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A case for climate justice education: American youth connecting to intragenerational climate injustice in Bangladesh

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ABSTRACT
In this paper, I present evidence for framing climate change education around social justice. More specifically, I provide empirical support for framing climate change education around intragenerational climate justice, and argue that this frame can influence youth in industrialized, wealthy nations to become mobilized, climate-engaged individuals. To do so, I apply critical qualitative analysis to narratives from American youth who participated in a global climate change education program in Bangladesh. My findings include the importance of contextualizing climate justice, framing climate change around humans, implicating ourselves in the problem and recognizing our own obligations in mitigation, seeing climate change as real and tangible, being in a place impacted by climate change, feeling solidarity with those impacted, and recognizing social injustice and power disparities within climate change impacts. Based on these findings, I recommend an approach that provides context, nuance, and personal connection to an otherwise abstract global problem.

Climate-change is the greatest human-induced crisis facing the world today. It is totally indiscriminate of race, culture, and religion. It affects every human being on the planet. But, so far, its impacts have fallen disproportionately… ‘Adaptation’ is becoming a euphemism for social injustice on a global scale. While the citizens of the rich world are protected from harm, the poor, the vulnerable, and the hungry are exposed to the harsh reality of climate change in their everyday lives. Put bluntly, the world’s poor are being harmed through a problem that is not of their making.

There is no need to commence this paper with a litany of reasons why climate change is a grave and urgent global concern; I start with the understanding that climate change is the most urgent social justice problem we face, as Desmond Tutu has aptly described in the above quote. George Sefa Dei (2010) similarly advises, ‘climate change is interlinked with questions of power, social difference, equity, and justice’ (89). Robert Bullard, often called the father of environmental justice, urges that, ‘It is important that when we talk about climate change, it is not presented as parts per million…the issue of equity should be given equal weight, too (Bullard et al. 2016, 3).’ This paper urges framing climate change education in highly industrialized nations so that climate change may become understood more widely as a social justice issue and, in doing so, that we may be more able to effect change and pursue mitigation.
Framing climate change

Climate change education has typically involved the science of climate change and/or the actions needed to address it (Monroe et al. 2017). While the science is important to understand, prior research demonstrates that knowledge about the science is not enough to affect the massive social and political changes needed to mitigate and adapt to climate change (Dickinson et al. 2013; Wolf and Moser 2011). In the climate change communication field, within ‘engagement with science’ models is the recognition that knowledge of science is insufficient (Lorenzoni, Nicholson-Cole, and Whitmarsh 2007; Wibeck 2014; Wolf and Moser 2011), and that action and commitment to change need to accompany it. Engagement models also emphasize the need for personal connection to inspire action (e.g. Lorenzoni, Nicholson-Cole, and Whitmarsh 2007; Wolf and Moser 2011). The need for personal connection to climate change has also been acknowledged in the field of climate change education (Monroe et al. 2017). While many in climate change education and communication fields recognize that understanding climate science is not enough, Gonzalez-Gaudiano and Meira-Cartea (2010) go a step further by problematizing how science shapes perceptions of climate change. They argue that science is often seen as value neutral which, in turn, makes climate change messages framed around science appear to silence social issues. In other words, centering the message on the science of climate change, even while apparently encouraging action, sends a message about what and who are important and worth considering.

Something needs to radically change in the way we communicate and teach about climate change. Wibeck (2014) reflects that in response to climate change messaging ‘fatigue,’ ‘new modes of communication and innovative forms of education’ are needed (18). Research has shown that the framing of climate change has the power to shape how it is seen (Wolf and Moser 2011). Nisbet (2009) explains that, ‘Frames are interpretive storylines that set a specific train of thought in motion, communicating why an issue might be a problem, who or what might be responsible for it, and what should be done about it.’ (15). Reframing climate change education and communications is an important move. Suggested refrairnings for climate change include public health (Maibach et al. 2010), security (Zia and Todd 2010), religion/morality, or economics. Among these, particular traction has come from public health framing (Myers et al. 2012).

Climate change communication literature has also emphasized the importance of reframing to reach new and different audiences who have not been previously concerned with environmental issues or climate change (Wibeck 2014). Engagement models also recognize the complex ways in which knowledge about science is socially situated across different groups of the public (Wibeck 2014). This research recommends using frames that resonate with various groups, recognizing that one frame does not fit all (Wibeck 2014). That said, climate communication literature cautions oversimplifying or stereotyping audience segmentation. In line with this reasoning, I suggest that framing around justice may be important for engaging groups in climate change for whom social justice is a primary concern.

Climate justice

The urgency of climate change demands that we frame the issue in ways that are most compelling to audiences beyond those already engaged and alarmed. Typical framing for climate change education and communication is nature-centric – featuring pictures of the iconic – and perhaps infamous – polar bears, glaciers, and melting ice caps (Hamblyn 2009; Manzo 2010). Given that the vast majority of the human population will never see ice caps, glaciers, or polar bears in nature, these images do not seem relevant; worse, they may reinforce a misconception that climate change is only happening far away, in places where few to no people live (e.g. Doyle 2007). Or, perhaps we have seen these images so often that we have become numb to them. Alternatively, it may be that the images of polar bears and glaciers have themselves become politically polarized. Bill Bigelow has suggested that,

Science can help us describe the problem and predict some of the consequences. But we need a social justice lens to probe the causes of the climate crisis, to focus on the stories of those most affected, and to think about how we should respond. (Bigelow and Dankbar 2016, 1)
Similar to the environmental justice movement which has reframed the environment using social justice as a narrative to catalyze social action (Bullard 2005; Taylor 2000), climate justice is a social movement that uses social justice to frame the issue of climate change. Climate justice acknowledges the disproportionate impacts that climate change is having on the world’s poorest nations and peoples and also points out that those responsible are the world’s wealthiest nations (Pittit 2004). Perhaps the most impactful aspect of climate justice is that it puts a human face on the impacts of climate change.

Kanbur (2015) explains that two distinct types of justice are addressed by the climate justice movement – intergenerational and intragenerational. Intergenerational climate justice is that which is located between generations – for example, in thinking about the need for current generations to protect and preserve for future generations (Kanbur 2015). Our Children’s Trust is a legal non-profit organization formed to recognize this kind of climate justice and in doing so, represents children and the need for climate mitigation on their behalf. Our Children’s Trust is behind the landmark case in which 21 youth are suing the US government over its failure to protect future generations from climate change, arguing that youth have legal rights to a stable climate in what has been called ‘the biggest case on the planet’ by University of Oregon law professor Mary Wood (Parker 2017, March). Intragenerational, or within generations, is a second type of justice that is addressed through the climate justice movement. Intragenerational justice highlights the differential impacts of climate change on people currently living around the planet. More particularly, intragenerational climate justice emphasizes that those being most impacted by climate change are also those who have contributed the least to the problem. Kanbur (2015) urges acknowledgement of these different types of justice arising in climate change discourse, and suggests that they need to be addressed explicitly, and perhaps separately, given their differing natures and implications. This paper focuses explicitly on intragenerational climate justice.

‘Storying’ climate justice education and communication

Climate change communications scholars have argued that the stories, or cultural narratives, that make climate change meaningful to the general public are crucial (e.g. Ereaut and Segnit 2006; Kearney 1994; Leggett and Finlay 2001). A team of journalism researchers conducting a quantitative analysis on the impacts of climate change images such as droughts, forest fires, and melting glaciers on viewers found that the most emotionally provocative images were ones that featured a single person, rather than those featuring groups of people or pictures that just featured landscapes (Sheehan, Dahmen, and Morris 2017). This finding suggests that a picture focusing on one person helps people feel more empathy than a picture showing groups of people, perhaps because it is easier for us to put ourselves in the shoes of an individual.

Fortunately, some climate communication initiatives have begun using stories to educate about climate change. The Yale Forum on Climate and the Media revamped their efforts to communicate climate change in 2014, renaming themselves ‘Yale Climate Connections’ and focusing less on the science and more on the stories of people affected by climate change or working to stop it. Another initiative entitled the ‘Climate Stories Project’ makes oral histories shared by individuals available online. The goal of this project is to provide ‘emotional and personal’ accounts to counter the ‘impersonal perspective of science or the contentious realm of politics’ (http://www.climatestoriesproject.org/). Anthropologist Susie Crate created a documentary about her work to record climate change’s human impacts. She explains that the documentary’s audiences seem most impacted by hearing individual stories of people affected by climate change (2017):

As humans have done for most of our history, [the Anthropologist documentary] tells the story of this global change via people’s lives and livelihoods. We enter into their worlds. We are touched by their community and family connections and the threat to their culture that unprecedented change presents. We feel their tragedy. (Crate 2017)

Crate (2017) calls this approach ‘storying’ climate change.
Climate justice education

Kagawa and Selby in their 2010 book, *Education & Climate Change*, assert that:

> There can be no ethical and adequately responsive climate change education without global climate justice education. Missing from most climate change education, especially in wealthier societies, is an appreciation that the metaphorical North of the planet is primarily responsible for carbon buildup but that its effects are coming thickest and fastest to the peoples and societies of the South…Education has a role in challenging and rolling back climate change injustice. (242)

Likewise, Kanbur (2015) has urged that ‘education plays and will play a key role in addressing the twin dimensions of climate justice, between and within generations’ (2). In a call to the field of education to consider climate change, Henderson et al. (2017) suggest that climate justice could be a useful research area for education scholars who study social injustices. Despite the urgent need, research on climate justice education is as yet an uncharted initiative. A Google Scholar search in December of 2017 for ‘climate change education’ revealed 4580 search results, while a search for ‘climate justice education’ revealed only 17 search results, of which only two were related to climate education and neither were empirical studies. Likewise, in a recent review of empirical studies on climate change education, Monroe et al. (2017) do not mention climate justice at all; however, they do express concern that few studies reflect Kagawa and Selby’s (2010) assertion that climate change education needs to envision a better future.

Despite a lack of research on climate justice education, some formal educators are beginning to include a focus on climate justice. Perhaps the largest initiative featuring climate justice education has been recently undertaken by the Portland Oregon public school district. In May 2016, in response to the work of local activists, parents, and educators, the Portland Oregon school board voted unanimously to pass resolution 5272, a ‘Resolution to Develop an Implementation plan for Climate Literacy.’ Bill Bigelow, an activist involved in the movement and curriculum editor of *Rethinking Schools* calls this move ‘the most comprehensive climate literacy policy of any school district in the country.’ (Bigelow 2016). As part of the climate literacy measure, Portland Public Schools includes a specific focus on developing climate justice curriculum – truly a first in the US. From its policy document:

> All Portland Public Schools students should develop confidence and passion when it comes to making a positive difference in society, and come to see themselves as activists and leaders for social and environmental justice – especially through seeing the diversity of people around the world who are fighting the root causes of climate change; and it is vital that students reflect on local impacts of the climate crisis, and recognize how their own communities and lives are implicated… Portland Public Schools’ oft-stated commitment to equity requires us to investigate the unequal effects of climate change and to consistently apply an equity lens as we shape our response to this crisis…

Portland Public Schools [commit] itself to drawing on local resources to build climate justice curriculum – especially inviting the participation of people from ‘frontline’ communities, which have been the first and hardest hit by climate change – and people who are here, in part, as climate refugees. (Portland Public Schools, 2016)

This resolution is already creating waves. Following its passage, the National Education Association, the largest teachers union in the US, voted to support it and encourage other states and cities to create similar policies (Bigelow 2016, July 16; Hellman, April 6, 2017). An environmental activism class at Lincoln High School in Portland has been created in response to the initiative and as part of the course, students have read activist work, marched on City Hall, and given testimony at public hearings on environmental issues (Hellmann, April 6, 2017). Tim Swinehart, the teacher, who is leading this course reflects that, ‘Responsible climate justice education has to help kids see how they play a role in creating a better world’ (Hellman, April 6, 2017).

The Portland public schools are clear in their interest in teaching climate change with an equity lens, yet they acknowledge in the resolution that ‘Portland Public Schools does not currently have a strategy for helping district educators to develop or to implement curriculum on the climate crisis.’ Thus, the need for curricula that feature social justice aspects of climate change is clear and urgent. Moreover, there is great need for empirical studies to validate effective and compelling climate justice curricula.
Situating this study

I propose that climate justice is a powerful frame for climate change education. Particularly in light of the Portland Public Schools climate justice initiative, the need for empirical work around climate justice education is important for designing climate change education that leads to mobilized, climate-engaged individuals. In this paper, I provide empirical support for reframing climate change education around intragenerational climate justice, and argue that this can be compelling for youth in industrialized, wealthy nations not just to learn about climate change, but become concerned and involved. Moreover, I argue not just for a climate justice approach to climate change education, but for a storied approach to climate justice education to provide needed context, nuance, and personal connection to the problem.

In previous work based on this study (Stapleton 2015), I reported that interacting with people who have been impacted by climate change increased the salience of environmental issues to the American participants. In this paper, I build on my prior study by exploring how the orientation of a global education program around climate justice issues impacted American youth, and in doing so, provide empirical support for climate justice as a promising frame for climate change education. Research questions guiding this analysis include:

• What aspects of an international climate change education program were most salient to participants, including participants for whom climate change was not of previous concern?
• How might framing climate change as a social justice issue impact students in a highly-industrialized nation?
• How might framing around climate justice impact participants’ knowledge about and action toward mitigating climate change?

To answer these questions, I share prominent themes from the participants’ narratives. Themes include: the importance of contextualizing climate justice, framing climate change around humans, implicating themselves in the problem and recognizing their obligations in mitigation, seeing climate change as real and tangible, recognizing the importance of being in a place impacted by climate change, feeling solidarity with those impacted, and recognizing social injustice. Following the analysis, I consider implications for climate justice education.

The study

The program

The program (also described in Stapleton 2015) was organized and implemented by a global education non-profit organization, World Savvy, that works with teachers and students in or near three major US metropolitan areas, New York City, Minneapolis, & San Francisco. The overseas portion of the program consisted of four weeks in Bangladesh, a nation that is already experiencing considerable effects of climate change (Rasid and Paul 2014). Of this experience, two weeks were in the capital city, Dhaka, where participants visited slums and organizations serving those living in the slums, listened to lectures about climate change, and spent time with their host families and host students. Another week was spent traveling by boat through the Sundarbans, one of the world’s largest mangrove forests and a UNESCO World Heritage site. An additional week of the trip put participants in small groups either in rural villages or urban slums to conduct service learning experiences, all related to climate change impacts on local populations. The US students were joined by host students for several of the weeks, and the Bangladeshi students were able to act as translators during this time. In addition to the overseas experience, students participated in pre-trip online learning, regional and national orientations prior to the trip, a reunion three months after the trip, and participant-created social action research projects in their communities and schools.
Program participants

The program participants were 30 high school students between the ages of 15–17 years who lived in or within 100 miles of one of the three U.S. cities where the non-profit operated: New York City, Minneapolis, and San Francisco. The participants were chosen by non-profit staff based on their leadership potential and contribution to the group's overall diversity in terms of race, class, ethnicity, nationality, religion, and orientation toward environmental issues. As a global education organization, the non-profit was focused principally on building global citizenship and secondarily on helping students understand more about climate change. While many overseas experiences are limited to those who can afford them, this program was sponsored by the US Department of State's youth ambassadors program and was free for participants. Thanks to World Savvy's wide reach across many schools, the group of 30 youth was highly diverse in every sense – socioeconomically, racially, ethnically, geographically. The youth also ranged greatly in their knowledge of and concern for climate change. Several were already active in climate change activist work, most knew something about climate change but were not particularly engaged with the issue, still others on the trip professed to know little to nothing about climate change.

Study participants

Recruitment for this study began with an email introduction from me sent to the participants by the program director. Thirteen of the program participants agreed to be interviewed by phone after the trip. The study participants were an extremely diverse group of high school students. Several youth in the study came from relatively privileged backgrounds, several others came from low-income backgrounds, while the majority fell socioeconomically along a continuum between these endpoints. The study participants came from all three U.S. metropolitan areas. The participants included six white youth and seven youth of color, of whom 10 identified as girls, and three identified as boys, all cis-gender. Racially, the study participant group consisted of six whites, two African-Americans, one South Asian, one Chinese-American, one Hmong-American, one biracial student, and one Latina. Before the trip, four self-described as being very aware of environmental issues, two self-described as being aware but not concerned, and five self-described as being unaware. All names appearing in this paper are pseudonyms.

Methods

As a researcher, I work within the critical theory paradigm, recognizing power imbalances and oppression, and I view research as an important tool to address and alleviate oppression. In terms of my positionality with respect to this study, I was able to meet all the trip participants in person at their pre-departure orientation, and I had a second opportunity to meet the participants living in/near New York City at their regional orientation. I observed activities at the two orientations and conducted focal group interviews at the main orientation. Though that data does not appear in this paper, those experiences allowed me to develop a better understanding of the participants as individuals and as a group. I also interned many years ago with World Savvy, the organization running the program, and have followed their subsequent work.

The primary source of data informing this analysis consisted of post-trip interviews conducted by myself with each study participant. The interviews ranged from 30 to 70 min depending on how much each participant wanted to share, and were conducted by phone due to our wide geographic distribution. The interviews occurred between 3 and 6 months after the youth returned from the trip to allow them time to readjust, conduct their social action projects, and reflect on their experiences. The interviews were unstructured (Cohen and Crabtree 2006), using a narrative-style approach (Clandinin and Connelly 2000); I was primarily interested in hearing the meaning that participants made from their experience as evidenced by the stories they told. The unstructured format allowed the participants to bring their own ideas into play, highlighting what was important to them about their experience. As a researcher, I wanted to avoid leading questions, so I asked initially, ‘Tell me about the trip’ and then
used follow up questions to clarify and better understand the ideas they shared. More detailed methods are described in Stapleton (2015).

In analyzing their experiences, I have spent hundreds of hours reflecting on the post-trip interviews, from conducting and transcribing them, to repeatedly coding for different analyses. Given that critical qualitative data analysis is not confined to coding, the time spent reflecting broadly on the data has greatly shaped my analysis and understanding of larger themes from the participants’ experiences. I initially analyzed the data looking at environmental identity (Stapleton 2015). In the process, I was struck by the participants’ knowledge of and enthusiasm toward addressing climate change at the close of the program. For this analysis, I was interested in climate change education aspects of the experience most salient to participants. As I isolated quotes and passages from their narratives concerning climate change education, I realized that though the program was not explicitly focused on climate justice, many emergent themes related to climate justice. I began recoding and grouping quotes based on how themes connected to climate justice. (That said, attempts to code and categorize can reduce the complexity and richness of the participants’ stories since many quotes were tied across multiple domains.) In identifying themes, I triangulated across the interviews seeking consistency across participant accounts.

Analysis

As a former high school environmental science teacher, I have spent years working closely with teenagers studying environmental issues. That said, I have rarely witnessed the intensity of enthusiasm and motivation to tackle a major environmental concern as I witnessed in this group. Admittedly, the participants were screened through an interview process and selected for their leadership potential. But, given the initial lack of climate change knowledge and/or action across many of the participants interviewed, their deep concern and activism upon returning home were striking.

Themes presented below had high prevalence within and across the youth narratives, though I included several less frequent themes because of their importance to certain subgroups – i.e. youth familiar with climate change messaging, and youth of color. Because the participants were reflecting on the trip through narratives rather than answering scripted questions from me, there is less chance of consensus across interviews. That said, emergent themes are notable since they have independently arisen across at least three or more separate narratives.

Climate justice contextualized

In this education experience, climate justice was contextualized through a detailed examination of climate change impacts on populations within Bangladesh, specifically across urban slums in Dhaka, the Sundarbans (mangrove forests), and the Chars (land forms resulting from river deposition); all places that have witnessed impacts of climate change (e.g. Ghosh 2015, April; Rasid and Paul 2014). These contexts alone were enlightening for some participants. For example, Ruilin admitted, ‘I didn’t know one country was being more affected by climate change.’ The program’s activities focused on the impacts of climate change both on various local ecosystems and on subpopulations within Bangladesh. Even the most nature-centric part of the trip (the boat trip through the mangrove forests), emphasized how climate change impacted the mangrove forests and the people who lived there. The participants were able to directly interact with a number of impacted people through service projects, where they worked alongside them helping to move a school to higher ground, or interviewing them for youth-made documentaries. As reported in Stapleton (2015), the program director explained, ‘They all met rural folks, they met climate refugees, they met people who live in slums because their farms can’t be farmed anymore because it’s too salty from increased storms.’

Nearly all study participants shared contextualized climate justice-related issues in their narratives. Anya described engaging in activities such as ‘surveying villagers about their water sources, asking them if they drank pond water or rainwater, asking how saline their water was and if it’s becoming more saline.’ Nalia explained that her group spent several days engaged in a service project with people
who lived on a Char, an island formed from river-deposition that floods regularly. About their situation, Nalia explained that,

Those are the people who are affected by climate change the most [in Bangladesh] because they experience this disastrous flooding that ruins their lives, basically every 10 years. This Char had been there for 15 years, so… something is about to happen.

Many participants mentioned the susceptibility of Bangladesh to flooding because it is low-lying and crisscrossed by rivers. They explained that rising temperatures caused cyclones to happen more frequently and to become more severe which in turn made it more difficult for many people they met to recover from the damages. As a result, many in Bangladesh were forced to leave their homes and even homelands. Participants explained that the rise in seawaters in a country at sea level caused a salinization of ground water which then impacted the availability of fresh water for crops and drinking. They also recognized that cyclones carried seawater inland, which caused further salinization of surface waters and land. They described that many people were forced to leave their homelands because of land/water salinization, and those who did not leave often had illnesses as a result. They connected the rising population (and degrading conditions) in the Dhaka slum as resulting partly from people being displaced from other areas because of cyclones, flooding, and water salinization. Across the group, the participants displayed deep contextual knowledge about how climate change was creating concrete ecological impacts that, in turn, had real consequences for the people they encountered.

Human versus nature-centric framing of climate change

While the impacts of climate change on humans in Bangladesh struck a chord with all the interviewees, a few students – those who were already familiar with climate change messaging in the US – contrasted this framing of climate change to ‘typical’ climate change images and messages that they had experienced in the US. Colin noted that,

Coming back to the US and comparing that to what the typical climate change media hype is… I think oftentimes when we say climate change here in America, students often hear – or associate it – with melting ice caps and polar bears, but we really got to see the real human aspect of it.

Likewise, Annie pointed out that

I've always just looked at climate change through, like an environmental or natural lens, focusing more on 'the ice caps are melting', not 'people are having to pack up and move every 5 years' so that was really interesting…

The youth not only noticed the difference, they urged that this should be the way we teach and communicate about climate change. For example, Annie offered that,

I think it’s really helpful to add that human connection… maybe people don’t understand water levels rising and forests being destroyed… but people will understand human suffering as kind of a universal thing. People want to help each other, I think, for the most part… I think it would be a really helpful point to get people involved in the issue, if we focus more on how it’s really affecting people.

Max went so far as to criticize a nature-centric lens in climate change messaging:

I'm not like 'save nature', I'm more like 'save us'… Really in the end it's us that are responsible for this, it's us that are going to have to deal with the effects of what we've created. So, that's why 'save the planet' bugs me… I feel like some people aren't as responsive to that message because they don't really understand that we're not saving the planet, we're saving us.

Max’s point that many people are not receptive to nature-centric climate change messaging is important.

Several recognized that they had never heard of the problem of climate refugees and were struck by it. Summer recalls,

We learned a lot about climate refugees which... was the thing I took most out of the trip– thinking about the people who are going to be affected the most. Even if we stopped all of our carbon emissions today – people will still be affected and there's not necessarily the right rules and regulations to help them, because climate refugees can't have status.
Similarly, Annie notes that
I learned this whole concept of climate change that hadn’t really occurred to me: climate refugees—I guess it’s not
officially part of climate change lingo yet or part of the curriculum, but it was just something that was very, very
relevant in Bangladesh…and I think like the thing from the trip that I think about the most is just like this group of
people who are actually refugees because of the issue, like refugees from a war or something. That really stayed
with me…

It is particularly noteworthy that even among the participants most knowledgeable about climate
change before the trip (e.g. Summer attended an environmental high school and was already a climate
activist), the concept of climate refugees was new. Annie’s comment that ‘I guess it’s not officially part
of climate change lingo or curriculum yet’ is important as it signals her awareness of an absence within
climate change education and communication.

Focus on solidarity/power imbalances

The organization used ‘bridges of solidarity’ as a unifying theme for the trip. The program director and
several participants told me about the program’s intentionality to work in solidarity with those who
lack power and privilege. This theme was of particular resonance to some of the participants of color,
no doubt, because of their personal experiences with systemic oppression. Anya reflected that,
The lesson of solidarity…Being connected with people from a completely different culture. Being able to work with
them, I feel like that was a huge theme and it really stuck through the entire trip and it still does.

Nalia read a quote by Indigenous activist Lilla Watson that she said, ‘summarizes what I can take
away from my whole trip:’
If you have come here to help me, you are wasting your time, but if you have come here because your liberation
is tied up with mine then let us work together.

The quote was shared with some of the students during a small group session led by one of the
teachers on the trip. About the quote, Nalia reflects,
That really summarized everything that we went through for the whole trip…I really felt a connection to the land
and to the people…That quote summarized what we were there to do and the impact that it had on all of us.

Nalia explained to me that
This is where I learned the true meaning of working in solidarity because…we were raising up a school…taking
this soil from the bottom, bringing it up this huge hill with a wooden basket thing on our heads and dumping it
and leveling it out for three days…just going back & forth, back & forth …we were really connecting with them
and speaking with them because we had our Bangladeshi hosts translate whatever we didn’t know…it was just
an experience where we were doing it together.

The participants felt particular solidarity with some of the most disenfranchised populations within
Bangladesh who were also being most affected by climate change. American students were well aware
of the broad socioeconomic spectrum of the people with whom they were interacting. The host fam-
ilies with whom the students lived and the partner school students with whom they worked during
much of the trip were relatively privileged. Participants recognized the wide gap between the severe
poverty they encountered in the slums/rural villages and their host families/host students. This richness
in context – both in the socioeconomic diversity of the American group and in the Bangladesh people
they met – serves as an important backdrop for understanding the role of injustice in this study. In
comparison to the most impoverished people in rural villages or urban slums, even the lowest-income
students among the American group reported feeling relatively privileged.

Nalia pointed out that people living on the Chars told the American youth that
‘To have people come from across the world to help us means a lot because our own people don’t even help us…
we’re the forgotten people.’ Nalia explained further that many of the host students from Dhaka had never been to
a char and had no idea that people in their own country were suffering so intensely.

Jay seemed particularly struck by the power and wealth imbalances within Bangladesh and the
differential ways that climate change played out across socioeconomics. He explains,
In Bangladesh, people who are poor and in rural villages are being affected the most. For example, my host family...they haven't seen as many effects because they have money...Climate change is affecting Bangladesh as a whole, so it kind of doesn't matter whether you're rich or poor, but still, they [host family] weren't receiving the brunt end of climate change and its effects because they were in the wealthier area.

Jay readily connected this trend to the way climate change will most adversely affect poorer communities back in the US as well, such as Hurricane Katrina's devastation for some of lowest income communities in New Orleans.

**Implicating themselves in the problem (and the solution)**

The program did not only focus on the impacts on people in Bangladesh; it tied these impacts directly back to the American youth themselves. This theme was prevalent in the interview narratives, with seven out of thirteen participants independently suggesting their own culpability in relation to climate change, often pointing out how specific actions that they regularly do impact many of the people they met.

Annie noted she thought about 'what you are doing to cause other people pain...' and that 'it's partly my fault that some people are going to be displaced from their land.'

Summer's language is remarkably similar to Annie's, even using many of the same words – 'pain' and 'fault' and 'displaced from their land':

It makes you aware of...what you are doing to cause other people pain. If I recognize that it's partly my fault that some people are going to be displaced from their land...it definitely just makes you realize and take things a lot more seriously.

Tina indicates that she is 'more inclined to help' (which perhaps refers to her willingness to contribute to the mitigation of climate change) because of the 'responsibility' and even 'guilt' she feels as a contributor to the problem. That the people being harmed are relatively guiltless seems to figure into her feelings as well:

I do think that the sense of responsibility...or guilt that I feel to...contributing to these horrible things that are happening to these people half-way around the world...who are definitely not doing anything to deserve it definitely makes me more inclined to help.

Nalia connects not only herself, but her country as the culprit for harming people who are the least to blame for climate change:

So what can I take away from this experience? The main thing was the fact that the people who contribute least to climate change are being affected the most...to see something that is so precious to them completely destroyed because of what is happening, you know, because of us – it was kind of like one hand was undoing the other. Like, as an American, this is an effect that we're having...I realized how greedy Americans are.

Like Nalia, Max connects the impacts on people in Bangladesh to himself and to his country:

People just like me, living in circumstances beyond their control but that were actually in our control...it was the big countries like us who were causing these problems for the smaller countries and the smaller countries couldn't handle it... just seeing how all the luxuries that we have are causing such harm to these people through floods & hurricanes ... it was really just shocking...I think this is something I'm going to be thinking about for the rest of my life every time I turn on a light or turn on the water. Now I'm just going to be thinking about what I saw in Bangladesh & the suffering that those people have there, and the little things I'm doing here contributing.

It is interesting to note Max's choice to use the word 'luxuries' since this indicates non-essentials. Juxtaposing 'luxuries' with 'harm...through floods and hurricanes' certainly creates a vivid impression of extreme disparities across the global community in relation to climate change. His comment 'beyond their control but that were actually in our control' is an important one as well since it emphasizes the differential locus of control, depending on people's national positionality.
**From an ‘abstract’ to a ‘really real’ phenomenon**

Seven of the participants independently mentioned that, despite knowing about climate change and even believing it was happening, it never felt quite as real as it did once they traveled to Bangladesh and saw the ‘really real’ impacts happening to people. I was struck by the corroboration in how youth described this shift from abstract to real/tangible conceptions of climate change. I have bolded specific terms describing this shift for emphasis. Max shared that,

> I understood climate change and I believed it was happening, but it never seemed quite so real… it seemed like this abstract idea, but going over there and realizing that, wow, this is really something that is happening, this is the future of the world if we don’t do something about it… it bumped up reducing climate change to the absolute top of my priorities.

Even though Max was a student who knew about climate change before the trip, he did not feel compelled to take action until he saw the impacts. Similarly, Colin shares that

> I knew what was happening… I understood the science behind it, but I hadn’t really connected it with reality. And it wasn’t until I saw how people were living in Bangladesh, and the sequence of events was presented to me, that I started making these connections.

Like Max and Colin, Annie knew about climate change, but was also impacted by the realness of the experience:

> We talk about climate change all the time, but – especially in Minnesota, the weather’s changed a little bit but there’s not like very real impacts present that I’m seeing in my life, so it was very different to actually see people who were facing changes that are impacting their lives a lot… Seeing how some people are being affected was like a really real experience that I hadn’t realized just how much it would impact me.

Similar to Annie, Serina recognized that ‘Seeing…the real effects of climate change… in Bangladesh… proved that oh, [climate change] is really this intense.’ Unlike Annie, though, Serina reported that she was not aware of climate change before the trip.

Like Serina, Ruilin had very little knowledge or awareness of climate change before the trip and reflected that

> Going there I realized that, wow, climate change really is a big deal and not a lot of us [in the US] come to realize it because we don’t experience it personally, like we’re just so busy with our own world and getting things done.

Tina, who described herself as not previously interested in climate change before the experience, shared that ‘it gives me a tangible thing to fight toward’. Though Summer was already a climate activist before the experience, she nonetheless repeated the language of ‘tangible’ and ‘real’:

> To see how it actually affects an area because I don’t think many people ever get that kind of opportunity and just kind of makes it more real and reminds me what is actually happening and makes it a lot more tangible.

These remarkably similar statements are perhaps most noteworthy because the youth saying them represent the full range in climate change knowledge/awareness prior to the trip, from those like Serina and Ruilin who professed to know little to nothing, through those who knew some but were not engaged by the issue, like Tina, to those who knew a lot but were not actively engaged in the issue, Colin, Max, Annie, to those who were already knowledgeable and engaged, Summer.

**The power of personal connection**

Seven participants reflected on the significance of their now personal connection to climate change. For example, Colin connects his actions through an impressively thoughtful sequence back – not just to a faraway place – but to a specific person with whom he now has a personal connection:

> When I use electricity here [in the US], in my mind the sequence of events immediately starts – I’m using energy, energy comes from the power plant, the power plant causes emissions, emissions cause climate change, climate change causes stronger cyclones, cyclones will cause more devastation and overcrowding in the cities which my friend and host, Shakeeb, is going to witness.

Importantly, Colin connects his experiences, his actions, and the impacts of his actions on climate change to a specific person, Shakeeb – his friend and host. Thus, impacts of climate change are now
deeply personal to Colin – and, as a result, more real, more urgent, more compelling. Nalia pinpoints a single individual’s story as ‘powerful’: ‘The guy in the Sundarbans who was born there, he shared his story with us and that was something that was powerful. He shared with us.’ Madison also connects the particular people and impacts she’s seen to her own life and recognizes how that connects to larger issues:

When you actually see a family…removed from their homes because of flooding and are now crammed into the slums….or our experiences on the char…these families who[se]…homes have to be relocated every couple of years, you realize how relevant it is for us as individuals who have the ability to make some sort of change in our life and what application I can have on the rest of the world. So, it’s definitely given me that context for my actions back home and just kind of broadened my horizons. I don’t think it’s possible to go on a trip like that and not see the bigger picture little bit.

Madison zooms in to the level of a single family and their story of being removed from their home and displaced to the slums as the ‘context’ that she needed to frame the significance of her actions back home. Anya aptly expresses:

I feel like it connected all the dots…now I have more of an emotional attachment to the people who are being affected by climate change. Like you know about it, you see it, you have the emotional attachment, and then the motivation to go out and be more green… seeing the effects of climate change really motivated me…I guess having that personal connection really changed it for me

Colin uses the same language as Anya, specifically pointing the emotional and personal, as he says, ‘Because I had experienced it, I had a reason to be emotionally and personally attached.’

Jay noted that ‘actually going to work with people and interact with people face-to-face, I felt that was really powerful for me.’ Likewise, Shelly commented that

I think that going to talk to the people, even though we didn’t speak Bangla–but we did have our host brothers and sisters translating – I think really hearing from them and not from newspapers and not from rich people who think they know what’s going on, I think that is what really meant the most, because we got to interact with them and we got to really feel their lifestyle and how climate change really does affect them.

Max reflects that

Just really seeing the people, it’s sort of like comparing statistical evidence to anecdotal evidence. People are going to be a lot more responsive to anecdotal evidence. You see this being very effective in politics even today, hearing about Joe Bob who lost his job. Actually getting to meet the person who was affected by this – hearing/seeing their suffering, it made it more real.

Through these quotes, we see that the participants felt touched and connected to the people that they saw, and this personal, emotional connection, tied themselves to the people and, as a result, to the problem.

**The importance of ‘being there’**

At least seven participants explicitly emphasized how important ‘being there’ in Bangladesh was to them. Shelly shares that, ‘I think that going there and talking to people who it really affects just made the entire difference.’ Like Shelly, Annie points to being in another place as the most important part, far more so than learning from a textbook in school:

I think that going to another place was the main part…being in a place and seeing it firsthand makes me more willing or makes you see the personal connection much more than just learning about it from a textbook or at your school…

Nalia notes that being in the presence of those who are suffering is far more difficult to tune out when suffering is seen on a screen.

It’s easy to see it on TV and say, ’Oh that’s so sad, but when you see it and it’s in front of your face and you can’t do anything about it…being that close to a person who is suffering and not being able to do something…it really makes you remember what you saw.

Tina similarly feels that no other media could replace her experiences there, ‘I don’t think words or pictures or movies would supplement these experiences that I had.’ Just like Tina, Colin shares that

For me it was seeing it. It was nothing that any video, picture, sound bite, nothing like that could’ve communicated.
Serina perhaps sums it best when she says simply, ‘I think just being there…changed me.’
A number of the youth were grappling with the challenge of communicating what they had seen with others back in the US who had not traveled to Bangladesh. Max considered that
It’s hard that it took that much for me to really realize the severity of global climate change & it makes me worried how…I’m going to be able to bring this information & this passion…to other people when they haven’t been able to see what I’ve seen.
Likewise, Colin admitted,
I don’t know how to communicate that to my peers…You can’t send everybody to areas that have been most affected, and so I think that’s a challenge all of us have coped with ever since…Because I had experienced it, I had a reason to be emotionally & personally attached & it’s very difficult to replicate that.

Indeed, the challenge of replicating this program on a wide-scale was even shared by the participants as they encountered how to transmit this message to others in the US.

Discussion and implications: toward compelling climate justice education
Wolf and Moser (2011) reflect that in the field of climate change communication, much research has focused on what does not work, insisting that ‘more needs to be understood about those who do make changes in their lives’ (563). They also emphasize the need for smaller, in-depth studies (Wolf and Moser 2011). That this qualitative study has found tremendous personal changes resulting from a climate change education program is worth our notice as researchers and educators. Moreover, the socioeco-nomic, racial, ethnic, and geographic diversity across participants gives these findings particular merit when thinking about framing climate change messages for different audiences. Below, I summarize the findings into larger messages for the design of climate change education.

Making climate change real through personal, human impacts
Perhaps the most important takeaway from this study is the importance of framing climate change education around impacts on humans in addition to those on ecological systems. Youth familiar with climate change messaging prior to this program felt that this human-centric framing was markedly different from what they had seen in climate change messaging & education. We should take seriously their insistence that this is an omitted yet persuasive frame. Arguably, most climate change messaging has been framed by climate scientists, environmentalists, or science/environmental educators for whom nature-centric framing is particularly salient. Being able to see beyond this bias is crucial for making climate change messaging and education compelling to more audiences. Indeed, researchers have warned that a lack of resonance of most climate change communication is a key psychological barrier in getting people engaged on the issue (Wibeck, 2014). As Max astutely reflected in his interview, ‘It all depends on how responsive people are to listening.’

While including the human impacts of climate change has been done to some extent in climate change education (e.g. CLEAN, n.d.), it typically presents generalities in terms of wide scale problems affecting mass populations. In Bangladesh, the American participants interacted with individual people, worked alongside them on projects, and lived with host families with whom they shared meals, conversation, lodging. In doing so, the participants came to connect real families, homes, and stories with climate change impacts. The power of this experience to the American youth suggests that climate justice education should be deeply personal, highlighting individuals, their families, their struggles, their stories. As Serina points out, ‘I learn from anyone who has a story to tell me about their personal experiences.’

In terms of content, the program addressed intragenerational climate justice (Kanbur, 2015), deeply examining how certain populations – often the most marginalized – were disproportionately subject to climate change impacts. By exploring different places within Bangladesh and having interactions with people there, the participants were able to see the complexity of impacts within a single country
context. Through their experiences, participants drew connections between multiple issues: increased cyclone severity, rising seas, ground water salinization, and climate refugees moving into increasingly dense urban slums.

**Connecting to the problem**

The importance of personal connection has been recognized for both climate change education (Monroe et al. 2017) and communication (Wibeck 2014). Not only were the participants personally connecting with people impacted, they were also connecting their own actions and roles to the larger problem. Connecting youth from a country with one of the highest per capita carbon footprints in the world to people on whom these footprints are leaving discernable marks is a significant contribution of this type of climate change education. Kari Norgaard (2011) suggests that climate change is a story about ‘the precariousness of privilege, the darker consequences of the good life in a world where not all have that life’ (208). In her work, Norgaard (2011) found that people in a highly-industrialized nation protected themselves from their culpability in furthering global climate change. This, she argues, led them to an everyday denial of climate change.

In contrast, for the participants in this study, realizing their own culpability seemed to engage rather than disengage them in addressing climate change. For example, Colin reflected,

> It was this realization that every small event that we do as consumers affects the climate. We’re never going to witness the effects of those small events – they’re microscopic, but there are so many of them and it’s this cumulative process that has these larger effects that people on the other side of the world, who unfortunately contribute the least to climate change, are experiencing.

Similarly, Max shared that,

> Leaving on the light switch or turning on the water is causing that much suffering in a country far far away … so I'm just looking to stop using things when I don't need them because I see it as having a more direct influence … on the people around the world.

Understanding how their individual actions accumulate to harm innocent people they met was perhaps the single most catalyzing force for the youth. Norgaard (2011) cautions that the extreme emotions that climate change invokes may actually be harmful because they may foster cognitive dissonance and denial. However, I argue here that the emotional element made all the difference – perhaps because it was made so emotional through personal connections – that the participants could not possibly deny climate change was happening or push it to the backs of their minds.

Connection is about being in a relationship, linked directly with something or someone else. At the beginning of the experience, the American youth saw their connection to climate change as abstract and tenuous. The participants reported either knowing little to nothing about climate change or seeing it as an abstract phenomenon, feeling little personal connection to it. However, after the experience, the participants felt deeply connected to the impacted/climate-vulnerable people they encountered. It was this personal and emotional connection to impacted people that, in turn, facilitated the American participants’ linkage of themselves directly and concretely to climate change, (in their words, a ‘really real’ connection).

Perhaps this is the way out of the problem Norgaard (2011) poses where emotions can be a roadblock to engaging in climate change, leading people to denial. Here, emotions are used for connection; through connection to real people affected by climate change, youth become tangibly linked to what can otherwise seem a complex, amorphous, abstract problem.

**Addressing equity within global climate change**

One key aspect of this program (and of intragenerational climate justice more generally) is a focus on equity and power and how they operate within climate change. These themes are crucial to helping people in industrialized countries understand the social complexity and consequences of climate change impacts. The program primarily approached equity through its emphasis on solidarity. Focusing on
solidarity perhaps helped to alleviate tokenizing of sub-populations most impacted by climate change. Moreover, the program allowed students to see the wide range of socioeconomic situations of people within Bangladesh. This showed participants that impacts were disproportionately experienced by those least able to shoulder the burden, even within one country. For example, participants learned that relatively marginalized residents in the Chars were the most displaced by increasingly severe flooding. Understanding the role of privilege within this complex global issue increased many of the participants’ concerns about climate change. As Bigelow urges,

> When we acknowledge that this is a human crisis, we have to analyze it the way we analyze other social crises: who benefits, who suffers, what is at the root of the crisis? And how do people’s race, class, gender, or nationality help determine how they are affected? (Bigelow and Dankbar 2016, 3)

Similarly, Endres cautions that without a critical analysis of how power and oppression operate within the climate change global social system, we may perpetuate injustice through climate change mitigation (Endres and DuPont 2016).

Importantly, the solidarity theme and power imbalances seemed to particularly motivate participants of color. Moser (2009) notes the importance of framing climate change messages for different audiences, and given this, I suggest that examining the intersections of power and racism across climate change is a useful frame, particularly for youth in industrialized countries who themselves experience oppression.

**Avoiding despair and avoidance through action**

Scholars have cautioned that a doom and gloom approach to climate change education and communication can lead to avoidance, denial, or immobilization (e.g. Moser 2009; Norgaard 2011). One of the most salient takeaways from the participants’ testimonies is that they tied themselves, their personal actions, and their country to the problem. This presents an interesting wrinkle in how we educate and communicate about climate change. I propose that the program’s positive focus on youth action – through in-country service projects and at home social action projects – helped to avoid the ‘despair deficit’ (CLEAN). These action projects focused on concrete work that youth could do immediately to help assuage climate change. While many of the youth recognized that their actions – like turning off lights – were small, they nonetheless did them, perhaps to quell some of the unease and guilt they felt about the tragic impacts of climate change they had witnessed in Bangladesh.

As a perfect illustration of this, Max shared that:

> Although it’s such a small small amount, leaving my light on…that contributes to a certain amount of energy being used, which means a certain amount of carbon is emitted, which means that global temperature is raised certain tiny amount and these actions build up over time can contribute a lot. And you know, the temperature is going up and the water is going up in Bangladesh which is causing harm to these people, so I guess I see it as more direct… leaving on the light switch or turning on the water is causing that much suffering in a country far far away…so I’m just looking to stop using things when I don’t need them just because I see it as having a more direct influence rather than an indirect on the people around the world.

While many of the youth recognized their own limitations, particularly as young people who were not autonomously able to make decisions about their housing, transportation, or even vote, being able to do something seemed to compel them to continue acting. Anya insisted, ‘Now I know what is going on, and I feel like I could do something about it.’ Ruilin, inspired by this experience said,

> There’s a bigger problem out there, more than yourself, that you’ve gotta solve…and if you want to have a better future for yourself, you also need to help the world so you can keep on going and others can keep on going, too.

The importance of agency is reflected in environmental and climate change literature. Howell (2011) has stressed that a sense of agency is vital for promoting environmental behavior. Bigelow has suggested that given the overwhelming nature of climate change, ‘We need to feel that our actions matter’ (Bigelow and Dankbar 2016, 4). Moser (2009) argues that,

> A communication strategy that does not very quickly tell people that there are feasible solutions with which to begin to address the problem, and what specific and appropriate actions individuals can take to help, is more likely to hinder than help the outreach and engagement effort. (293)
While much can (and should) be said about the limitations of focusing on individual actions, based on this empirical data, I caution that focusing only on large, abstract global policy initiatives in climate change education might be disempowering since it can feel difficult to have a voice within policy, particularly for young people who cannot yet vote. I suggest instead a multi-faceted approach which emphasizes both actions people can do now and larger systemic measures needed by local, regional, and national entities.

**Human focus at the expense of an environmental one?**

It is worth noting that this program was not framed as environmental education, or even climate justice education, but instead was organized and implemented by a global education organization whose aim is to foster global citizenship. This was discussed previously in Stapleton (2015), but bears revisiting for its impact on how climate change was framed. Because World Savvy is a global education organization, it framed the program primarily toward global citizenship, rather than environmental education. However, the focus on humans resulted in the youth becoming engaged in environmental action and intention (see Stapleton 2015). This suggests that climate change educators should not assume that an overt focus on humans will detract from the concern that students may have towards the environment.

**Addressing the conundrum of ‘being there’**

Certainly, the clearest limitation of this study is the conundrum that getting many of the youth to care deeply about climate change required tremendous carbon footprint accumulation for overseas travel. Carbon concerns aside, the costs and complicated logistics make replicating this experience on a wide-scale nearly impossible. In other words, how can we capture the ‘being there’ aspect in climate justice education without ‘being there’?

Several of the participants suggested ways to work around this. Colin suggested:

Video chat technology to integrate student-to-student contact in different countries so that hopefully students have the chance to forge those relationships so that they have an intrinsic reason to care.

Given the rapid expansion of video technologies and the rapid dissemination of cell phones globally, Colin’s suggestion seems like a plausible one. I particularly like his suggestion of student-to-student contact, since a number of the youth have discussed how important it was for them to have a personal connection – quite literally a face to connect to climate change.

Of course, with climate change impacts becoming increasingly obvious all over the world including in the US, it may be that people in industrialized countries do not need to travel very far to see/meet human faces of climate change impacts. Annie suggested that, ‘Even if it’s to a different part of their own city…any way that you can get a kid out of their own environment to see a different way people are living is important.’ To Annie’s point, a number of groups, including the Portland Public Schools, have called for an examination of climate justice through local impacts (e.g. Endres and DuPont 2016; Vongalis-Macrow 2010).

**Concluding thoughts**

[In understanding] climate change as a global climate justice issue…heart as much as head should guide what we do in the name of the human family. Tutu (2010, xvi)

Monroe et al. (2017) report that, at this point, very few empirical studies in climate change education have approached climate change from social and science (interdisciplinary or transdisciplinary) approaches. Studying the science should not be the only way we teach about climate change. Moreover, a social justice approach to climate change education does not preclude teaching the science of climate change. The program in this study focused on the science of climate change through the Bangladesh context in addition to social justice. While framing climate change education around climate justice is
promising and needed, it should be executed along with a panoply of climate change education initiatives, including an understanding of the science so that once people are motivated, they can make decisions based on facts and data. In formal educational settings, emphasizing social justice in climate change may further spread the onus of teaching climate change to a broader range of disciplines in addition to the sciences. Where climate change is already being taught outside of science disciplines, the response to climate justice may deepen the student experience and build the commitment to act, which abstract knowledge has often failed to engender. In schools and universities, having climate change within the ambit of social studies/humanities courses can lessen pressure on science instructors to be the sole messengers of climate change and may foster interdisciplinary connections and perspectives.

A number of scholars in climate change education and communication have suggested that focusing on local events, people, or places is a way to increase relevance of climate change (Endres and DuPont 2016; Vongalis-Macrow 2010). While I do not refute that local impacts are important, this study provides evidence that the people and places impacted by climate change can be compelling for audiences even if they are far away, as long as audiences are personally & meaningfully connected to them.

In acknowledging the role of the ‘heart as much as head’ for addressing climate change, Desmond Tutu points to the need, especially for those of us in highly industrialized countries, to feel deeply about climate change. As Monbiot (2006) points out, ‘nobody ever rioted for austerity’ (42). We in industrialized nations are unlikely to give up our luxuries without a convincingly good cause. But, people have rioted for justice. Putting social justice at the center of our images in climate change education and communication can give compelling motivation for people in industrialized nations to take action. Given the rapidly increasing severity of climate change impacts, we have not a moment to waste.

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References*

*Many citations in this paper are people of color and/or women; many of whom are from the Global South. This is an intentional move. It also suggests that how we frame environmental issues is in great part a result of our own positionalities.


