



# Undergraduate Journal

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### **A Study of Student Perceptions on the Rights of Nature**

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#### **Abstract**

This research article explores the concept of the Rights of Nature by reviewing survey results from undergraduate students at the University of North Carolina Wilmington (UNCW) on their perception of the Rights of Nature. The Rights of Nature are defined as nature having the same right to exist as humans (Harden-Davis et al., 2020). This study found how receptive undergraduate students are to the term Rights of Nature by analyzing their answers to a list of questions, both multiple choice and short answers. The research findings concluded that students at UNCW agree with the theoretical conceptualization of the Rights of Nature. However, they think it is politically infeasible as a solution to environmental problems.

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#### **Introduction**

This article examines the concept of the Rights of Nature by focusing on the University of North Carolina Wilmington (UNCW) students to learn about their views on the environment and the Rights of Nature. The term Rights of Nature was invented in the later twentieth century. A law professor from Southern California Law Review, Christopher Stone, wrote an article about the lack of rights given to nature (1972). The popularity of the construct began in the 1970s when major environmental laws and policies were enacted (Kotzé & Calzadilla, 2017). For this paper, the Rights of Nature is defined as awarding nature the same right to exist as humans (Harden-Davis et al., 2020). Although nature and humans are incomparable to many people, giving natural resource systems the right to exist helps ensure humans have a healthy environment (Kotzé & Calzadilla, 2017). The Rights of Nature extends existing rights to the environment already provided by the Endangered Species Act and the Clean Water Act that treat natural resource systems as protected entities. Recently in the United States, environmental

policies have become very political and polarized (Karakas & Mitra, 2020). Socioeconomic ideologies have been found to categorize those with similar climate change and environmental beliefs (Karakas & Mitra, 2020).

Most people think of nature as something a person can own (Community Environmental Legal Defense Fund [CELDF], 2016). By owning a part of nature, that person can do what they wish with that area; therefore, it is that person's right to do as they please (CELDF, 2016). Creating laws and ordinances for the Rights of Nature ensures the area is recognized as needing to be protected (CELDF, 2016). Normal environmental laws regulate what happens, whereas the Rights of Nature can prevent environmental disruption (CELDF, 2016). The Rights of Nature approach is precautionary and preemptive. By giving Rights to Nature, the designated area has "the right to exist and flourish" and "people, communities, and governments have the authority to defend those rights" (CELDF, 2016). Part of the necessity for having the Rights of Nature is to ensure that the environment stays healthy for humans; therefore, it can also be a human right, as humans should have the right "to a healthy environment" (CELDF, 2016).

One of the viewpoints in this study is the anthropocentric perspective: that humans are the most important entity on Earth (Burdon, 2020). This viewpoint has been strong in Americans until recently and has been linked to the rise of the Rights of Nature construct (Burdon, 2020). This viewpoint shifted in the 1960s as protection of the environment became widespread (Kotzé & Calzadilla, 2017). The Rights of Nature remain a hot topic in international and United States politics as cities, states, and countries decide whether to implement the concept (Kotzé & Calzadilla, 2017). Unfortunately, in the United States and other countries such as Ecuador, there is a polarized society in how citizens view the environment, and it can even be based on indigenous philosophies (Tănăsescu, 2020). The Rights of Nature can be more effective than normal environmental laws and policies because giving "rights" to a subject can provide more protection (Kotzé & Calzadilla, 2017).

The Rights of Nature are not meant to draw away rights from humans. Instead, it is meant to emphasize and strengthen human rights to privileges such as a healthy environment. Public buy-in may be necessary for the Rights of Nature to be viable. Therefore I am collecting students' opinions to learn if it is even something students would approve of. Citizens may also need a clearer understanding of the term. Public participation and buy-in are important for the success of most laws and policies. If people are involved initially, they may even be more likely to support the Rights of Nature in their area. Since nature is a common pool resource, it is open to anyone. Most common pool resources have a limit and can be susceptible to the tragedy of the commons, wherein people will use the resource without thinking that others have access to it too. This can mean that the resource ends up being depleted or polluted without consideration of what this could mean to others. The rights of nature are important for this reason. It could help combat the tragedy of the commons for common-pool resources, especially since we are in an age where corporations have human rights through the *Citizens United v. Federal Election Commission* (FEC) case (2010). Since rights have been given to non-humans before, why would they not be able to be given to nature? This leads to the research question that this article will answer: what are the UNCW students' perceptions of the Rights of Nature?

## Literature Review

Rights of Nature was first conceived in the article "Should Trees Have Standing? - Toward Legal Rights for Natural Objects" by Christopher D. Stone (1972). This article explains that no rights for nature have been recognized but that corporations and non-person entities have

recognized rights (Stone, 1972). Stone points out that even the thought of giving corporations humanlike rights used to be taboo: “throughout legal history, each successive extension of rights to some new entity has been, theretofore, a bit unthinkable” (1972, p. 453). This changed the thought process that nature could have humanlike rights. We have already given corporations and other entities extended rights, so in theory, nature should be able to have extended rights too. Corporations were given extended rights in the *Citizens United v. FEC* case in 2010. In this case that started in 2008, the Supreme Court ruled in favor of Citizens United, granting corporations extended rights, such as the right to donate to political campaigns (2010). This ensured that corporations could influence policy decisions as citizens do through political campaign donations. Therefore, it is important to decide how the rights of corporations and nature will be balanced, especially when only one has confirmed rights in the United States. Usually, in order for change to occur, a possibly taboo subject has to become a forefront issue. This can be applied to the Rights of Nature, especially since non-human entities are already entitled to humanlike rights in some places.

Another stepping stone for the environmental protection construct is the book *The Rights of Nature: A History of Environmental Ethics* by Roderick Frazier Nash (1989). He explains how many legal battles have been fought to ensure rights were gained and how this applies to nature (Nash, 1989). At the beginning of American environmentalism, the privileges of nature were given to white men (Nash, 1989, p. 33). The ethics of the environment and how it was treated were not given much thought until the twentieth century (Nash, 1989, p. 34). The concerns with nature in American history were not abundant until then because there was still a struggle for the rights of people (Nash, 1989, p. 35). The rights of humans and nature can conflict. When this happens, the decision is given to the court to determine how to balance the situation (CELDF, 2016).

In 2006, the first mention of a violation of the Rights of Nature was made in Tamaqua Borough, Pennsylvania, where “The Army For A Clean Environment” was formed and aimed to stop the dumping of chemicals in the area (CELDF, n.d.; Community Environmental Legal Defense Fund [CELDF], 2015). The dumping was toxic, and residents stated that the Rights of Nature were being violated by the action of corporations (CELDF, 2015). An ordinance was passed to protect nature and the residents around the area of the incident (CELDF, 2015). Below is the opening line of the ordinance (Tamaqua Borough Sewage Sludge Ordinance, 2006): “An ordinance to protect the health safety and general welfare of the citizens and environment of Tamaqua Borough by banning corporations from engaging in the land application of sewage sludge, by banning persons from using corporations to engage in land application of sewage sludge, by providing for the testing of sewage sludge prior to land application in the borough, by removing constitutional powers of corporations within the borough, by recognizing and enforcing the rights of residents to defend natural communities ecosystems.”

Ecuador was the first country to add the Rights of Nature to its Constitution in 2008 (CELDF, n.d.). As the first country to add the Rights of Nature to its Constitution, Ecuador became an experiment to see how well it could be followed and enforced (Kotzé & Calzadilla, 2017). The goddess Pacha Mama, considered “mother earth,” helped Ecuadorians accept the concept (Knauß, 2018, p. 707). As the concept was part of indigenous belief, Pacha Mama already strongly influenced everyday life (Knauß, 2018, pp. 707-708). Listed below are some excerpts from the 2008 Ecuadorian Constitution that include mentions of the Rights of Nature (Comparative Constitutions Project, 2021):

Table 1: Ecuadorian Constitution Implications of *Rights of Nature*

<b>Location of Text</b>	<b>Wording</b>	<b>Implications</b>
Preamble	“CELEBRATING nature, the Pacha Mama (Mother Earth), of which we are a part and which is vital to our existence,”	This section recognizes the importance of the earth.
Chapter 1, Article 10	“Nature shall be the subject of those rights that the Constitution recognizes for it.”	This section recognizes that nature has rights.
Chapter 6, Article 66, Section 27	“The right to live in a healthy environment that is ecologically balanced, pollution-free and in harmony with nature.”	This section recognizes that humans have the right to a healthy environment, and therefore the environment needs to be protected.
Chapter 7, Article 71	“Nature, or Pacha Mama, where life is reproduced and occurs, has the right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes. God or other deities All persons, communities, peoples and nations can call upon public authorities to enforce the rights of nature. To enforce and interpret these rights, the principles set forth in the Constitution shall be observed, as appropriate. The State shall give incentives to natural persons and legal entities and to communities to protect nature and to promote respect for all the elements comprising an ecosystem.”	This section recognizes the <i>Rights of Nature</i> comes from Pacha Mama, or “mother earth.” In order for these rights to be met, they must be implemented in the Constitution.

*The implications are the opinion of the researcher.*

Chapter 7 is specifically about the Rights of Nature. Four articles address the concept and how citizens are expected to proceed (Comparative Constitutions Project, 2021). These quotes were included to showcase the wording used to describe the Rights of Nature in a constitutional setting. Specifically in the Ecuadorian Constitution, the Rights of Nature was included because of the prominent feature that Pacha Mama plays.

### **Methodology**

This study utilized a survey to collect responses from students at UNCW regarding their perspectives on the Rights of Nature construct and its applicability to the Cape Fear River (See copy of the questionnaire in the Appendix). Data were collected to find how receptive undergraduate students were to giving nature humanlike qualities to ensure nature has the same rights as humans. UNCW Institutional Review Board (IRB) approval was gained in the fall of 2021. After IRB approval, the UNCW Institutional Research and Planning Office (IRP) released 3,500 students' emails, about 30% of the student population, to complete the survey. The UNCW

emails consisted of undergraduate students over 18 years old and were not in distance education. These emails are only accessible to the surveyor to keep results anonymous. The email that the IRB approved was sent out to these students through Qualtrics, an online survey software.

This survey was voluntary, and no questions were required. This can cause a difference in the amount of data received for each question. For students to remain anonymous, questions about majors, minors, or the specific department of the student were not taken. This information could have provided a new perspective to this study that cannot be examined at this time. No emails or IP addresses were recorded for anonymity. The minimum consent language was embedded at the top of the electronic survey so that students could give their consent for their results to be used (See Appendix). Students had two weeks in November 2021 to complete the survey.

### **Data**

Both quantitative and qualitative data were recorded during this study. The survey consisted of 21 questions, starting with inquiries to develop an understanding of the background of the research subjects and the demographics questions (See Appendix, demographics questions block). Then, a section asking about students' opinions on nature, the nature questions (See Appendix, nature questions block). Finally, an overview of the term Rights of Nature with follow-up questions, the Rights of Nature questions (See Appendix, Rights of Nature questions block). There were a variety of question types used, including multiple-choice and open-ended. In the end, there were 217 responses. Of these, only 211 could be used in the study. This was about a 6% response rate from the sample population provided by the IRP. The six responses taken out were responses with no data collected. For question 19, the qualitative question of the survey, only 113 responses were recorded. These responses were taken out and numbered in no specific order. These answers will provide themes within the data, described in more detail in the results section. The research hypothesis for this study is that UNCW students are receptive to the Rights of Nature concept if they believe it is politically feasible.

### **Analysis**

After the Qualtrics survey closed and the completely blank responses were taken out, data was looked at using the Qualtrics Reports. These reports show the distribution of data for each question. Of the 211 respondents for question 1, 51.66% are 18-20, 36.49% are 21-24, and 11.85% are 25 years or older (See Chart 1). Of the 210 respondents for question 2, 81.43% are white/Caucasian, 6.19% are from multiple races, 5.24% are Hispanic/Latino, 4.29% are black/African American, 2.38% are Asian/Pacific Islander, and 0.48% prefer not to state their ethnicity (See Chart 2). In 2021, the UNCW student population of full-time undergraduates was 78.4% white (College Factual, 2021). The high correlation of white students shows that the research paper's subset population is similar to the entire population. Of the 210 respondents for question 3, 28.10% are male, 68.57% are female, 2.86% are non-binary/third gender, and 0.48% are genderqueer (See Chart 3). This data is similar to that of the overall percentage of undergraduates at UNCW in 2021, which was 61.1% female and 38.9% male (College Factual, 2021). This data does differ as there are no other gender options other than women and men in the College Factual data. The data gathered for this research paper is still a good representation of the student population.

#### Chart 1

Q1 - Which category below includes your age?



Chart 2

Q2 - What is your ethnicity?

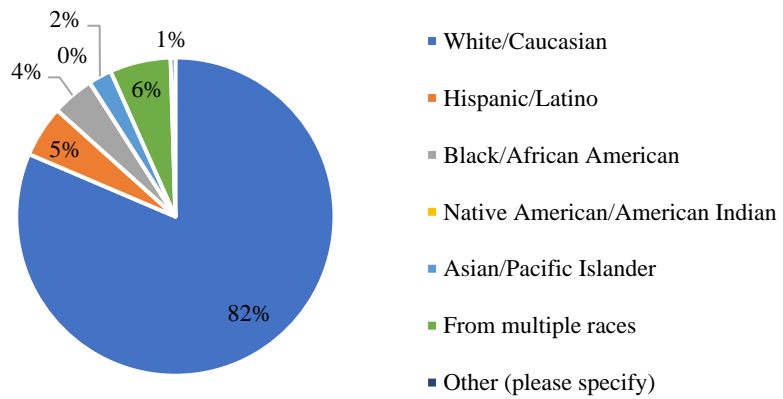
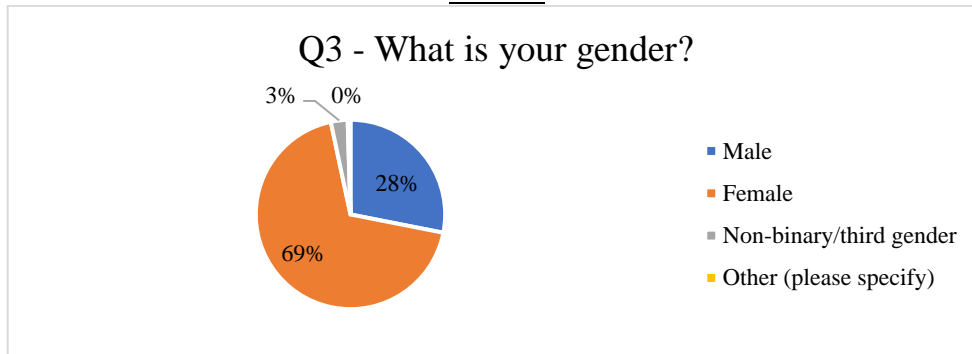


Chart 3



Of the 211 respondents for question 5, 14.69 % 70.62% have lived or gone to school in New Hanover County for less than one year, 70.62% for 1 to 4 years, 5.21% for 5 to 9 years, 6.16% for 10 to 19 years, and 3.32% for 20 to 29 years. For question 6 of the 211 respondents, 34.60% are seniors, 31.75% are juniors, 22.75% are sophomores, 6.64% are freshmen, and 4.27% are super seniors. This is not as distributive as the normal population of undergraduates at UNCW. The total enrollment for undergraduates in the fall of 2021 was 14,488 students, and of this, 2,435 were part of the Freshman Class (University of North Carolina Wilmington [UNCW], 2021). This means that closer to 16.81% of the study should have been freshmen. The distribution of classes is hard to control when answers are to remain anonymous. The majority of the sample population was 18-20 years old, white/Caucasian, female, seniors, and had lived or gone to school in New Hanover County.

Chart 4

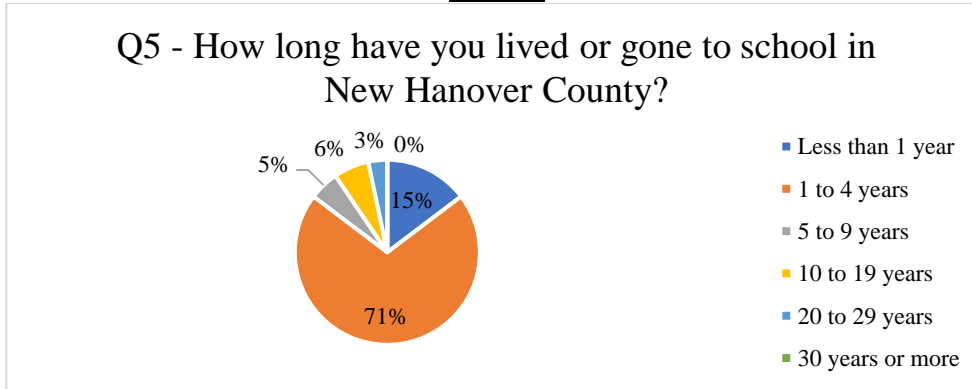
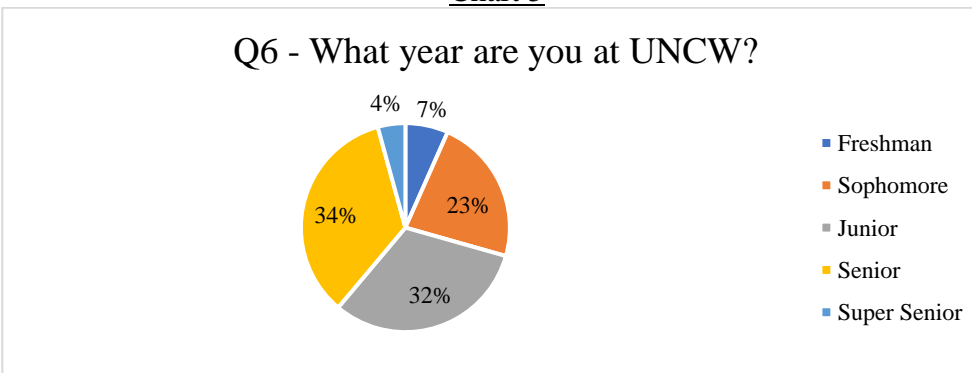


Chart 5



## Results

The second and third blocks were analyzed to gain insight into UNCW student perceptions. This section of the research is broken down into the nature and Rights of Nature questions, as done in the survey. This breakdown was deemed necessary as the second block helps to gain perspective on how students feel about nature and the third block on the construct specifically.

### Block 2: Nature Questions

The second block, nature questions, provides an overview of students' perceptions of nature and their views on public affairs and news. Questions 9 through 12, Table 2, gather responses on how aware students are of news and how they acquire information. It is important to learn how aware students are of public affairs to see if this could influence their decisions on how they view nature. The definition of public affairs is given to students as follows: a term used to describe an organization's relationship with stakeholders (See Appendix). For the students that know more about public affairs, it can be assumed they may know about the Citizens United v. FEC case. If they knew about the Citizens United case, they would know that non-humans have received rights. If they have this knowledge, it could influence how they answered the Rights of Nature questions in block three. Even though a majority of students are either "not aware" or "slightly aware" of public affairs, many believe it is either "slightly important," "moderately important," or "very important" to be up to date on the news (Table 2). These data points are contradictory to each other as it could be assumed that those aware of public affairs would find it important to be updated on the news. It would also be assumed that students would be checking the news more often than weekly, even though Table 2 shows that 44.85% of students only check the news "weekly." Respondents are also primarily receiving their news from social media, with 40.22% of students marking this option as one of the possible ways they source their news.

Table 2: Questions on Students Awareness of News

<b>Q9 – How aware are you of public affairs?</b>		
<b>Field</b>	<b>Percentage</b>	<b>Count</b>
Not aware	30.57%	59
Slightly aware	46.11%	89
Aware	20.21%	39
Very aware	3.11%	6
	100%	193
<b>Q10 – How important is it for you to be up to date on the news?</b>		
<b>Field</b>	<b>Percentage</b>	<b>Count</b>
Not at all important	4.12%	8
Slightly important	25.77%	50
Moderately important	43.30%	84
Very important	20.10%	39
Extremely important	6.70%	13
	100%	194
<b>Q11 – How often do you check the news?</b>		
<b>Field</b>	<b>Percentage</b>	<b>Count</b>
Never	10.31%	20
Monthly	14.95%	29



Weekly	44.85%	87
Daily	28.35%	55
Hourly	1.55%	3
	100%	194
<b>Q12 – What are the sources of your news?</b>		
<b>Field</b>	<b>Percentage</b>	<b>Count</b>
Network news outlets	29.48%	107
Print news outlets (newspapers, magazines, etc.)	8.54%	31
Social media	40.22%	146
Cable news	9.92%	36
News related podcasts	11.85%	43
	100%	363

The above data was collected from the Qualtrics survey of undergraduate students at UNCW.

The questions specific to nature in the second block are 8, 13, 14, and 15 and help create a better idea of how students at UNCW feel about the environment without mentioning the Rights of Nature. The data from question 8 can be found in Table 3. Over 50% of respondents stated that the natural environment was in bad condition and there would need to be a lot of effort put in to save it. This is a high percentage of respondents, and only 20 believe the natural environment is in good condition. Question 13 explains the respondents' view on what New Hanover County, North Carolina, is doing to protect its environment. Table 3 shows that the largest group of students “neither agree nor disagree” that New Hanover County does a good job of protecting natural resources. The next largest group of respondents somewhat disagrees and believes that New Hanover County does not do a good job of protecting natural resources. Question 15 provides data on respondent beliefs that the environment has changed, for example, by increased flooding, stronger storms, higher temperatures, etc. These examples were provided to students. Table 3 shows that most students believe that there have probably or definitely been changes to their environment.

Table 3: Questions on Students' View on the Environment

<b>Q8 – In your opinion, how would you describe the condition of our natural environment?</b>		
<b>Field</b>	<b>Percentage</b>	<b>Count</b>
In good condition	10.36%	20
In some trouble and could be saved with a little effort	36.27%	70
In bad condition and will take a lot of effort to save it	52.85%	102
In such bad condition, that not much can be done	0.52%	1
	100%	193
<b>Q13 – Do you think New Hanover County does a good job protecting natural resources?</b>		
<b>Field</b>	<b>Percentage</b>	<b>Count</b>
Strong disagree	16.06%	31
Somewhat disagree	29.53%	57
Neither agree nor disagree	37.31%	72

Somewhat agree	15.03%	29
Strong agree	2.07%	4
	100%	193
<b>Q15 – Have you noticed changes in your environment?</b>		
<b>Field</b>	<b>Percentage</b>	<b>Count</b>
Definitely not	0.52%	1
Probably not	6.70%	13
Might or might not	9.79%	19
Probably yes	43.81%	85
Definitely yes	39.18%	76
	100%	194

*The above data was collected from the Qualtrics survey of undergraduate students at UNCW.*

Table 4 shows the data collected on question 14. This information was collected to learn respondents' values and how they view the environment. Each viewpoint represents a popular viewpoint in both past and present American environmentalism. The book, *The Rights of Nature: A History of Environmental Ethics*, discussed in the Literature Review of this paper, focuses on changing attitudes toward nature, which number 14 touches on (Nash, 1989; See Appendix). A large majority of UNCW students consider themselves “conservationist” at 65.10%, with the following largest category considering themselves “ecocentric” at 26.04%. The definitions provided in the survey are given for each answer in Table 4. These definitions were listed for the students so that respondents would not pick based on their assumptions of each value option.

**Table 4: Question and Definitions on the Students' Viewpoint of Earth**

<b>Q14 – Which viewpoint do you find aligns best with your values?</b>			
<b>Field</b>	<b>Definitions</b>	<b>Percentage</b>	<b>Count</b>
Anthropocentric	Humans are the most important entity on earth	2.08%	4
Ecocentric	Value and importance are on nature as a whole	26.04%	50
Cornucopian	Population-growth projections do not affect the earth and that there are infinite resources	0.00%	0
Conservationist	Extracting natural resources from the earth while still keeping a sustainable relationship with the environment	65.10%	125
Preservationist	Humans should not consume lands and natural resources and should be maintained in their pristine form	6.77%	13
		100%	192

*The above data was collected from the Qualtrics survey of undergraduate students at UNCW.*

*Block 3: Rights of Nature Questions*

The third block in the survey, the Rights of Nature questions, starts with an overview and a brief definition of the concept to give the respondents some knowledge before answering the last six questions. Table 5 questions were regarding the execution of the Rights of Nature (See Appendix for survey questions 16, 17, 20, and 21). These questions are all about how it could be feasibly implemented. For question 16, there was an example given for respondents to understand better what it was asking. The example was: “New Hanover County decides to give the Cape Fear River humanlike rights. This would make it illegal to pollute the Cape Fear River within New Hanover County.” The example for question 17, for better respondents' understanding, was “the Cape Fear River.” The Cape Fear River is an example for questions 16, 17, 20, and 21 because it is a local river running through New Hanover County and is where most residents get their water. In 2017, information was released that GenX, a chemical compound, was dumped into the river in Fayetteville, North Carolina, a town upstream (Cape Fear River Watch, n.d.). This quickly spread around New Hanover County, and now residents are told to filter their water with either a reverse osmosis filter or using activated charcoal or carbon filters (North Carolina Government, n.d.). This local pollution was an example because most students learn about the problem at orientation. Therefore, it was pleasantly surprising to learn that the answers to 16, 17, 20, and 21 favor the Rights of Nature and increasing water quality protections.

**Table 5: Questions Regarding the Implementation of the *Rights of Nature***

<b>Q16 – If New Hanover County were to try to implement a Rights of Nature statute would your gut reaction to be for or against it?</b>		
<b>Field</b>	<b>Percentage</b>	<b>Count</b>
Strongly disagree	5.17%	9
Somewhat disagree	5.75%	10
Neither agree nor disagree	10.34%	18
Somewhat agree	32.18%	56
<b>Strongly agree</b>	<b>46.55%</b>	<b>81</b>
	100%	174
<b>Q17 – Do you think the concept of Rights of Nature could be a good protection strategy for natural resources?</b>		
<b>Field</b>	<b>Percentage</b>	<b>Count</b>
Definitely not	3.43%	6
Probably not	7.43%	13
Might or might not	13.71%	24
<b>Probably yes</b>	<b>47.43%</b>	<b>83</b>
Definitely yes	28.00%	49
	100%	175
<b>Q20 – If the government were to put more emphasis on water quality protection, would you as an individual be more likely to pay high drinking water rates?</b>		
<b>Field</b>	<b>Percentage</b>	<b>Count</b>
Strongly disagree	7.43%	13
Somewhat disagree	10.86%	19
Neither agree nor disagree	16.00%	28

Somewhat agree	44.57%	78
Strongly agree	21.14%	37
	100%	175
<b>Q21 – Would you be willing to pay more for tap water if you knew it was higher quality?</b>		
<b>Field</b>	<b>Percentage</b>	<b>Count</b>
Strongly disagree	5.71%	10
Somewhat disagree	10.86%	19
Neither agree nor disagree	12.00%	21
Somewhat agree	36.57%	64
Strongly agree	34.86%	61
	100%	175

The above data was collected from the Qualtrics survey of undergraduate students at UNCW.

UNCW student perceptions of the Rights of Nature can be determined by combining questions 18 and 19. Question 18 states, “Do you think giving the Cape Fear River the same rights as a person is possible?” Question 19 states, “Regarding the previous question, why or why not?” Using the quantitative data from 18 and the qualitative data from 19, each question can be put into distinguishable value groups. Six groups were created from the given answers to number 19: economic, miscellaneous, ecological, doubt, non-human, and political. These values were decided by finding common themes throughout the 113 responses. Each response was read thoroughly before deciding on common themes. These themes could be broken down more, but for this survey, only choosing six groups kept response values concise. These groups could help future research when comparing answers between values. Below, in Table 6, are the value groups with a definition and example from the survey respondents.

Table 6: Delineating Question 19 Data

Value	Definition	Example
Economical	Respondent answers are based on how the <i>Rights of Nature</i> could affect the economy.	Survey Respondent #18: “We are heavily dependent on the Cape Fear River, like many other natural resources in the world and in North Carolina. It would be hard for us to completely change our habits without having an impact on the economy.”
		Survey Respondent #21: “The heavy resistance that it would face by those who use the resources of or gain economic advantage by their relationship with the river that would likely have to be stopped due to implementing this.”
Miscellaneous	Respondent answers could not fit into one of the other five categories.	Survey Respondent #11: “It is a river.”
		Survey Respondent #88: “I do not understand the concept.”
Ecological	Respondent answers are based on wanting to maintain and	Survey Respondent #24: “Aside from it maintaining intrinsic value for existing, the rights of nature must be maintained in

	preserve the natural environment.	order for humans and nature to have a balanced existence with one another.” Survey Respondent #40: “Because the natural environment needs protecting just as much as individual people.”
Doubt	Respondent answers are based on people not believing or being apprehensive of the <i>Rights of Nature</i> .	Survey Respondent #3: “I think there are a lot of people in this area that won't ‘get’ it and will successfully spin it negatively.” Survey Respondent #33: “People are selfish and entitled. If you can't get someone to respect another person- especially if they have the same beliefs- they won't respect nature. If they can respect a body of water as a person, but not another person as a person, they are a liar and a hypocrite.”
Non-human	Respondent answers are based on believing that nature can not be compared to a human.	Survey Respondent #1: “In my opinion a body of water cannot have the same rights as a human.” Survey Respondent #16: “Public perception will not view it as a human right.”
Political	Respondent answers are based on how politics will affect the <i>Rights of Nature</i> .	Survey Respondent #13: “Because I seriously doubt that all the counties that border the Cape Fear are gonna approve such a bill, nor is the state government likely to step in.” Survey Respondent #15: “Government is influenced by people who aren't concerned about the environment.”

The above table has definitions based on the opinion of the researcher.

Table 7 creates a spectrum from the various answers to question 19. By combining the distinguishable values with 18, answers align with if respondents were for or against the Rights of Nature and their perceptions of it. Of the responses to question 19, 37.17% of them are “political,” and most of those responses believe that it is probably not possible to give the Cape Fear River the same rights as a person. One of these responses stated that they believe human rights are still a concern; therefore, the Rights of Nature can not be focused on until humans are equal. The largest overall categories were people who believe that since the Cape Fear River is not human, it is “definitely not” or “probably not” possible to implement in New Hanover County.

Table 7: Distinguishable Values Condensed

	<b>Economic</b>	<b>Miscellaneous</b>	<b>Ecologic</b>	<b>Doubt</b>	<b>Non-huma</b>	<b>Politic</b>	<b>Total</b>
	<b>al</b>	<b>us</b>	<b>al</b>		<b>n</b>	<b>al</b>	<b>(Percentag</b>
							<b>e)</b>

<b>Definitely not</b>	0	1	0	2	13	4	17.70%
<b>Probably not</b>	1	3	0	7	13	12	31.86%
<b>Might or might not</b>	1	2	1	5	5	12	23.01%
<b>Probably yes</b>	1	0	6	2	1	9	16.81%
<b>Definitely yes</b>	1	0	5	0	1	5	10.62%
<b>Total (Percentage)</b>	3.54%	5.31%	10.62%	14.16%	29.20%	37.17%	113

Table 7 shows groupings of the distinguishable values found in questions 18 and 19 of the survey.

### Conclusion

The research question asked: what are the UNCW students' perceptions of the Rights of Nature? The bigger picture of this research question is the perceptions of the Rights of Nature. The knowledge gained from this study can be used to further the Rights of Nature from the distinguishable values discovered on the perspectives of the Rights of Nature. This topic is important to research as the construct did pose some concerns to students on the feasibility. To further the possibility of enacting laws, ordinances, or policies using the Rights of Nature, the feasibility of the concept needs to be demonstrated. Overall, Table 7 shows that most respondents believe it is probably impossible to give the Cape Fear River the same rights as a person. Of these respondents, the theme that many of their answers to question 19 fell into was either political or non-human. Many of the respondents who fell into the political value category had answers based on the government not supporting the concept of the Rights of Nature. This can be seen in survey respondents 4, 13, 15, and many more (Table 8). Studying UNCW student perceptions helped to discover how future decision-makers and voters currently feel about the environment and if it is possible to extend the Rights of Nature.

Table 8: Examples of Political Responses

<b>Respondent Number</b>	<b>Respondent Answer to Question 19</b>
4	“Because for some reason taking care of the earth is a political issue. It should not be but it is. You would have to jump through so many hoops to make this happen and then somehow get the public on board.”
13	“Because I seriously doubt that all the counties that border the Cape Fear are gonna approve such a bill, nor is the state government likely to step in.”
15	“Government is influenced by people who aren’t concerned about the environment.”

Table 8 shows examples of respondents who answered in a political fashion. The numbers given to each answer have no specific meaning. No edits were made to the answers.

The significance of the results is that although UNCW students are receptive to the concept of the Rights of Nature, they do not believe it is politically feasible. Many respondents thought it would be a good addition to protect the environment but lacked feasibility. The research hypothesis that UNCW students are receptive to the concept of the Rights of Nature if they believe it is politically feasible was found more false than true. This is because more students believe it is “definitely not” possible and “probably not” possible to give the Cape Fear River the same rights as a person for political reasons. This combined data would be 49.56% of respondents, whereas students who believe it is “definitely” and “probably” possible to give the Cape Fear River the same rights as a person for political reasons account for only 27.43% of the data collected. The other respondents fall in the middle, believing that it “might or might not” be possible to give the Cape Fear River the same rights as a person for political reasons, at 23.01% of respondents. This concern must be addressed each time the Rights of Nature are implemented. Future research could focus on how to make this happen.

### Research Limitations

There has not been a study done on a college campus before to learn about student perception of the Rights of Nature. One limitation is that there was a disproportionate number of students per grade level. There were fewer freshmen and more juniors and seniors. There was also limited racial diversity in participants as this college is predominantly white. Therefore, future studies, including a more ethnically diverse set of students, would be of interest. As this study was conducted on a college campus, it limits the information gathered on demographics outside of considered normality inside a college. This would be a limitation in age, location, and employment status. Another limitation was based on Question 21, “Would you be willing to pay more for tap water if you knew it was higher quality?” as it lacked a specific number, which could have led to variability when being answered. If the sample population was divided into different groups and these students were asked the same question with a specific number, we could find out the students' willingness to pay. There is a difference in perceptions between the value groups decided in this study. In future research, the six groups can be used to compare their values with other factors from the survey. The importance of this study was to flush out the data received. In the future, the variables and categorized groups can be studied to discover if there are any relationship patterns. An ANOVA and t-test can be used to compare the relationships. An ANOVA test can be used to compare the demographic questions and theoretical construct questions, Question 19, and answers. The smaller value groups, economical, miscellaneous, and ecological, would have to be combined to use an ANOVA test. Post-stratification can also adjust the survey results to be more proportional and in line with the entire population results at UNCW for undergraduate students over 18 who are not in distance education. An additional limitation would be that the students at this college are possibly more aware of environmental issues because of the water quality issues within this community. Even so, the students did not strongly advocate for the Rights of Nature. Thus, a study on students with no linkage to an environmental issue may show a different level of support for the Rights of Nature and even the future of the concept.

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## Appendix

### Rights of Nature Qualtrics Survey

#### Start of Block: Participation is Voluntary

Your participation is voluntary. You may refuse to participate or refuse to answer any question. You may stop at any time without penalty.

The data you provide will be kept secure once it is in the researcher's possession. However, the researcher cannot guarantee security during transmission of the data due to keylogging or other spyware that may exist on the computer you are using.

If you are under 18 or not an undergraduate student at the University of North Carolina Wilmington, please do not continue.

All responses will be kept anonymous and there will be no identifiers reported.

#### End of Block: Participation is Voluntary

#### Start of Block: Demographic Questions

1. Which category below includes your age? (If you are under 18, please do not continue)
  - 18-20
  - 21-24
  - 25 or older
2. What is your ethnicity?
  - White/Caucasian
  - Hispanic/Latino
  - Black/African American
  - Native American/American Indian
  - Asian/Pacific Islander
  - From multiple races
  - Other (please specify)
3. What is your gender?
  - Male
  - Female
  - Non-binary / third gender
  - Other (please specify)
4. Which of the following categories best describes your employment status? (You may select more than one answer.)
  - Employed, working full-time (40+ hours a week)
  - Employed, working part-time (less than 40 hours a week)
  - Unemployed (currently looking for work)
  - Unemployed (not currently looking for work)
  - Student
  - Retired
  - Self-Employed
  - Disabled, not able to work
  - Other (please specify)
5. How long have you lived or gone to school in New Hanover County?
  - Less than 1 year
  - 1 to 4 years
  - 5 to 9 years
  - 10 to 19 years
  - 20 to 29 years
  - 30 years or more
6. What year are you at UNCW? (If you are not an undergraduate student at UNCW, please do not continue.)
  - Freshman
  - Sophomore
  - Junior
  - Senior
  - Super Senior
7. Do you identify as an in-state or out-of-state student?
  - In-state
  - Out-of-state

#### End of Block: Demographic Questions

Start of Block: Nature Questions

8. In your opinion, how would you describe the condition of our natural environment?
- In good condition
  - In some trouble and could be saved with a little effort
  - In bad condition and will take a lot of effort to save it
  - In such bad condition, that not much can be done
9. How aware are you of public affairs? (Public affairs: a term used to describe an organization's relationship with stakeholders.)
- Not aware
  - Slightly aware
  - Aware
  - Very aware
10. How important is it for you to be up to date on the news?
- Not at all important
  - Slightly important
  - Moderately important
  - Very important
  - Extremely important
11. How often do you check the news?
- Never
  - Monthly
  - Weekly
  - Daily
  - Hourly
12. What are the sources of your news?
- Network news outlets
  - Print news outlets (newspapers, magazines, etc.)
  - Social media
  - Cable news
- News related podcasts
13. Do you think New Hanover County does a good job protecting natural resources? (for example, river water quality)
- Strongly disagree
  - Somewhat disagree
  - Neither agree nor disagree
  - Somewhat agree
  - Strongly agree
14. Which viewpoint do you find aligns best with your values?
- Anthropocentric (humans are the most important entity on earth)
  - Ecocentric (value and importance is on nature as a whole)
  - Cornucopian (population-growth projections do not affect the Earth and that there are infinite resources)
  - Conservationist (extracting natural resources from the Earth while still keeping a sustainable relationship with the environment)
  - Preservationist (humans should not consume lands and natural resources and should instead be maintained in their pristine form)
15. Have you noticed changes in your environment? (for example, increased flooding, stronger storms, higher temperatures, etc.)
- Definitely not
  - Probably not
  - Might or might not
  - Probably yes
  - Definitely yes

End of Block: Nature QuestionsStart of Block: Rights of Nature Questions

Block 3 The following set of questions talks about the concept of Rights of Nature.

Rights of Nature is the concept that nature has the right to exist the same way as humans (Harden-Davies, et. al., 2020). This concept is based on giving nature the ability to have personhood, which in turn gives the specific part of nature rights that a human would have

(Kinkaid, 2019). This ability for nature to have personhood means that there are certain aspects of respect that nature then receives.

16. If New Hanover County were to try to implement a Rights of Nature statute would your gut reaction to be for or against it? (For instance, New Hanover County decides to give the Cape Fear River human-like rights. This would make it illegal to pollute the Cape Fear River within New Hanover County.)

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

17. Do you think the concept of Rights of Nature could be a good protection strategy for natural resources? (for example: the Cape Fear River)

- Definitely not
- Probably not
- Might or might not
- Probably yes
- Definitely yes

18. Do you think giving the Cape Fear River the same rights as a person is possible?

End of Block: Rights of Nature Questions

- Definitely not
- Probably not
- Might or might not
- Probably yes
- Definitely yes

19. Regarding the previous question, why or why not?

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20. If the government were to put more emphasis on water quality protection, would you as an individual be more likely to pay high drinking water rates?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

21. Would you be willing to pay more for tap water if you knew it was higher quality?

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree