Chapman University

Chapman University Digital Commons

Student Scholar Symposium Abstracts and Posters

Center for Undergraduate Excellence

Fall 11-30-2022

Under New Direction: Using Theatre to Combat the Climate Crisis

Brian Kirsch

Follow this and additional works at: https://digitalcommons.chapman.edu/cusrd_abstracts

Brian Kirsch

TH 498B: Senior Seminar

Dr. Jocelyn Buckner

12/8/22

Under New Direction:

Using Theatre to Combat the Climate Crisis

I. Abstract

The Earth is growing unsuitable for human society as we know it at an unprecedented rate. Among the latest in a set of increasingly grim statistics, the atmosphere's carbon dioxide concentration is now a staggering 150% of its value for most of human history (Stein). This has triggered global warming on track to meet or exceed 1.5 degrees Celsius, which comes with extreme and irreversible changes to the planet (Jackson). However, this information fails to both command its merited attention and spark the urgent action needed to preserve our way of life. Less than half of American voters consider climate change to be a "very important" voting issue and less than a tenth consider it to be the most important one (YouGov America). The incongruence between climate change's danger and society's concern is stark and concerning.

In this paper, I analyze the content and techniques that political, scientific, and news sources employ to deliver information about climate change. I explore how these elements contribute to the failure of these media to mobilize society against the severe threat posed by climate change. Theatre, as an institution and as a set of storytelling tools, has the potential to resolve this failure to present environmental information effectively. Theatre is, fundamentally, an art form that compels its audiences and causes action. By breaking down the audiences' walls against being affected; creating an emotional connection, intimacy, and complicity; and

encouraging audience participation; theatre can call its audiences to action. I show that the emotive force that theatre builds from these techniques can be employed to truly convince society to care enough about the Earth to keep it from burning.

II. Introduction

A. The Status of the Planet

The planet's health is failing, and the situation has only grown more dire as time passes without sufficient action. Among the most alarming of the planet's concerns is the meteoric rise of atmospheric carbon, which is already causing significant and lasting impacts on the environment. This is, inarguably, the result of human activity. Prior to the industrial revolution, atmospheric carbon dioxide levels were stable at 280 parts per million for the rest of human civilization (Stein). Since the industrial revolution, this metric has skyrocketed to a staggering 421 parts per million of carbon dioxide--a 150% increase (Stein). With deforestation, the burning of fossil fuels, and numerous industrial activities, humanity has drastically altered the chemical makeup of our planet's atmosphere.

This level of carbon in the atmosphere was last seen on Earth over four million years ago, during a time when temperatures were seven degrees higher and ocean levels may have been as high as 25 meters higher than they are now (Stein). Such knowledge of the planet's past paints a dire picture of its future. If atmospheric carbon is not mitigated, a return to these conditions may be likely, changing our world with flooding and heightened temperatures. However, these are not the only impact of unrestrained environmental degradation. According to NASA researchers, climate change will worsen extreme weather and alter the Earth's ecology, resulting in the potential displacement, starvation, flooding, and likely, the eventual death of millions (Jackson).

This bleak picture of the future is not, however, set in stone; it can still be lessened or even avoided by quick, broad, and comprehensive action.

Insofar as climate change itself goes, its extent is primarily influenced by greenhouse gas emissions. In a nutshell, "future effects depend on the total amount of carbon dioxide we emit. So, if we can reduce emissions, we may avoid some of the worst effects" (Jackson). Reducing carbon emissions and sequestering atmospheric carbon are incredibly impactful strategies that can provide shelter from some of climate change's worst hazards. However, successfully following this strategy requires broadly coordinated action to reduce emissions in all sectors; "awareness [of climate change] without the ability to hold corporations, countries, and individuals accountable will not result in major action on environmental issues" (Kamarck). No singular individual or group can unilaterally reduce greenhouse gas emissions in sufficient volume to save the earth singlehandedly--instead, change must be driven by large swaths of society, both public and private, in order to accomplish enough.

B. Public Opinion

Despite the desperate need for broad public mobilization and the clear evidence of climate change's reality and grim status, large sectors of the population do not find climate change to be a real or pressing issue. Despite a nearly 90% consensus in the scientific community on climate change's anthropogenic drivers, only "50% of U.S. adults held the… opinion [that climate change is primarily due to human activity]" (Henderson 110). Such prevalent disagreement between the scientific community and the broader public signifies both a major obstacle in the dissemination of important climate change-related scientific knowledge and an untenable degree of public inactivity.

This discrepancy is in part fueled by a fundamental miscommunication between authority figures--scientific, activist, and political--and the general public. The inability of institutions and experts to communicate the urgency of climate change and encourage individuals and groups to take action inhibits the broad public mobilization so sorely needed. One element driving the failure of such scientific and political media to inspire action is "a lack of trust in [government] institutions [which] blunts the public's risk perceptions and therefore their willingness to support behaviors or policies to address climate change" (Kamarck). People who doubt the efficacy and honesty of their government are less likely to believe its communications regarding climate change and to accept the calls to act against it. Similarly, climate change is a highly complex topic. Despite the quicker successes of other environmental campaigns, "complexity is the death knell of many modern public policy problems and solutions… it is hard to see the connections between coal plants in one part of the world and hurricanes in another… when the water in your river smells and turns a disgusting color and dead fish float on top of it, no sophisticated scientific training is required to understand the link between what's happening in the river and the chemical plant dumping things into it" (Kamarck). Accordingly, media related to climate change is plagued by uncertainty and technical complexity.

The impacts of these factors interfering with communication are profound. Despite the existential threat to our way of life posed by climate change, inadequate messaging has lead to a distinct lack of public action. Polls reveal that as few as 8% of respondents identified climate change and the environment as the most important issue of the 2022 midterm elections (YouGov America 15). With so few people recognizing the true urgency and danger of the climate crisis, something is fundamentally wrong with how experts and activists communicate about climate change. Ultimately, this may be related to the lack of connection between members of the public

and the narrative of climate change that is presented to them. Essentially, “the final piece to the puzzle of why the political salience of climate change seems so out of step with the physical proof and urgency of the issue may have to do with the realm of imagination… we learn best through stories… And yet… climate change is even more absent in the world of fiction than it is in nonfiction” (Kamarck). When dealing with such a large and, at times, abstract topic, such as climate change, narrative stories help issues that may feel distant in the abstract become personal and create emotional stake.

C. A Dramatic Change in Methods

While there are numerous strategies to convey information with greater degrees of personal investment and emotional connection, many are not used or not used frequently in the context of environmental messaging. In particular, theatre, as a form of art and as a set of conventions for guiding communication alike, is underutilized by climate scientists, activists, and politicians. Theatre practitioners are--like novelists, painters, and screenwriters--storytellers. As storytellers, artists “are the most effective and powerful storytellers we have in society… One can’t underestimate the power of fiction in shaping society’s attitudes” (Kamarck). Accordingly, theatre offers a route for influencing society through the power of stories and narratives. However, theatre is particularly unique in the path it follows to create meaning and teach audiences. Theatre is able to teach using an emotional strategy by heightening an audience's emotions, isolating the emotions, and then purging them away; thus theatre teaches through eliciting curiosity, removing misconceptions, and leaving behind memories of emotion (Levy 24-25). Rather than--or in addition to--using an analytical framework or intellectual arguments, theatre provides a subconscious, instinctual, and emotional level of teaching. This emotional

connection is, in some cases, able to reach audiences who are not open to being taught through logical or analytical means.

This offers a unique opportunity for employing theatre and theatrical methods to better connect and communicate with the public in regard to discussions of climate change. Theatre has, in this way, the potential to emotionally connect with a public that has not yet been engaged. Moreover, theatre generates narrative stories which may provide audiences a tool with which to rationalize and understand the abstraction and complexity of climate change. Likewise, theatre may be able to increase audience members' emotional investment in the climate change crisis, increasing their stake in the issue and encouraging action. In fact, theatre has already been utilized for environmental messaging. Even as early as the nineteenth century, plays such as Henrik Ibsen's *An Enemy of the People* have employed traditional theatre frameworks to discuss environmental issues such as pollution (Ibsen). In recent years, more experimental approaches to environmentally active theatre have arisen, ranging from community theatre workshops focused on local environmental issues to the new field of ecodrama involving participatory and environmentally grounded storytelling. These forms of theatre provide promising progress in harnessing theatre to engage the public to combat climate change. However, these theatrical events have a limited scope due to limitations of audience size and duration. Accordingly, I propose that investigations into the isolation and use of theatre's emotionally evocative aspects in non-theatre environmental messaging is not only worthwhile but critical. By utilizing theatrical strategies, scientists, activists, and politicians may be empowered to emotionally connect with the public and encourage their action while still maintaining the broad reach that social media, news, and other electronic and written sources can command. By developing environmentally active theatre and theatrically-inspired environmental messaging, the public can be mobilized in

time to mitigate climate change. In particular, I contend that expanding the reach and accessibility of environmentally active theatre while encouraging the scientific and activist communities to adopt the emotional teaching and evocative imagery of the theatre constitutes a two-pronged approach to better impact the general public.

III. Literature Review

A. The Science

The Earth is warming. Our planet is on track to warm by at least 1.5 degrees Celsius, or more, which comes with extreme and irreversible changes to the planet (Jackson). The danger is well documented and has been for years, and yet, not enough is being done to avert the crisis. In this paper, I analyze this incongruity between the reality of climate change and the public's lack of demand for mitigation. I explore the research that documents how this discrepancy has formed and how current scientific communication continues to widen it. However, I also address the gaps in the scientific community's knowledge regarding how to bridge this divide, and propose methods for applying theatre and theatrical strategies to span the gap.

The scientific community now has an overwhelming consensus (nearing 90%) that human activities have caused and continue to drive the Earth's changing climate (Henderson 110). The literature and the analyses of scientists are in clear agreement. Moreover, not only is it clearly agreed that this climate change is happening, it is broadly accepted that it constitutes a crisis--and a worsening one at that. Climate change will worsen extreme weather and alter the Earth's ecology, resulting in the potential displacement, starvation, flooding, and likely, the eventual death of millions (Jackson). Generally, scientific inquiry on climate change has moved past questions of if and on to those of how and how to best approach it. The climate crisis' presence and severity are well-documented.

B. The Reception

However, despite this clear consensus in the scientific community, the general public is not so united. A Pew Research Center study found that only a startlingly low "50% of U.S. adults held the… opinion [that climate change is primarily due to human activity], an agreement gap [between the public and scientists] of 37%" (Henderson 110). This presents a clear lack of engagement in environmental communication by the general public, which I study in detail in this paper. The prominence of this miscommunication becomes clearer when only 8% of respondents identified climate change and the environment as the most important issue of the 2022 midterm elections (YouGov America 15). Somewhere between the scientific community and the general public, knowledge of climate change and its severity is being lost. In this paper, I explore how this communication is breaking down and how theatre can offer solutions.

Some research has heretofore been conducted on this phenomenon. Notably, psychological studies have developed models that analyze the motives for collective action. In particular, some psychologists have developed a "Social Identity Model of Collective Action," which evaluates three main elements in communication that can lead to collective action or mass mobilization: the group's perception of injustice, their perceived efficacy, and how their identity relates to the issue (van Zomeren et al., 2008). Such a model allows for quantitative communications analysis and significantly more objective comparisons than would otherwise be possible. This has, in turn, paved the way for some inquiry into the effectiveness of scientific communication regarding climate change in sparking collective action. The article, *Assessing the mobilization potential of environmental advocacy communication*, by Robyn Gulliver, Kelly Fielding, and Winnifred Louis, involves the application of an algorithm, LIWC, to the messaging

of environmental organizations to study their efficacy in relation to SIMCA (Gulliver et al., 2021).

In surveying nearly 500 organizations' messaging, Gulliver's team found that they "used emotional language far less frequently than the LIWC 2015 Dictionary. Instead, [they] demonstrate more formal, logical and hierarchical communication content" (Gulliver et al., 2021). Accordingly, the research suggests that environmental messaging is significantly lacking in emotional strategies. The study does suggest several possible reasons for this omission, including the failure of text media to adequately convey emotion, a desire to avoid perception as overly emotive or manipulative of readers, or a preference for logical and "clear-thinking" arguments and presentation (Gulliver et al., 2021). This does constitute analytical insight into the reasons for science communication's failure to engage and mobilize audiences adequately. When taken in the context of polls, such as the aforementioned Pew and YouGov surveys, it becomes evident how this miscommunication leads to a lack of public engagement on this issue. In this paper, however, I inquire into what emotional messaging could look like and accomplish in the context of climate change. While text-based media may well struggle to convey emotion in an engaging way, theatre is built around the idea of shared emotional experience, and accordingly, I study how theatre could be harnessed to improve public engagement with science.

C. The Theatre

The theatre has long been well-documented as being capable of teaching, informing, and driving the emotion of its audiences. Research abounds as to how theatre is able to so sway its audience, with many different theories put forward--perhaps, in part, due to the different strategies of different types of theatre and the varied personalities and opennesses of audience members. In *Reflections on How the Theatre Teaches*, Jonathan Levy lists eleven of the most

compelling theories and strategies that may contribute to theatre's ability to communicate, including that audience members submit themselves to being taught and quieting rationality to accept emotion; that the theatre blocks out distractions and creates a world without irrelevant details or interference; that it animates information, making it more accessible; that it can scare audiences with the consequences of their actions, dramatized up on the stage; and by interacting directly with an audience's emotions (Levy, 21-24). Levy goes on to theorize that this direct emotional connection is the most powerful and unique element of theatre's ability to teach and that it functions through heightening an audience's emotions, isolating the emotions, and then purging them away; that theatre teaches through eliciting curiosity, removing misconceptions, and leaving behind memories of emotion (Levy 24-25). Accordingly, regardless of which mechanism is employed in a given theatrical situation or experienced by a specific audience member, the fact remains unchanged that theatre teaches, at least in part, through emotion. With the research concluding that theatre is able to communicate emotionally, I explore how this can be employed in the context of fighting climate change.

Recently, a new theatre genre has begun developing with the concept of ecodrama. Though ecodrama does not have a set style or specific content, it is a form of theatre that is centered on raising awareness of environmental issues and motivating action. The field is promising, and experts report that, in regard to a 2017 Australian ecodrama, "anecdotally, many audience members reported feeling moved by the performance" (Collins et al., 22). By immersing audiences in the ecodrama, connecting with them, and even developing participation in the production, ecodrama has very effective aspects that can be utilized for encouraging activism in other contexts. However, little qualitative research has been done on ecodramas insofar and the role of pre-existing bias is unclear. While audience members report strong

feelings, research must be conducted to discern what their feelings were prior to the performance--if any audience members went from apathy or disagreement to a desire to protect the environment. Likewise, it has not yet been quantified how much this performance has driven behavioral changes and collective action.

However, ecodrama is not the only example of theatre being employed to drive environmental action. Research into the advantages and possibilities of these approaches is already underway. In *Promoting environmental justice in contaminated areas by combining environmental public health and community theatre practices*, Roberto Pasetto and Giulia Innocenti Malini propose that community theatre can build civic engagement, improve a sense of community, raise awareness of issues (namely pollution), encourage critical thought, and drive participants to challenge the status quo and take collective action (Pasetto and Innocenti Malini). This, too, offers a possible method for employing theatre in mobilizing communities to preserve the environment. While the application to environmental issues is a theoretical application in Pasetto and Innocenti Malini's paper, it is based upon the well-documented field of theatre for social change and several cases and studies that emphasize the capacity of theatre to promote civic engagement (Pasetto and Innocenti Malini). Both of these theatrical approaches to motivating environmental action have their merits, but research is still lacking, and my paper explores both of these options and present other possibilities.

Overall, in this project, I continue the research into the potential of theatre and theatrical methods in driving community and public engagement with environmental activism and climate change prevention. Evidently, the scientific consensus is that the threat of climate change is severe and that scientific communication is resulting in sufficient mass mobilization. There is a limited time to mitigate climate change before it becomes truly irreversible, and as such, it is

critical to communicate effectively and encourage public action. I argue that theatrical methods are able to create emotional connections with audience members and allow them to be open to being moved and learning. I contend that this emotional connection is the missing element of scientific messaging regarding climate change; that utilizing the emotive force of theatre can bridge the gap between scientific knowledge and public action.

IV. Findings

A. The Wrong Tools for the Job

Generally, media regarding climate change, produced by activists, scientists, journalists, and politicians alike, suffer from an inability to connect with previously neutral or inactive members of the public and motivate them to act against climate change. Despite representing different forms of media with different contexts and styles, they tend to share many of the same obstacles. In one example, in remarks delivered to the United States Senate and disseminated online, Senator Bernie Sanders spoke on the danger and urgency of the climate crisis, beginning his speech by stating:

> The most serious challenge facing our country and the entire world today far and away is the existential threat of climate change… that's what the scientific community is telling us in a virtually unanimous voice. The latest report from the United Nation's Intergovernmental Panel on Climate Change (IPCC) is very clear and it is very foreboding. If the United States, China and the rest of the world do not act extremely aggressively in cutting carbon emissions our planet will face enormous and irreversible damage. In fact, the world that we will be leaving our children and future generations will be increasingly unhealthy and uninhabitable. (Sanders)

This portion of the speech relies largely on logical arguments. Senator Sanders uses technical and largely sterile, impersonal language. The most tangible effects of climate change that he discusses here are distant, in the future. He does not explain the link between carbon dioxide and climate change. By starting his speech in this way, Senator Sanders distances his argument and himself from unconvinced audiences who are neither engaged nor inspired to act.

Similarly, Greenpeace, a large environmental justice organization, states on its website that "Our climate is in crisis… we have little more than a decade to take bold, ambitious action to transition our economy off of coal, oil, and gas, and onto safe and green renewable energy. Shifting to cleaner, locally-run energy will not only slow the tide of climate catastrophe, it'll create millions of new jobs that sustain families while protecting community health" ("Ending the Climate Crisis"). Similarly, the crux of the argument rests on logical analyses of risk, danger, and gain, rather than emotional connection.

A report published by the National Oceanic and Atmospheric Administration begins "Carbon dioxide measured at NOAA's Mauna Loa Atmospheric Baseline Observatory peaked for 2022 at 421 parts per million in May, pushing the atmosphere further into territory not seen for millions of years" (Stein). The passage not only relies on technical language but is completely abstract. It discusses the extent of carbon in the atmosphere but there is no clear frame of reference for what this truly means. A measurement of "421 parts per million" has little to no meaning to someone without a scientific background and is completely intangible.

An article in the New York Times warns that "to stabilize the world's temperatures at the cooler end of that range, two degrees, will require a near-total transformation of all the human systems that gave rise to warming: energy, transportation, agriculture, housing and industry and infrastructure. But, while ambitious and difficult, it now seems possible — a very different sort

of future, neither a best-case nor a worst-case scenario" (Wallace-Wells). Likewise, this statement is vague, abstract, and deeply complex. The complete change of human society that the article predicts is incredibly difficult to rationalize and imagine because it is presented as completely different. The article presents a complex situation, which makes it difficult for readers to identify closely with it. Accomplishing this, in reality, would take a much smaller, piecemeal approach in order to implement. The only way to ensure that the general public can understand this change sufficiently to enact it would be to see a route of many very small steps. This article does not take that path, and so, it fails to be approachable to those who most need to be convinced to act and taught how to make the change.

Accordingly, all four of these statements face obstacles preventing audience engagement and mobilization based on the degree of technical language, the abstraction or complexity of climate change, and its distance from the audience and their personal life. However, these problems are not unique to these examples. Psychology researchers have constructed a model for explaining when people are motivated to take part in a collective and what inspires them. This "Social Identity Model of Collective Action" is based on their findings that heightened senses of shared social identity, worse feelings of injustice or displeasure, and stronger confidence in the efficacy of potential action all increase the likelihood of individuals engaging in mass action (van Zomeren, 524). This model provides a means for quantifying the efficacy of calls for public mobilization, which can provide deeper insight while studying environmental messaging. In fact, a team of researchers employed the SIMCA model alongside an algorithm to analyze the messaging of almost 500 environmental organizations' websites, finding that they "used emotional language far less frequently [and] demonstrate more formal, logical and hierarchical communication content" (Gulliver et al.). This confirms the trend in the above examples,

illustrating that many environmental activists are drawn towards the usage of logical and technical language and arguments. The researchers propose that activists may be opting for such non-emotional messaging because they discount "the mobilizing power of emotion" or "assume readers come to the website with a pre-existing level of concern or negative emotion [and] strive to elicit an emotional response through the presentation of facts" (Gulliver et al.). As such, environmental messaging is devoid of the emotional messaging that may be able to motivate audiences who are not already in agreement. Environmental organizers must be able to engage neutral and even opposing members of the public to generate critical mass for the broad action that is broadly needed.

B. Another Tool on the Table

Theatre--as an art form founded in forging emotional connections between practitioners, subject matter, and audience members--provides an alternative path that may aid in connecting with the public and inspiring their engagement and action. This emotional connectivity is fueled by several aspects of theatrical experience working in concert. This involves the audience's willful engagement with the play and its emotional realities; the removal of interference from external sources; the accessibility of information presented through words, sound, and sights in the theatre; the dramatization of emotions and consequences, taking them to their extremes; and the direct interaction with audience members emotions (Levy, 21-24). Accordingly, theatre creates an environment where audience members open up their own walls against being vulnerable or affected which empowers the messages of what is presented on stage. The intimacy of the theatre and the complete focus on the story aids in engrossing the audience, deepening the impact. It is this emotional impact, more than the plot or other intellectual elements, that sticks with audience members. The theatre sparks emotions and then, even after they have faded,

"These shadow-tracks of emotion stay with us, submerged. And that it is these forgotten memories of emotion, along with other vivid and focused experiences of our lives, that form the rich, unconscious storehouse and archive of our emotional life. It is they that provide the sense of emotional recognition we feel when we find ourselves with a familiar feeling in a new situation" (Levy, 25). In this way, theatre teaches beyond the individual content of a single play or event. It works with the lived experiences of audience members to inform their decision-making. This influence to make lasting changes to the way audience members make decisions gives theatre the power to make real-world impacts. This field of theatre for social change is established and effective.

Theatre for social change is a broad area of theatre that involves the use of theatre performances as well as non-traditional theatrical events in to encourage substantive societal change and empower individuals to improve their circumstances. One particularly influential practitioner of theatre for social change is Augusto Boal, pioneer of the Theatre of the Oppressed methodology. In Theatre of the Oppressed, "the spectator is invited to actively intervene and change the course of dramatic events in real time… if the passive spectator can become an actor that changes the course of dramatic events, the passive citizen is also capable of acting in changing the course of events in the world [they inhabit]" (Silva and Menezes, 44). This general strategy, while the details vary wildly from methodology to methodology, is emblematic of the goal of theatre for social change: to transform neutral or passive bystanders into activists working towards change. Many forms of theatre for social change accomplish this by making audience members a part of the performance, or causing them to feel complicit or involved in the action on stage. Overall, in this "immersive theatre, the audience members are not passive bystanders… They are part of the story; that role may be as a witness or even an actual character;

they are empowered to act. This contrasts with the conventional model of theatre, where an audience sits silently in the dark, feeling comforted, or defeated by the performance, but unable to take action" (Collins et al., 22). Accordingly, immersion and participation provide a further step in theatre's ability to teach audiences. Theatre for social change takes a step beyond providing emotional experience to inform decisionmaking to directly teach action to the audience and allow them to practice. Such capacity for teaching makes theatre for social change a particularly useful framework when applying theatrical strategies to environmental communication.

C. The Steps Already Taken

Theatre for social change and its strategies have already begun to be applied to the climate crisis. This crossover between theatre and environmental activism--which I refer to as environmentally active theatre--is still in its infancy, requiring more study and further development, but already offers significant promise toward combatting climate change. I categorize this environmentally active theatre as a subsection of theatre for social change, and as such much of the study surrounding theatre for social change, in general, is directly applicable. However, more targeted research can tease out the nuances and peculiarities of the subgenre and of audiences' perceptions of climate change. Moreover, ecodrama, an emerging theatrical style within the category of environmentally active theatre is a promising source of new ideas and approaches but still remains novel and relatively unstudied.

Environmentally active theatre takes multiple forms and has the potential to continue developing these and exploring new pathways as well. Community theatre has served as one vehicle for this form of environmental messaging. Studying an example in Texas among several others throughout the world, researchers have found that community theatre can build civic

engagement, improve a sense of community, raise awareness of issues (namely pollution), encourage critical thought, and drive participants to challenge the status quo and take collective action (Pasetto and Innocenti Malini). In particular, this improved sense of community is important for mobilizing the public. According to the SIMCA model discussed previously, social identity is one of the primary predictors of collective action, and as such, community' theatre's ability to develop this shared group identity suggests a significant advantage in motivating collective action.

Beyond this use of already-established community theatre tools, the environmentally active theatre has also seen the arrival of a new form of theatre: ecodrama. While this nascent theatrical form is still developing its own set of conventions and standards, ecodrama generally involves the direct addressing of environmental issues, audience immersion or participation, and the use of the environment or parts of it as an aspect of the theatrical event itself. In one Australian example, researchers noted the performance's success, as "Many people volunteered their time to help and participate. The audience… were from a very broad and multicultural demographic, but mainly children and their families, which was an ideal target audience for conveying messages about environmental issue" (Collins et al., 22). Although further quantitative study is needed to confirm the extent of its effectiveness, this suggests a promising ability both invite action and convince formerly neutral or opposing audience members. It is not yet clear to what degree this qualitative information is biased; if the audience members were primarily already in agreement about the danger of climate change or if only those who were reported being moved. Finding out the answer to this question would provide ecodrama practitioners the tools to hone their craft and better reach their audiences.

Part of this effectiveness is driven by ecodrama's unique peculiarities. For this same Australian ecodrama, the performance "reached a wide multicultural and intergenerational audience. By delivering an engaging and immersive story on a living stage in a non-didactic way, it is hoped that a seed of good intention was planted in the hearts and minds of participants and audience alike" (Collins et al., 22). The immersion of the performance and the centerpiece of the environment represented on stage both serve to reduce the distance between the audience and climate change. By simultaneously engaging the audience with the emotional connection of theatre and bringing them closer to the issue of climate change, this ecodrama may truly have been capable of not only convincing the audience of the urgency of climate change, but also showing them their own closeness to it, and thereby creating a sense of efficacy. In doing so, the performance tapped into two aspects of the SIMCA model, improving its encouragement of public action. Similarly, another St. Louis ecodrama involving a tour of several polluted regions can be described through the SIMCA model. The ecodrama "brought attention to the issue of contaminated sites in the areas west of the city… The impact of the tour is lasting, as the sensory experience encourages participants to hold onto the images, smells, and sounds of each of the five sites, allowing Ross[, the creator of the experience,] to achieve her goal of bringing awareness to the contamination of land in the place she too calls 'home'" (Bauer and Kalz). This ecodrama accordingly emphasized the sense of outrage and urgency that is included in the SIMCA model, by bringing audience members to the most devastated locations, they experience the damages of pollution with all their senses. Instead of being told about the problem, audience members experience it firsthand. This closeness, coupled with the conversational setting with the practitioner, contributes to an emotionally compelling experience. Thus, ecodrama and environmentally active theatre in general offers promising approaches toward bringing about

mass mobilization in audiences. Developing these forms of environmentally active theatre further and discerning what lessons they can offer in non-theatrical settings is critical to engage a broader audience on the issue of climate change.

V. Discussion

A. The Place of Environmentally Active Theatre

Environmentally active theatre, although itself a form of theatre, functions differently and serves different purposes than more conventional theatre styles. Drawing on its theatre for social change roots, environmentally active theatre is far more immersive, direct, and often participatory, than traditional theatre. While many traditional plays do discuss social issues and call for action, the audience still remains as spectators of the narrative, rather than participants. Likewise, while informing audience members' decision making through creating memories of emotion can be effective, it does not spark immediate action as effectively. Thus traditional theatre generally relies largely on raising awareness to an issue and its severity and urgency, but does not address the other elements of the SIMCA model as effectively. Environmentally active theatre, however, is far more participatory, removing distance between audience members and issues and creating a direct interaction between audience and performer. In doing so, two or more aspects of the SIMCA model are often employed simultaneously to encourage action. Not only is a memory of emotion created, but audience members experience the toll of climate change and feel what is at stake. This allows them to experience emotional and physical representations of climate change's complexities and abstractions that are difficult to convey logically. When considering the concept of climate change, they then have a memory of emotion to inform their reaction, driving engagement with collective action. Likewise, the participation of environmentally active theatre can allow audience members to develop a sense of efficacy and

realize their own power in combatting the climate crisis. This is an important step in generating collective action as without a sense of efficacy, even the most diehard believers in climate change will have little motivation to act when they believe that public action would be futile. Thus, while theatre offers significant benefits, environmentally active theatre is even better suited for engaging the public in regard to the climate crisis.

On the other hand, environmentally active theatre has both advantages and disadvantages when compared to the environmental media of scientists, activists, politicians, and journalists. These media rely primarily on logic arguments and the outrage aspect of the SIMCA model, often failing to connect emotionally with readers and listeners or to adequately use the other elements of the model that environmentally active theatre is able to engage. However, these mainstream media forms are able to reach broader audiences and persist after an initial event has ended. When disseminated on the internet, social media, or television, environmentalists' statements can reach across the country or world, and be consumed by members of the public from all walks of life, and consumed quickly with few costs. By contrast, environmentally active theatre, as with any form of theatre, is reliant on an audience attending the show, committing time and usually a not insignificant amount of money, in order to receive the messaging. This dependence on attendance can be problematic for generating public action if members of the public who are not already engaged with climate activism do not choose to or can not afford to attend. Similarly, theatre is inherently ephemeral. A large portion of the emotional connection and even the meaning is contributed by the live performance and participation. The record of the theatrical event is generally not as evocative or emotionally powerful. When a theatre event or run ends, it is over, and few, if any, others will be won over by its messaging. Mainstream written and spoken media, however, can be consumed weeks, months, or even years after it was

produced and still remain exactly as effective. This too can allow these mainstream media formats to reach far larger audiences as viewership continues to grow over time. Due to these differences, a comprehensive approach to improving communication with the public to combat climate change requires the use of both types of communication. Neither can accomplish this alone.

B. The Path Ahead

While it is critical that both the mainstream messaging of environmental activists and the emerging field of environmentally active theatre are both employed to combat the climate crisis, it is also critical that both expand into new areas and develop additional strategies. Among the greatest drawbacks of environmentally active theatre are its severely limited reach and the difficulties associated with engaging resistant audience members. One solution to the former is simply to produce more ecodramas and other environmentally active theatre productions in more locations and for bigger audiences. However, this is far easier said than done, and would require significant amounts of funding and the collaboration of numerous artists. While it is still a good strategy, another substantive development would likely be necessary. In particular, I would recommend a movement towards some of the techniques of performance art or even drawing from Boal's Invisible Theatre methodology. By moving environmentally active theatre into a public setting the barriers preventing audience members from entering the performance space are removed. Instead, a far more random section of the public becomes the audience, ideally engaging a more diverse audience and connecting with individuals who were previously indifferent or opposed to fighting climate change.

Even traditional theatre can work towards improving environmental outcomes. While the conventional form of theatre is not perfectly suited for this work, it is far from useless, and with a

danger as daunting and as urgent as climate change, every strategy that can be used ought to be used. There is no shortage of plays and musicals that involve environmental themes or messages, and more are always being written. While they may not be as direct in every case, or as participatory as environmentally active theatre, the power to forge memory of emotion and influence audience decision making is not one that should be squandered. Regional and commercial theatres can and should include shows like *An Enemy of the People* that emphasize the importance of environmental activism in their seasons to aid in the endeavor of mobilizing the public.

Most in need of improvement, however, is the environmental media of activists, scientists, and politicians. These mainstream communications are able to reache far larger audiences than theatre productions, but are not currently able to take advantage of this reach. By employing strategies borrowed from theatre and theatre for social change, it may be possible to better benefit from the advantages offered by such a large audience. First and foremost, it is imperative that a greater degree of emotional and tangible language be used in this messaging. Environmentalists can learn form theatre and invoke memories of emotion that readers already have, drawing comparisons to scenarios that readers are more likely to have experience with. Relying solely on technical language alienates readers who do not have the requisite background knowledge or investment in environmental science. By focusing on generating emotions and creating tangible images and feelings in audiences, I propose that they will better understand the realities of climate change and be more likely to engage with collective action. It is also incredibly important that environmentalists consider the use of narrative in theatre. By discussing the causes, the effects, and the barriers preventing action--such as polluting corporations and anti-environmental politicians--environmental messaging can be framed in a narrative form. I

contend that this would help the public in rationalizing climate change while also generating outrage against those who perpetuate it, further encouraging action. Additionally, environmentalists could benefit from the sense of connection and community that theatre is able to generate. By emphasizing shared social identities amongst audiences and environmentalists, I theorize that audiences can be encouraged to work in solidarity with each other and mobilize to combat climate change.

VI. Conclusion

Accordingly, further research into the use of theatre formats and techniques for improving environmental communication merit further research and consideration. Theatre is uniquely suited to creating emotional connections with audience members informing their future decision-making, while specialized social change and environmentally active approaches are well-suited for engaging audience members with participatory experiences that can strengthen social identities and make the abstract tangible. Without the widespread use of these techniques, the public has failed to take enough action and climate change has continued to heat the Earth with grimmer and grimmer outlooks. Evidently, the written and speech-based messaging of environmental activists, politicians, journalists, and scientists are not adequate to generate sufficient public action to mitigate climate change. However, environmentalists can learn from the strategy of theatre techniques to better connect with and engage with audiences. In doing so, enough public action could be mobilized to prevent the earth from burning.

I propose that the theatre should increase the production of plays with environmental topics and messages; that environmentally active theatre should be grown in scale and scope while adopting new techniques to reach broader audiences, such as the public interaction of performance art; and that conventional environmental messaging should adopt the

emotionally-charged, narrative-based, and community-building techniques of theatre. These developments could greatly improve the effectiveness of both theatre and conventional environmental media in engaging the public and motivating public action to fight the climate crisis. However, research into the crossover of environmental communication and theatre is lacking. Significant study is necessary to quantify the effectiveness of these approaches and to map out the path for future developments to environmental communication and environmentally active theatre. Of course, this further research would not be possible without practical application. Theatre practitioners and environmentalists must take risks and attempt new techniques, such as those which I have proposed, in order to make progress. While all of them may not be successful, the current situation is not tenable in the long term, and experimentation is the only way to determine the effectiveness of a new approach.

Moreover, by experimenting with this crossover between environmental communication and theatre and by conducting research to determine how well the collaboration of these two fields compels audiences; how effectively it reaches members of the public not already committed to environmental issues; and if it is able to not only generate awareness of the climate crisis but also promote action, we can extend this study into other areas. Once research is conducted, with theatre as a proof of concept, other fields can likewise be explored. Perhaps music or visual art or game design or some other field of study holds the key to the next improvement to environmental communication. By understanding how theatre can be used to this purpose, the same can be attempted with these other fields. When it comes to fighting the climate crisis, we must use every tool at our disposal, and creating as many multidisciplinary approaches--such as this one--as possible provides the opportunity to overcome further obstacles. Furthermore, in illustrating the potential to use multidisciplinary tools, like environmentally

active theatre, for combatting the climate crisis, the possibility of these tools to address other social issues is evident. If theatre can help improve environmental outcome, perhaps it or other multidisciplinary approaches can be applied to societal problems as widespread as racial injustice, gender inequality, LGBTQIA intolerance, and socioeconomic prejudice.

VII. Bibliography

Bauer, Rachel E., and Kristen M. Kalz. "Exploring the History and Implications of Toxicity through St. Louis: Performance Artist Allana Ross and the 'Toxic Mound Tours.'" *The Journal of American Drama and Theatre (JADT)*, vol. 32, no. 2, May 2020, https://jadtjournal.org/2020/05/21/exploring-the-history-and-implications-of-toxicity-through-st-louis-performance-artist-allana-ross-and-the-toxic-mound-tours/.

Collins, Julie, et al. "Saving the Planet with Ecodrama: Transformational and Experiential Theatre within a Living Stage." *Restore, Regenerate, Revegetate Conference Proceedings*, February 2018.

"Ending the Climate Crisis." *Greenpeace*, https://www.greenpeace.org/usa/campaigns/climate/. Accessed 1 Nov. 2022.

Gulliver, Robyn, et al. "Assessing the Mobilization Potential of Environmental Advocacy Communication." *Journal of Environmental Psychology*, vol. 74, Apr. 2021, https://doi.org/10.1016/j.jenvp.2021.101563.

Henderson, Alice N. "Reflections on Science Communication in the Context of Global Climate Policy." *Global Consensus on Climate Change: Paris Agreement and the Path Beyond*, by Keith E. Peterman et al., vol. 01313, American Chemical Society, 2019, pp. 107–18.

Ibsen, Henrik. *An Enemy of the People*. Edited by Geoff Barton, Translated by Arthur Miller, 1. publ., 2nd impr, Longman, 1994.

Jackson, Randal. “The Effects of Climate Change.” *NASA Global Climate Change: Vital Signs of the Planet*, 19 Sept. 2022, https://climate.nasa.gov/effects.

Kamarck, Elaine. “The Challenging Politics of Climate Change.” *Brookings*, 23 Sept. 2019, https://www.brookings.edu/research/the-challenging-politics-of-climate-change/.

Levy, Jonathan. “Reflections on How the Theatre Teaches.” *Journal of Aesthetic Education*, vol. 39, no. 4, 2005, pp. 20–30. JSTOR.

Pasetto, Roberto, and Giulia Innocenti Malini. “Promoting Environmental Justice in Contaminated Areas by Combining Environmental Public Health and Community Theatre Practices.” *Futures*, vol. 142, Sept. 2022, p. 15. *DOI.org (Crossref)*, https://doi.org/10.1016/j.futures.2022.103011.

Sanders, Bernie. “PREPARED REMARKS: Sanders Gives Floor Remarks on Climate Disasters and the Mountain Valley Pipeline.” *Bernie Sanders: U.S. Senator for Vermont*, 8 Sept. 2022, https://www.sanders.senate.gov/press-releases/prepared-remarks-sanders-gives-floor-remarks-on-climate-disasters-and-the-mountain-valley-pipeline/.

Silva, José Eduardo, and Isabel Menezes. “Art Education for Citizenship: Augusto Boal’s Theater of the Oppressed as a Method for Democratic Empowerment.” *Journal of Social Science Education*, vol. 15, no. 4, Dec. 2016, pp. 40–49. ERIC.

Stein, Theo. “Carbon Dioxide Now More than 50% Higher than Pre-Industrial Levels.” *NOAA Logo National Oceanic and Atmospheric Administration*, 3 June 2022, https://www.noaa.gov/news-release/carbon-dioxide-now-more-than-50-higher-than-pre-industrial-levels.

van Zomeren, Martijn, et al. “Toward an Integrative Social Identity Model of Collective Action: A Quantitative Research Synthesis of Three Socio-Psychological Perspectives.” *Psychological Bulletin*, vol. 134, no. 4, July 2008, pp. 504–535. *DOI.org (Crossref)*, https://doi.org/10.1037/0033-2909.134.4.504.

Wallace-Wells, David. “The New World: Envisioning Life After Climate Change.” *The New York Times*, 26 Oct. 2022. *NYTimes.com*, https://www.nytimes.com/interactive/2022/10/26/magazine/visualization-climate-change-future.html.

YouGov America. *Economist Toplines July 11 2022*. Poll, YouGov PLC, 11 July 2022, p. 22, https://docs.cdn.yougov.com/sdsvy1azjc/econTabReport.pdf.