connected. Instead of just observing this animal from the inside, I was actually making eye contact and being acknowledged by this deer." Humans may be more connected and motivated to protect species that exhibit human-like features. The results show that these interactions are important for introducing multispecies connection and sentience. This study was specifically interested in the effect of these interactions on perspectives of conservation; however, only five experiences had a directly positive impact on the participant's conservation initiatives. These results suggest that there is a causal effect of wildlife interactions on human's perspectives on, emotions shared with,

and behaviors towards other species. Of the narratives that included no reference to transformation, only one trend was detected. Three of these narratives came from students of Environmental Studies. It is possible that because these participants show long-term demonstrated interest in this field, they have not had recent experiences that radically changed their perspectives or actions.

The narrative data indicates that interactions with rare species of nonhuman animals tends to produce more transformative reflections from respondents, as these posts were more than twice as likely to describe a transformation of the participant. Moreover, interactions with rare wildlife were more likely to make participants reflect on the idea of coexistence, and were just as likely as interactions with common animals to make participants reflect on human impacts and sharing a space with nonhuman animals. These findings indicate that interactions with more unique wildlife can lead to deeper reflection and greater transformations for participants. Cornish and colleagues noted that attitudes towards specific domesticated animal species can influence attitudes about how these animals should be treated (2018); while our findings do not go as far as this, they do seem to indicate that for wild animals, just as with domestic animals, certain species do result in different reactions. In particular, interactions with rare species tended to produce deeper reflections overall among participants.

### ***Strengths***

There are several notable strengths to conducting qualitative research in the form of written narrative and including sources of media to illustrate the narrative. Primarily, collecting narratives allows the researcher to gain a deeper, more personal understanding of the encounter. This format uncovers emotions and allows for deeper analysis of the data. Not only does this

research format create an interactive and meaningful experience for the participants, it can be incredibly transformative for the researchers as Richardson (2001) highlights and discusses at length in her work. Additionally, using a non-random convenience sample created a diverse participant base. The participant pool is composed of all ages over the age of 18, both college and non-college students, and a mix of Boston College and non-Boston College community members. Having a diverse group of participants provided a wide range of interest in wildlife, perspectives, and experiences with wildlife. Using Facebook as the chosen platform for conducting this research allowed the participants to foster connections with each other and the researchers instead of being blind to who the other participants were. This unique online platform provides a new contribution to community building in conducting ethnographic, narrative research. The researchers posted educational videos towards the end of the data collection process to inform the members of the group of the reasons for the research and explaining key concepts in the non-human animal research space. This, along with the inclusion of personal narratives in the manuscript allowed the researchers to co-create with the participants and each other through the contribution of personal anecdotes. Situating the researchers within the narrative space as opposed to a pure observational and reiterative role is what makes narrative research and ethnography unique as noted by Bönisch-Brednich (2018). What sets our study apart is the contribution of our voices in the research space to educate, influence, and emote alongside participants in true sentient form. This study was largely an original research method design which allowed the researchers to tailor the process to specific desired outcomes and implications for the researchers, participants, and larger field of wildlife research.

### ***Limitations***

While the design of this study offered many benefits to the research, there are several aspects that may limit the ability to form definitive and generalizable conclusions. Although extensive efforts were taken to invite interested participants to the group, the size of the sample was somewhat small, with only 22 of 42 total human participants sharing their experiences with the group. The small size of participants allowed for more extensive and inclusive analysis of narratives; however, the sample may not be representative of the greater human population. Additionally, the sample was overwhelmingly female, with only one male participant. The vast majority of participants (77.27%) are college students. So, the findings may be primarily generalizable to female college students. In “Inclusiveness and Diversity in Citizen Science,” Paleco and colleagues stress the role of citizen science in producing knowledge, which we, as researchers, create through our framing of our narratives and the participants we include (Paleco et al., 2021). In the process of our research, our group has embraced subjective experience; however, it is important to recognize that our identity as female college students contributed to a less than inclusive sample. Lastly, the open ended nature of the prompt led to differences in content, limiting the researcher’s capacity for direct comparison of participant experiences.

### ***Implications***

Throughout our study, our intention was to focus on connecting people around the idea of protecting our shared environment. We aimed to instill an emotional approach to reflections on wildlife interactions, and by so doing, shed light on the relationship between participants’ understanding of non-human animal sentience and their opinions on conservation and biodiversity. Based on our results, in which participants readily shared a wide variety of thoughtful narratives about their experiences with wildlife that embraced their emotions and

complex topics of sentience and conservation, we feel that we were able to accomplish this goal. Moreover, though participants came from a variety of backgrounds, all of them were able to enter into a reflective headspace and meditate on their interactions, motivations, and emotions in regards to wildlife. Participants became a part of a community conversation that bound them together around these ideas. Thus, we effectively created a community setting in which participants were able to reflect on their interactions with wildlife and thus engage with each other, their emotions, and the important topics of sentience, biodiversity, and conservation.

A main takeaway from our study is the importance of education on sentience and conservation in order to protect biodiversity. Participants that did not have prior knowledge of these terms had less profound reflections than others, and some did not even mention sentience or conservation at all. As the Dolby study indicated, providing participants with more information about concepts like the treatment of animals can cause participants to feel empathetic towards animals, so greater education on the similar topics of sentience and conservation could lead to similar effects on groups at a larger scale (Dolby, 2020). If our study were to be replicated in the future, we recommend creating further online communities where participants can continue to share media about their wildlife interactions and connect on this issue and these concepts. These online spaces provide a unique environment where anyone can be invited to participate across geographical distance and time zones. Furthermore, participants can validate each others' experiences through likes and comments, creating an encouraging atmosphere where participants feel comfortable being vulnerable. Larson and colleagues indicated that experiences with wildlife strengthen emotional responses among participants, so continued conversations in which people can reflect on their wildlife interactions could promote greater connection to the important concepts of biodiversity and conservation (Larson et al.,



2016). Moreover, social networking platforms such as Facebook are designed specifically to encourage connections between people, and between people and new ideas, so spaces such as this should be readily utilized. Furthermore, in the future, a larger sample size with more participants and continual posts would enrich the data and allow researchers to draw more in-depth conclusions about sentience and conservation. Similarly, research would benefit from a longer collection period, which would allow for greater reflection and interaction among the participants that would produce more data. Researchers in the future exploring similar methods should thus dedicate a portion of their effort towards sustaining the community long-term, possibly by creating new prompts, replying to participants' posts, sharing articles with the group, or otherwise playing an active role in the community.

### ***Directions for future research***

Future research can build upon our study by exploring multiple topics, including whether people tend to think about conservation from a bio-, eco-, or anthropocentric perspective. Moreover, future studies could compare how perceptions of wild and domesticated species are different, and how these potential differences impact views on conservation. While two of the studies from the existing literature examined human relations to, understandings of, and emotions towards domesticated animals, and our study focused on human relations to wild animals, there exists a gap of studying human-animal relations with these two groups simultaneously (Cornish et. al, 2018; Dolby, 2020). Thus, future researchers could study participants' views on both domesticated and wild animals, rather than only analyzing their views, emotions, relations, and experiences with one category or the other separately. Furthermore, future research that takes a similar approach with creating a social media

community could study what the most effective ways are to increase and maintain engagement among participants with these topics. Future researchers could explore if sharing articles, frequently commenting and liking posts, providing new prompts or other content regularly, using “Live” features or other facets of these social networking platforms would be the most successful strategies to sustain a long-term and tight-knit community around these ideas.

### References

- Bönisch-Brednich, Brigitte. "Writing the Ethnographic Story: Constructing Narrative out of Narratives" *Fabula*, vol. 59, no. 1-2, 2018, pp. 8-26.  
<https://doi.org/10.1515/fabula-2018-0002>
- Borda, O.F. (2006). Participatory Action Research in Social Theory: Origins and Challenges. In *the Handbook of Action Research*. H. Bradbury (Ed.). P. 27-37.
- Contreras, Randol. (2019). The Broken Ethnography: Lessons from an Almost Hero. *Qualitative Sociology*, 42(2), 161-179.
- Cornish, A., Wilson, B., Raubenheimer, D., & McGreevy, P. (2018). Demographics Regarding Belief in Non-Human Animal Sentience and Emotional Empathy with Animals: A Pilot Study among Attendees of an Animal Welfare Symposium. *Animals*, 8, . doi: 10.3390/ani8100174
- Diaz, Sandra. “UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating' – United Nations Sustainable Development.” United Nations, United Nations, 6 May 2019,  
[www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/](http://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/).
- Ditmer, MA, Iannarilli, F, Tri, AN, Garshelis, DL, Carter, NH. Artificial night light helps account for observer bias in citizen science monitoring of an expanding large mammal population. *J. Anim. Ecol.* 2020; 00: 1– 13. <https://doi.org/10.1111/1365-2656.13338>

- Dolby, N. (2020). Nonhuman animals and the future of environmental education: Empathy and new possibilities. *Journal of Environmental Education*, 50(4–6), 403–415.  
<https://doi.org/10.1080/00958964.2019.1687411>
- Jane Goodall Institute New Zealand. "Animal Sentience.", Dec 19, 2019,  
[https://www.youtube.com/watch?v=oOkGgsN7JXI&feature=emb\\_title](https://www.youtube.com/watch?v=oOkGgsN7JXI&feature=emb_title).
- Kirksey, S. & Helmreich, S. (2010). The Emergence of Multispecies Ethnography. *Cultural Anthropology*, 25(4), 545-576.
- Larson, Lincoln R. Caren B. Cooper & Mark E. Hauber (2016) Emotions as Drivers of Wildlife Stewardship Behavior: Examining Citizen Science Nest Monitors' Responses to Invasive House Sparrows, *Human Dimensions of Wildlife*, 21:1, 18-33, DOI:
- Manfredo, M.J., Teel, T.L., Don Carlos, A.W., Sullivan, L., Bright, A.D., Dietsch, A.M., Bruskotter, J. and Fulton, D. (2020), The changing sociocultural context of wildlife conservation. *Conservation Biology*. doi:10.1111/cobi.13493
- Paleco, C., Peter, S. G., Seoane, N. S., Kaufmann, J., & Argyri, P. (2021). Inclusiveness and Diversity in Citizen Science. *The Science of Citizen Science*, 261-282.
- Richardson, L. (2001). Getting personal: Writing-stories. *International Journal of Qualitative Studies in Education*, 14(1), 33-38.
- Scott, Dawn M., et al. "Spatial Distribution of Sarcoptic Mange (*Sarcoptes scabiei*) in Urban Foxes (*Vulpes vulpes*) in Great Britain as Determined by Citizen Science." *Urban Ecosystems* 23.5 (2020): 1127-40. ProQuest. Web. 7 Oct. 2020.
- Treves, A., et al. "Just Preservation." *Biological Conservation*, vol. 229, 2019, pp. 134–41, doi:<https://doi.org/10.1016/j.biocon.2018.11.018>.
- Wallach, Arian D., et al. "Summoning compassion to address the challenges of conservation." *Conservation Biology* 32.6 (2018): 1255-1265.
- Özdemir, Vural. (2020). "One Nature": A New Vocabulary and Frame for Governance Innovation in Post-Covid-19 Planetary Health. *A Journal of Integrative Biology*, vol. 24.11

## Appendix A.

### **Recruitment and Informed Consent Message (Sent to participant after joining the Facebook group)**

Thank you for your interest in participating in our study. Through this research we hope to better understand the ways human feelings about animal sentience and emotion can impact the treatment of animals and attitudes about conservation.

If you agree to take part in this study, you will be asked to submit personal anecdotes about your interactions with wildlife. In your responses we encourage you to reflect on your emotional connection to wild animals and your interpretation of animal emotion. We welcome the submission of narratives, photographs, videos and/or audio recordings of your interactions with wildlife.

We are hoping you may benefit from being in this study and in the community created through our platform which will foster meaningful conversations about participants' human-animal interactions. The researchers hope to generate knowledge about the role of human understanding of sentience in conservation practices that may benefit society.

The records of this study will be kept private. In any sort of report we may publish, we will not include any information that will make it possible to identify you if you wish to remain anonymous. If you have questions about this research, you may contact Jennifer Schauer, [jennifer.kelly.3@bc.edu](mailto:jennifer.kelly.3@bc.edu), 617-552-4130.

By typing your full name in this text box, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I understand what the study is about and my questions so far have been answered. I agree to take part in this study.

If you have any questions, comments, or concerns, please list them below and one of our researchers will get in touch with you soon.