

**The Nexus of Climate Change Messaging and Morality at
Boston College**

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Abstract

Boston College as an institution teaches the importance of social responsibility, urging its students to use their degrees to solve the world's most pressing problems. Climate change in many regards can be regarded as the largest predicament facing humankind on an ecological, moral, and ethical basis - yet action fighting this problem here at BC is not a priority to most students. The study aimed to find the morality foundations within the undergraduate study body in order to better tailor climate change messaging campaigns to target action, and to discover the overarching beliefs around the high-contested, partisan issue. A survey was distributed using the reference of Jonathan Haidt's Morality Matrices and the Yale Six America's Climate Study. The morality portion of our results reveal a study body with a four-foundational moral matrix largely across demographics consisting of care, fairness, oppression, and loyalty. The climate portion of our results highlights that while the vast majority of the BC student body thinks climate change is happening with much certainty and believe it will profoundly impact plants and animals as well as people in developing nations, there is a personal disconnect with the subject because the majority of the population does not think it will much affect the BC community, their family or themselves. Overall, the study reveals a morality pattern which can be used to better inform the student body's personal disconnect from climate change as an issue, which will hopefully inspire increased action.

Table of Contents

Introduction	4
Methods	7
Results	12
Discussion	19
Recommendations	22
Works Cited	25

Introduction

Precedent of Climate Action at Boston College

Boston College was founded in 1863 on the principles of Catholic social teaching with the ultimate goal of developing students who directly address the world's most urgent problems. Anthropogenic climate change, in many respects, can be considered the greatest issue facing humanity today. Beginning during the Industrial Revolution, humans have emitted over 100 gigatons of carbon dioxide into the atmosphere through the burning of fossil fuels (U.S. EPA). Climate change is predicted to and is already resulting in dire consequences to people around the world, especially marginalized societies (Health and Human Rights Journal). For example, entire islands in the South Pacific have already had to relocate to other islands as a result of sea level rise making their homes unlivable (The Guardian). With this massive issue in mind, there seems to be a disconnect between BC's ideals and the institution's action on climate change. While research from 2016 under Boston College Professor Jeremy Shakun shows that several hundred BC students are concerned about climate change, there is a discrepancy in the amount of action that correlates with this concern throughout the student body, faculty, and administration.

Boston College is ranked as one of the most prestigious universities in the United States and therefore has an inherent responsibility to act as a leader in combatting major social and ethical issues like climate change. Furthermore, Catholic social teaching asserts that we must care for our "common home" and therefore our Earth. Based on these two assertions, Boston College is not only responsible to combat climate change but is equipped with the resources to do so. Yet, by many regards, the institution is currently dedicating limited resources to doing its part in overcoming the massive ecological, moral, and ethical predicament (The Heights, 2017).

Climate Communication Developments

The communication of how climate change can be addressed is pivotal to garnering student motivation and commitment to action. What captivates the interest of one individual with certain political leanings is not necessarily what captures the minds of those on the other end of the political spectrum. Social psychologist, Jonathan Haidt explains how our unconscious cognitive capacities guide and control our conscious decisions and deliberations. Haidt has developed a moral matrix which maps the importance of five different morals (care, fairness, loyalty, authority, and sanctity) against the political leanings. Figure 1 shows the results of his study and indicates that while liberals stress the values of care and fairness above all else,

conservatives find value in all five fairly equally (Haidt, 179).

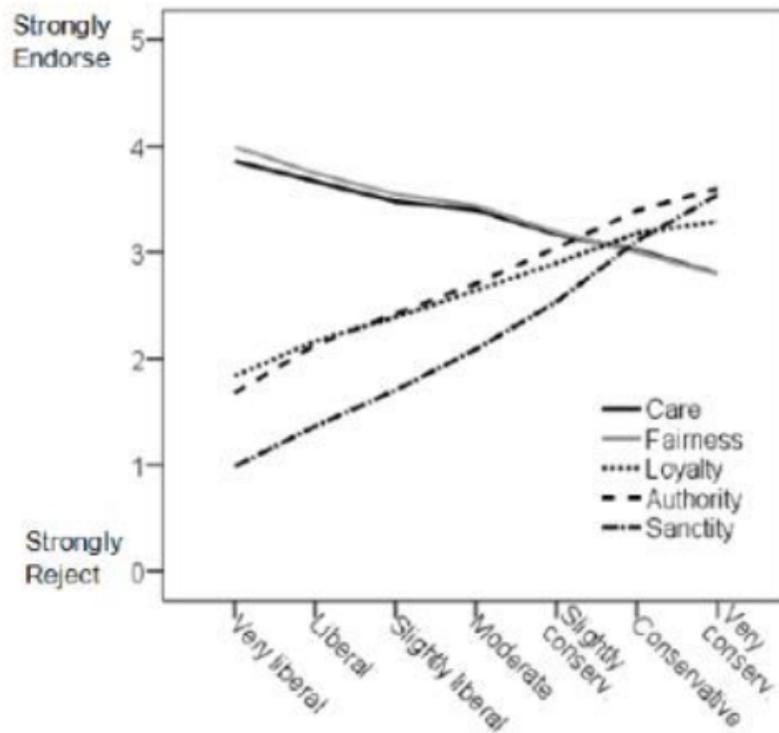


Figure 1: Haidt’s Moral Matrix: An accumulation of research that maps the importance of five moral values (care, fairness, loyalty, authority, and sanctity) versus political preference.

In *The Righteous Mind*, Haidt argues that we must work within the confines of our groupishness if we want to bridge the connections between what he terms “hives” by forging human connections between groups (Haidt, 254). Haidt’s research has been supported by climate communication investigations. Research suggests that promoting attitudinal change, in a sense appealing to the rider, is not as effective in mediating the link between individual attitudes and behaviors as targeting social norms, in a sense appealing to the elephant and the ‘hive’ (Ockwell et al., 305). Inforcing the social and structural impediments to behavior change over individual and voluntary action is a more effective way at facilitating both acceptance of low-carbon lifestyles and engagement with climate change action. (Ockwell et al., 306). The manifestation of these findings at BC would involve increased climate messaging that targets social and structural elements of the university over individual action.

Knowing where the BC community falls on this Haidt’s moral spectrum would be valuable in tailoring communication campaigns which speak to their underlying unconscious

cognitive decision making. One of the foundational elements of communication is to know one's audience, and for climate messaging a pivotal part of this knowledge includes the audience's beliefs on climate change. The Yale Project on Climate Change partnered with the George Mason University Center for Climate Change to gather this pivotal information about the climate change beliefs of the American public (moving forward, this study will be referred to as Yale's Six Americas). The study found a six-faceted America, in which the population is split by their belief, concern, and motivation surrounding climate change; the groups ranged from alarmed, concerned, cautious, disengaged, doubtful, and dismissive (Leiserowitz et al., 1) (Figure 2). Grouping the BC undergraduate study body into similar groups will help to refine the differences within the population messaging campaigns target audience.

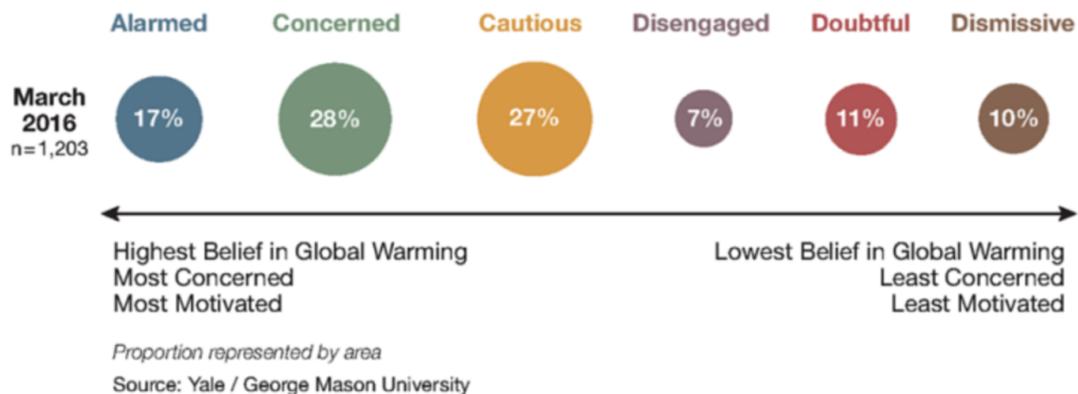


Figure 2: Yale's Six Americas - A large pool of American subjects was surveyed and then placed into six categories based on their concern, or lack thereof, about climate change.

Research Study Aims

Ultimately this project aims to provide sustainability and climate justice organizations on campus and faculty with the tools to help inspire and motivate BC students to action. The aim was to conduct an online survey to measure student concern and action on climate change as well as the main moral principles they identify with. This information will be utilized to create recommendations for student organizations and faculty on how to frame climate change in a way that not only instills interest, but more importantly: action. The survey results and accompanying recommendations could prove to be a powerful communication tool for sustainability efforts on campus.

Methods

We created an online survey to assess which of Haidt's six moral principles students identify with, their level of concern about climate change, and opinions on what groups climate change will affect most. We used the online platform, Qualtrics to create the survey and distributed it via email to professors, resident directors, and classmates. The survey link was also posted to Boston College class of 2017, 2018, and 2019 Facebook groups. Only Boston College undergraduate students were surveyed. A wide variety of professors were contacted so as to reach a diverse portion of the BC population. Moreover, the survey was distributed to resident directors and RAs in the attempt to get responses that accurately represent the demographic distribution of the BC student body. The survey was anonymous but included eight demographic questions such as class year, gender, major, country and city of origin, and political affiliation.

The first and second sections of the survey consisted of twelve questions on morality and fourteen questions on climate change, respectively. Of the twelve morality questions, there were two questions that accounted for each of Haidt's principles of moral messaging: care, fairness, oppression, loyalty, authority, and sanctity. The questions were emulated questions from Jonathan Haidt's moral survey website, yourmorals.org, to measure students' moral affiliations. The survey asked the subjects to rank a particular action from 0 to 10; 0 being something that is not at all relevant to their judgment of right or wrong and 10 being very extremely relevant to their judgment of right or wrong. The actions and their corresponding moral principle include:

Table 1. Survey Questions on Moral Relevance

Moral Principle	Question
Care	Whether or not someone cared for the weak or vulnerable
Fairness	Whether or not someone acted unfairly
Oppression	Whether or not someone uses their power to oppress another person
Loyalty	Whether or not someone did something to

	betray his or her group
Authority	Whether or not someone showed a lack of respect for authority
Sanctity	Whether or not someone violated standards of purity and decency

The next six questions asked the subjects to rank from 0 to 10 their agreement in a statement. The questions and their corresponding moral principle include:

Table 2. Survey Questions on Personal Moral Importance

Moral Principle	Question
Care	Compassion for those who are suffering is the most crucial virtue
Fairness	When the government makes laws, the number one principle should be ensuring that everyone is treated fairly
Oppression	I am wary of leaders unless they have first earned my trust
Loyalty	I am proud to be a BC eagle
Authority	If I were a student and disagreed with my provost or dean, I would stay quiet because that is my duty
Sanctity	People should not do things that are

	disgusting, even if no one is harmed
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Higher rankings indicate a higher identification with a particular moral principle. Since there were two questions per moral principle, the average for each was calculated on Microsoft Excel to determine how highly each subject identified with a particular principle. The total average for each principle was calculated and compared to a demographic such as political affiliation or undergraduate college to determine a moral matrix that is representative of the BC student body.

The questions on climate change were extracted from Yale University’s study “Global Warming’s Six Americas” which align people based on their level concern about climate change. These questions ask the subjects to identify whether or not they think climate change is real, how certain they are of its existence, how important it is to them, and to what extent it will affect their lives. These questions will allow us to determine which of the “Six Americas” BC falls on: alarmed, concerned, cautious, disengaged, doubtful, and dismissive. The climate questions include:

Table 3. Questions on Climate Change Certainty, Harm, and Action

Certainty
Do you think climate change is happening?
How certain are you that climate change is happening?
How important is the issue of climate change to you?
How worried are you about climate change?
Personally, how well informed do you feel you are about the issue of climate change?
Harm
How much do you think climate change will harm you, personally?
How much do you think climate change will harm your family?
How much do you think climate change will harm the BC community?

How much do you think climate change will harm the plants and animals?
How much do you think climate change will harm people in developing countries?
Action
Do you think BC should take action on climate change?
Over the past 12 months, how many times have you attended on-campus events about climate change?
Over the past 12 months, how many times have you attended a community meeting or rally for climate change action?
Over the past 12 months, how many times have you volunteering or donated money for climate change causes?

Student level of concern, how much harm they think climate change will cause to different groups, and how much action they have taken to combat and protest climate change, will all help indicate which of the Six Americas BC students fall under.

Results

Demographic Information

Over the period of two weeks, 140 responses were collected and stored in the Qualtrics database, which renders our data statistically insignificant considering there are over 9,000 undergraduates at Boston College. Out of those responses, 80% of subjects identified as White or Caucasian, 10% as Asian/Pacific Islander, 6% Hispanic or Latino, 1% Black/African American, and 3% other. We decided against analyzing results in conjunction with the subject's' ethnicities because they are not representative of the BC student population. 64% of respondents were female and 36% were male, which is also unrepresentative of the student body, given that during the 2015-2016 academic year, 53% of the student body identified as female and 47% as male.

77% of respondents were from students in the Morrissey College of Arts and Science (MCAS), 18% from the Carroll School of Management (CSOM), 6% from the Lynch School of Education, and 0% from the Connell School of Nursing (CSON). The school affiliation is relatively representative of the BC student body. For instance, in the Fall of 2015, 65% of BC students were enrolled in MCAS, 24% from CSOM, 7% from Lynch, and 4% from CSON (Boston College Fact Book, 2016). Therefore, subjects were grouped by undergraduate college to compare their responses to the morality and climate change questions.

Figure 3 illustrates the political affiliations of all respondents. It is important to note that while the majority of the surveyed group has a political affiliation, 20% of students are unsure of their political affiliation. Over 50% of BC students are liberal while 14% are conservative.

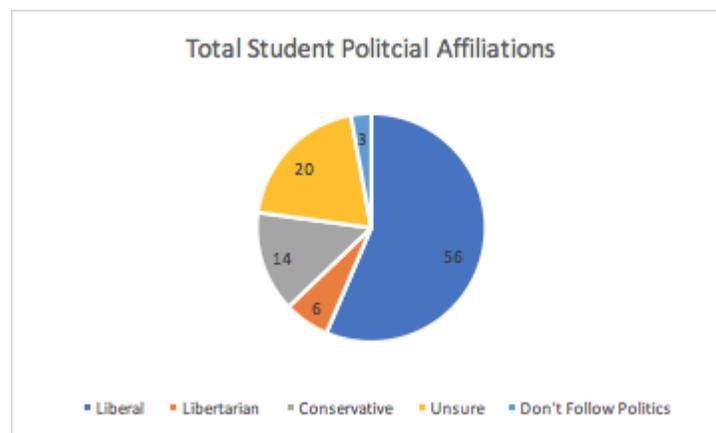


Figure 3. Political Affiliations of Surveyed Boston College Students

Student Moral Foundations

Figure 4 illustrates each of Haidt’s moral foundations and their level of appeal to each undergraduate school. CSON is not included because none of the respondents identified as CSON students. Each school identified the least with loyalty and sanctity. Lynch students identified most with the care principle while MCAS identified mostly with the oppression principle and CSOM with the authority principle. Overall, all three schools almost equally identified with care, fairness, oppression and authority.

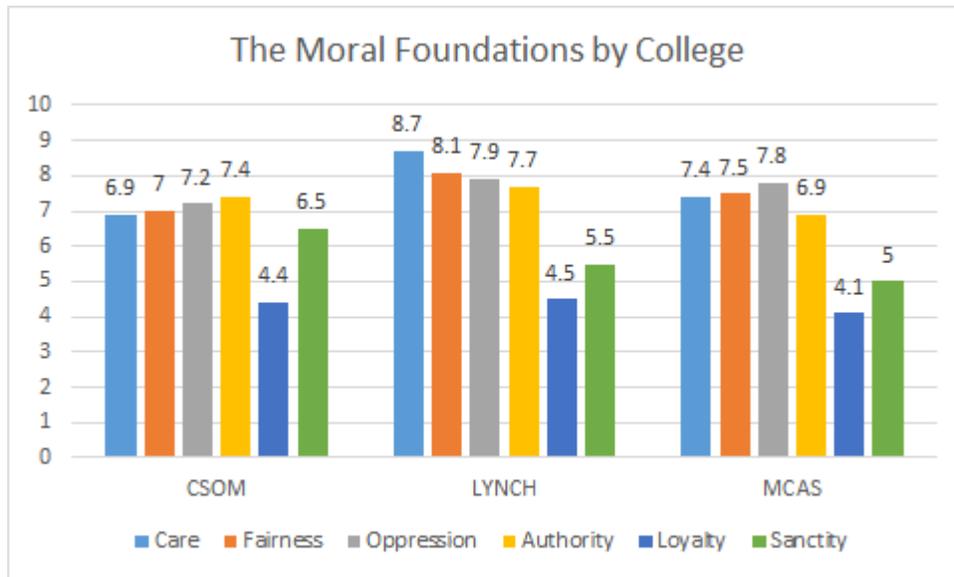


Figure 4. Highest identifying moral principles by undergraduate college.

Figure 5 depicts the dominant moral principles of each political affiliation group. Rather than conservatives placing an overall equal value on each moral principle as they do in Haidt’s study, all political and non-political affiliations strongly identify with the care, fairness, oppression, and loyalty. Consistent with Haidt’s findings, liberals value authority the least. Both Figures 4 and 5 illustrate that the entire survey body identified the most with the four principles listed above.

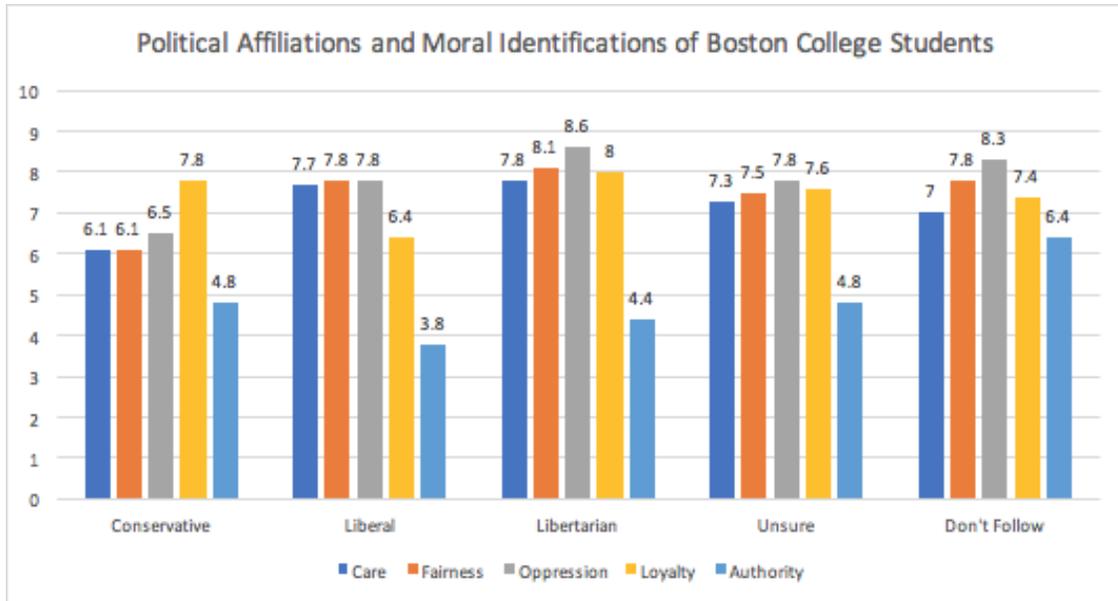


Figure 5. The moral foundations of the different political affiliations at Boston College.

Climate Change Conviction

Students clearly believe that climate change is happening and are for the most part, moderately concerned about it. Figure 4 illustrates that 87% of Boston College students are very certain that climate change is happening and 12% are somewhat certain.

How certain are you that climate change is happening?

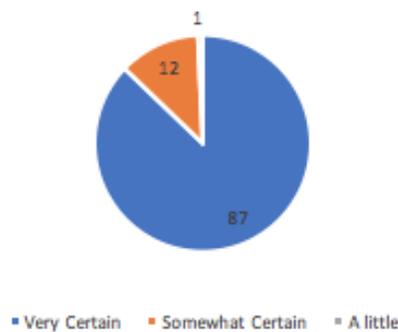


Figure 6. Total student certainty that climate change exists and is happening.

Figure 7 shows the importance the subjects assign to climate change in their personal lives. 41% of students consider climate change extremely important, while 24% consider it moderately important and 8% as slightly important. Thus, most BC students are aware of climate change, and consider it at least moderately important to their own personal lives.

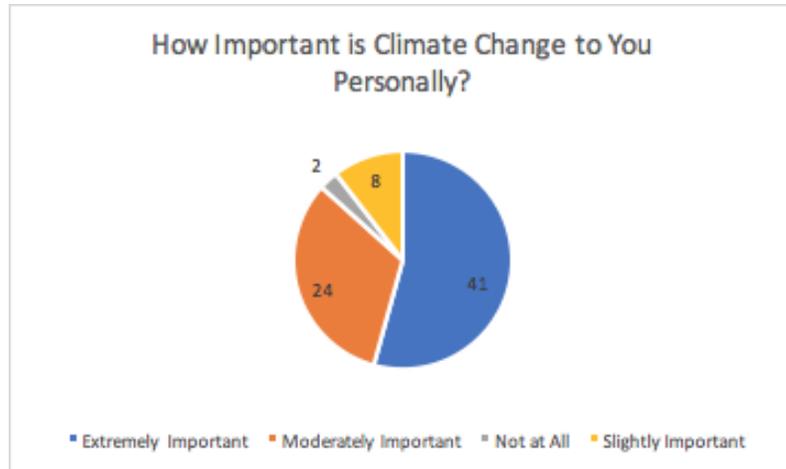


Figure 7. Percentage of personal importance students assign to climate change.

This personal importance is reflected in Figure 8, which shows student concern about climate change. The majority (85%) of students are very worried or somewhat worried about climate change.

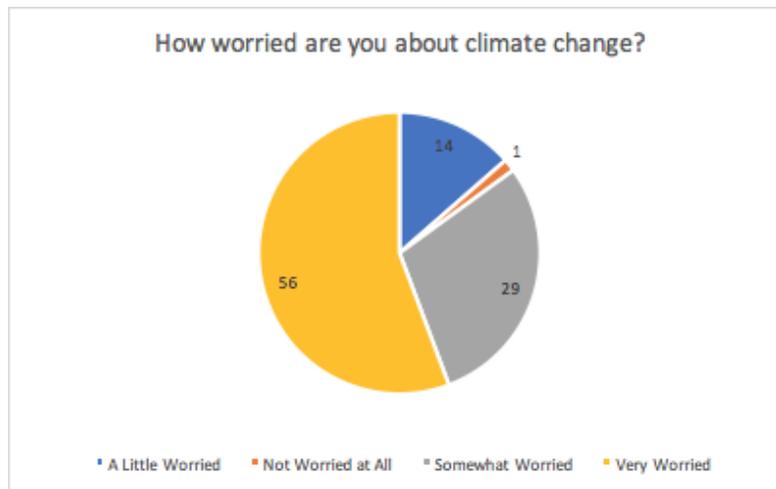


Figure 8. Total student concern about climate change.

However, despite the high concern about climate change, and the personal importance it holds to students, over 50% of students feel little to somewhat informed about climate change, as seen in Figure 9.

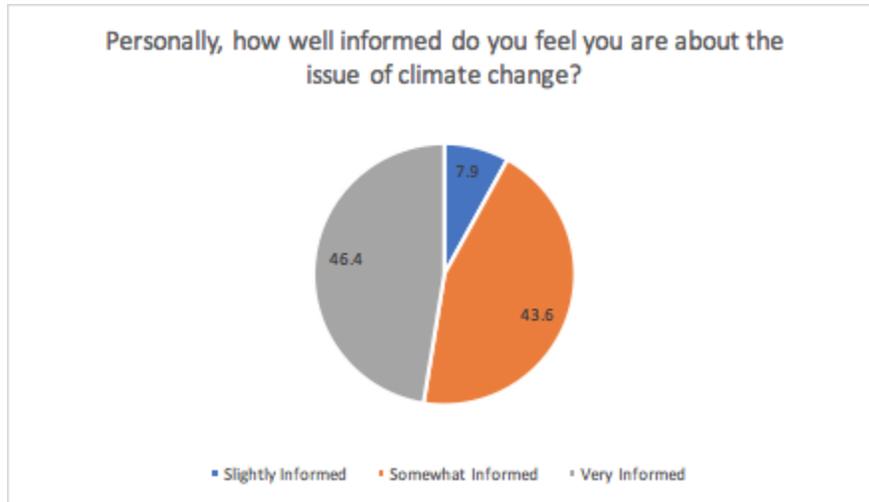


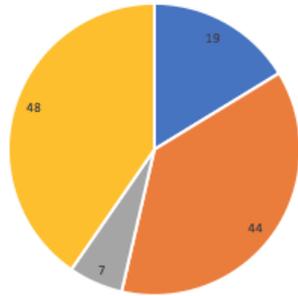
Figure 9. Level of student knowledge pertaining to climate change.

Therefore, there is a clear disconnect between the strong concern about climate change among students and their actual knowledge on climate change. This lack of knowledge could either stem from many different areas of education, whether it is access to education or lack of action towards educating oneself.

Climate Change Harm

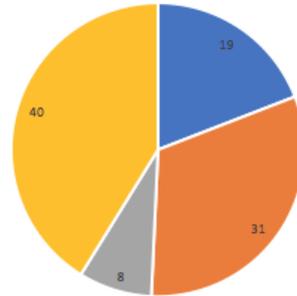
Figure 10 shows that most students believe that they themselves, their families, and the BC community will be somewhat affected by climate change. Students think these groups will all be between 40% and 48% somewhat harmed. By contrast, Figure 11 illustrates how students believe that between 88% and 89% of plants, animals, and marginalized communities will experience “a lot” of harm as a result of climate change. Therefore, students believe that groups outside of their own lives will be more greatly affected by climate change.

How much do you think climate change will harm you, personally?



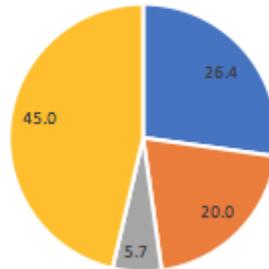
■ A little ■ A lot ■ Not at All ■ Somewhat

How much do you think climate change will harm your family?



■ A little ■ A lot ■ Not at All ■ Somewhat

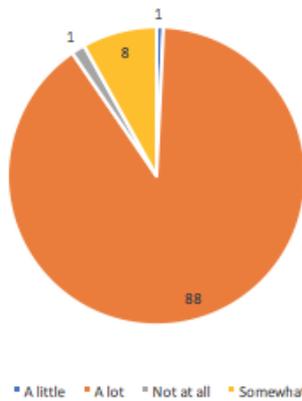
How much do you think climate change will harm the BC community?



■ A little ■ A lot ■ Not at all ■ Somewhat

Figure 10. Student belief on how much harm their families, the BC community, and themselves will endure as a result of climate change.

How much do you think climate change will harm people in developing countries?



How much do you think climate change will harm plants and animals?

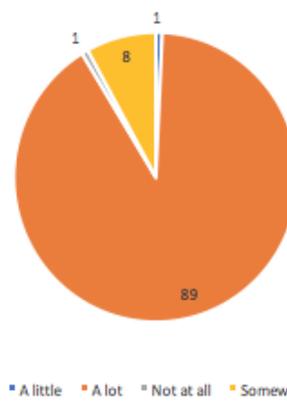


Figure 11. Student belief on how much harm people in developing countries and plants and animals will endure as a result of climate change.

Climate Change Action

Figure 12 illustrates that 85% of students believe that BC should take action on climate change, while Figure 13 shows that only 39% of students have attended more than one on-campus event and/or action on climate change within the past twelve months. Once again, there is a clear disconnect between student conviction and action to address climate change.

Do you think BC should take action on climate change?

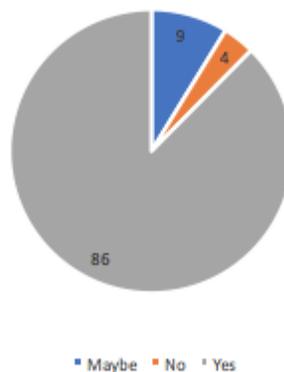


Figure 12. Student opinion on whether or not Boston College should take action on climate change.

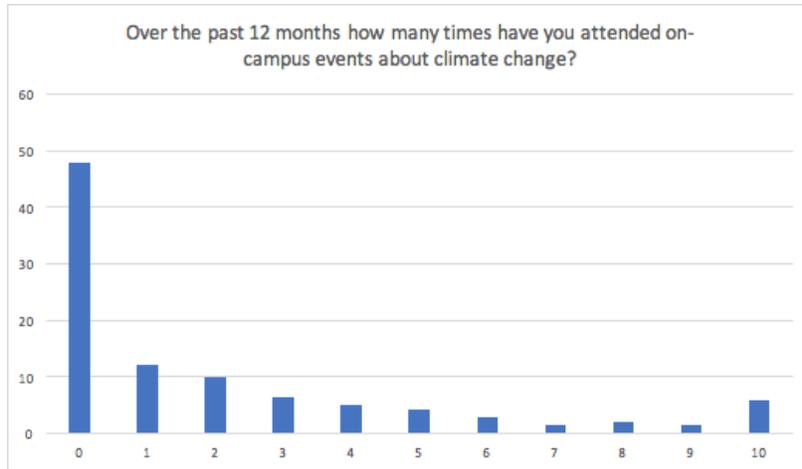


Figure 13. Number of on-campus events geared towards climate change that students have attended within the past 12 months.

Discussion

The survey findings reveal a dichotomy within the BC undergraduate population. The results established that the vast majority of the population at BC thinks climate change is happening with certainty, yet it is of differing importance levels to various factions of the student body. The results reveal that they are worried about the impending effects of climate change, yet have taken limited actions to combat the progression of it here at BC through attending climate-gearred events. The separation between the worry around climate change and the will to turn that into action is perplexing, yet explainable.

The dichotomy between belief that climate change is happening and the lack of action is partially explained within our further findings. While the BC population largely feels climate change is happening with great certainty, over half feel only somewhat or slightly informed about the issue; revealing a huge potential acting point for the future work of environmental clubs to better inform the student body about the processes and effects. Furthermore, the dichotomy is explained through the personal disconnect seen in our results. While the vast majority of the participants think that the effects of climate change are going to profoundly harm plants and animals as well as people in developing countries, they largely do not think climate change will have a large impact on the BC community, their family, or themselves personally. We propose that the undergraduate student body population needs to be shown that climate change will bring harm to them personally to increase action to combat it here on campus. Our findings also indicate that the majority of the Boston College student body ranges from the disengaged category to the concerned category of Yale's Six Americas because of their higher end level of concern combined with a remaining in lack of knowledge on climate change, action, and the inability to see that everyone will be affected by it. To accomplish a shift to the alarmed category most effectively student groups and faculty should utilize the morality findings in order to best tailor their attempts to reach more of the population.

The morality results in particular reveal an interesting pattern of ethics and a place for optimism here at BC. Haidt's work revealed a three-foundation liberal matrix of care, fairness, and oppression as well as a six-foundation conservative matrix with the preceding three in addition to loyalty, authority, and sanctity-- yet at BC we see a different pattern across the board, largely regardless of political affiliation, college, class year, or major. Instead of a three or six-foundation moral matrix, the majority of the population has a four-foundation moral matrix

consisting of care, fairness, oppression, and authority. While the importance of these four differ slightly across college and political affiliation, the heightened importance of these particular foundations across demographics shows the potential for common moral grounds across groups on campus. While these different groups may connect with information in different ways, it is likely that the social-teaching of Jesuit education has helped to instill a similar moral matrix in all of us.

Despite the commonality in morality between all of the demographics at BC, there were also some notable differences that could be valuable in messaging climate action. Based on morality findings we can better tailor our climate messaging at BC depending on the political party, class year, and college under target. Conservatives and CSOM students in particular show a heightened importance towards authority and sanctity compared to the other demographics. While the majority of the student place importance in care and fairness, it will be important to frame these arguments and messaging from a personal standpoint moving forward if we wish to bridge the personal disconnect.

Recommendations

Climate change is an intersectional topic in that it affects all living and nonliving beings on the planet. However, as our results made clear, BC students do not understand this intersectionality, nor do they believe that climate change will greatly affect them or their groups.

A proposed solution to this problem is collaboration with other non-environmental organizations on campus to highlight the connections between seemingly unrelated subjects such as finance or psychology. The purity principle can be incorporated into this collaboration by relating cleanliness and lack of pollution to combatting climate change. Campaigns could equate the overarching idea of reducing emissions, and general consumption, to cleanliness and purity on BC's campus or other places students associate with home. Student groups could use natural imagery from local areas near BC to draw the connection between global climate change and localities where BC students live.

A campaign that appeals to the loyalty principle is one that highlights student pride for and dedication to BC. The campaign would include facts about how the Boston area will be affected by climate change. For example, it could emphasize how Boston is the 8th most vulnerable city in the world to sea level rise (Nature Climate Change, 2013). The campaign could also include effects of climate change that Massachusetts is already experiencing, such as the drought that occurred during the summer of 2016 (Mass. Wildlife Climate Action Tool, 2017). In this way, the campaign would connect climate as a global issue to one that is local and that will affect BC students. Furthermore, it would help to bridge the gap between student belief in what groups will be affected most by climate change.

Another important recommendation is to focus the care and fairness campaigns on the personal and in-group level rather than on the larger inter-group scale. The results revealed that most students here at BC have picked up on the traditional care, fairness, and oppression campaigns utilized by the majority of environmental groups here at BC and nationally (Wolsko et al., 10). Instead of emphasizing the harm and inequity of climate change on groups outside of the in-group here at BC, like the harm that people in developing countries will face, emphasis should be placed on the harm and inequity to be faced by the students here. The campaigns that appeal to these foundations could include emphasizing the inequity of larger institutions like fossil fuel industries place on them personally or their in-group. The care, fairness, and oppression foundations could serve as a valuable bridge to connecting the personal to the climate change predicament.

Additionally, these collaborations can serve as a way to create new messengers on climate change. According to George Marshall in his book, *Don't Even Think About It: Why Our Brains are Wired to Ignore Climate Change*, the person who sends the message is more

important than the message itself (Marshall, 116). Marshall discusses inherent biases that are ingrained in us, such as trustworthiness. The more we trust someone, the more willing we are to listen to what they have to say. For example, Debbie Dooley, one of the founding members of the Tea Party, is an outspoken advocate on climate change and solar energy (Vox, 2017). She purposefully utilizes language that appeals to conservatives including terms like “energy freedom” and “national security.” Dooley is an example of how utilizing a person that people trust and language to frame a narrative can sway a group’s elephant in the right direction. In relation to BC, clubs and organizations should seek out a new messenger for climate, whether it is the head of the finance department in CSOM or the president of the BC republican organization, and work with them to create a new framework to which they can communicate the importance of climate change. Pairing our findings with climate messaging research reveals that it would be successful to emphasize this appeal to authority would be popular among CSOM students and conservative groups in particular (Wolsko et al., 8). Furthermore, student organizations and faculty should carefully choose their language so as to appeal to whichever target audience they may have.

With regards to BC’s overarching four-foundational moral matrix of care, fairness, oppression, and authority, there are several opportunities for new messaging campaigns. An example of an overarching campaign that appeals to all four morals is a “where were you when” campaign as derived from a World War I troop recruitment campaign (Marshall, 87). The campaign was originally used to motivate men to sign up for the draft by forcing them to look forward into the future and realize that they don’t want to miss out on an opportunity to make a difference; to do something great. In the context of BC, this could be turned into a photo campaign where students write down what they will do when someone in the future asks them what they were doing when “greenhouse gas emissions were growing out of control” (Marshall, 88). This campaign would primarily appeal to the care principle, but would also appeal to the loyalty principle in that it would hopefully instil a feeling of responsibility and patriotism. Ultimately, it would work to steer the elephant in a different direction.

There are many ways in which BC student organizations and faculty members could market and re-frame on-campus events and actions pertaining to climate change. If our survey was reproduced on a larger scale so as to become statistically significant, the results can be used to create tangible climate action campaigns on campus. Our results show that BC students

believe in climate change and are very concerned about it. Now, it is a matter of imperative to create the connection between student concern about climate change and how it applies to their own lives, help them understand how it will affect everyone in the future, but most importantly motivate them towards individual action.

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