Stepping Sustainably:
The Potential Partnership Between Dance and Sustainable Development

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Introduction

In 1987, the United Nation’s Brundtland Commission coined the term “sustainable development,” defining it as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”¹ Since then, the definition of sustainable development has expanded and grown more complex. Now the United Nations sees it as “the guiding principle for long-term global development,” and it has become an increasingly important concept in business and governmental practices across the world.²

The “three pillars” of sustainable development—economic, social, and environmental—make up the foundation of its theory. Some people see these areas as contradictory, assuming that environmental standards harm the economy, that business damages the environment, or that both hinder basic human rights. Sustainable development seeks to end this tension and unite the three pillars. It aims to combine natural sciences with economics and the social sciences to develop the world in an economically profitable, socially conscious, and environmentally sustainable way.

In September 2015, these foundational concepts entered their next phase when the United Nations announced its Sustainable Development Goals (SDGs). The seventeen SDGs (Figure 1) replace the previous Millennium Development Goals and lay out a plan for how the United Nations will lead global development between 2015 and 2030. Through the SDGs, the United Nations aims to “end poverty, protect the planet, and ensure prosperity for all.”³

¹ United Nations (UN) Brundtland Commission, Our Common Future: Report of the World Commission on
However, in this discussion about intersectionality and working across sectors, the arts are rarely, if ever, mentioned. Thus, ample space exists for discussion and research on the topic of the arts and sustainability. The following page will explore this area, attempting to fill in the arts gap in sustainable development. Hopefully, this study will create a foundational conversation about the relationship between the two fields and will encourage further research on the topic.

While all types of art have the potential for this collaboration, dance seems to be particularly appropriate. In its most basic essence, dance can be defined as movement through space. Accordingly, it is inherently linked to space and requires a cognizance of it. Furthermore, dance’s interaction with space is ephemeral.\textsuperscript{4} Unlike other art forms that require instruments and canvases, dance does not leave tangible traces or utilize extra resources.

Nevertheless, dance does leave lasting footprints environmentally. Land must be cleared to build large studios with sprung floors, and energy must be consumed to provide stable (often

high) temperatures that keep dancers’ bodies uninjured. Theaters require extra space to accommodate audiences as well as immense amounts of electricity to power stage lights and sound systems. Set and costume designs add to dance’s resource consumption as do the vehicles and fossil fuels required for touring.

Clearly, theatrical dance as it is practiced in many parts of the world is not a sustainable system. Bringing dance into contact with sustainable development could improve the practices of dancers and dance companies. It could also benefit the outreach strategies of sustainability practitioners. Sustainable development struggles with communicating to people outside of its field. Cross-disciplinary work with dance could be one method of bridging that divide. If utilized correctly, dance could be a means of reframing the sustainability conversation so that it reaches a broader audience and targets more lasting, cultural solutions to environmental issues.

**Background: Scientific Concepts and Rhetoric**

Some geologists assert that the earth has entered a new geologic era, which they call the Anthropocene. This term comes from the Greek roots *anthropo* meaning “man-made” and *cene* meaning “new.” It implies that human actions are altering earth’s physical processes on a scale equal to that of the ice ages, the meteor that killed the dinosaurs, and the advent of living organisms. Consequently, an unprecedented new period of Earth history has begun.

Humankind’s extreme impacts on the environment began in the late-eighteenth to early-nineteenth centuries when the Industrial Revolution transformed how we produce and consume. Since then, the human population has exploded. Today, over 7.4 billion people live on the

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planet—about nine times the people that lived in 1750—and that number is rising. When coupled with the new consumptive habits of industrialized modern society, this extraordinarily rapid population growth has significant but uncertain consequences to the finite resources on which human life depends. Earth’s environment is a complex and interrelated system run by the cycling of nutrients, energy, and elements. Disrupting one of these cycles threatens the others. Accordingly, sustainable development does not focus on one issue but instead looks into many facets related to different environmental, social, and economic concerns.

Anthropogenic (human-induced) climate change is one of the most pressing, and most controversial, of these issues. The use of organic carbons in the form of fossil fuels for power and transportation has caused an unprecedented spike in the amount of carbon dioxide (CO₂) and other greenhouse gases in the atmosphere (Figure 2). Evidence suggests the increases in greenhouse gas concentrations are likely causing average global temperatures to rise, which is, in turn, having various impacts on other environmental processes.

It is important to consider atmospheric greenhouse gas concentrations when considering climate change, not simply greenhouse gas emissions. It is not individual emissions that cause climate change, but rather the build-up in the atmosphere of all the greenhouse gases that have

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6 Sachs, 1.
been emitted since the beginning of the Industrial Revolution. Simply reducing the number of emissions will still increase the atmosphere’s greenhouse gas concentration over time. Since the beginning of the Industrial Revolution, the atmospheric concentration of CO₂ has increased at an alarmingly fast rate. In the 1700s, atmospheric CO₂ concentrations were only 280 parts per million⁷ (ppm).⁸ By 2013, CO₂ concentrations reached 400 ppm, an atmospheric concentration not experienced in over three million years.⁹

It is also important to remember that CO₂ is not the only greenhouse gas. Others include water vapor, methane, nitrogen oxides, and industrial chemicals such as hydrofluorocarbons.¹⁰ Each greenhouse gas traps different amounts of heat radiated from the earth’s surface; thus each has a different warming (or cooling) effect on the atmosphere. This phenomenon is called radiative forcing. It allows climate scientists to calculate CO₂ equivalents, a normalized unit of measurement that makes comparisons between the warming effects of greenhouse gases possible.¹¹ For example, the radiative forcing of methane is twenty-five times that of CO₂, so one ton of methane would have an equivalent warming effect as twenty-five tons of CO₂.¹²

Other environmental problems exist besides climate change, but many of these problems inflict damages that enhance climate change. Deforestation is a prime example. Clearing forests causes loss of habitat, diminished soil quality, enhanced erosion, altered evaporation rates, and increased water runoff, which ultimately leads to flooding.¹³ It can also instigate desertification.

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⁷ The measurement “400 parts per million” means that there are 400 molecules of CO₂ for every one million total molecules in the atmosphere. In other words, 0.04% of the atmosphere is composted of CO₂.
⁹ Sachs, 402.
¹⁰ Sachs, 399.
¹² Hausfather, “Understanding Carbon Dioxide Equivalence.”
¹³ Craig et al., 430-1.
the transformation of fertile land into a non-productive wasteland. An additional side effect is increased CO\textsubscript{2} emissions. Trees, which scrub CO\textsubscript{2} from the air during respiration, are large stores of carbon. When they are cut down, that carbon is released back into the atmosphere.

Together, all of the unsustainable actions that one commits create one’s environmental footprint, the total impact that a person’s actions and decisions have on the natural world. Many steps can be taken to decrease an environmental footprint. A common option is utilizing sustainable technologies such as energy efficient appliances and transportation options as well as renewable energy technologies like solar and wind. Additionally, some consider directly withdrawing excess greenhouse gases from the atmosphere. Called carbon capture and sequestration (CCS), this process extracts carbon from emission points or the atmosphere directly, and then stores that carbon in geologic formations (as the majority of carbon is naturally stored). Although it is a promising idea that is being conducted in some locations, CCS is complicated, expensive, and faces shortcomings.

An economic version of CCS is known as carbon offsetting. This growing phenomenon allows people to invest money into environmental projects to compensate for their carbon emissions. The overall goal of offsetting programs is to become carbon neutral, meaning that there is no net gain to the carbon content of the atmosphere. Carbon offsets can go to many sources including developing renewable energy technologies or combatting deforestation. In other cases, people will invest in reducing methane emissions from landfills, providing sustainable technologies to developing countries, or withdrawing carbon through CCS.

\textsuperscript{14} Ibid., 429.
\textsuperscript{15} Ibid., 100.
\textsuperscript{17} Ibid.
However, technologic solutions to sustainability issues are not the only solutions nor are they necessarily the most lasting. Much of our current sustainability problem results from our cultures. Culture, in this case, will be defined as the values, beliefs, practices, and traditions that characterize a group of people and influence the choices and actions those people make. Modern society is overpopulated and overly consumptive. Western culture, which has been seeking to control nature for centuries, now struggles with understanding its relationship to nature. Solving this cultural problem will result from many changes, including altering how sustainability thinkers communicate with the outside world.

Environmental rhetoric is often dramatic and depressing; it has been this way for a long time. Influential author and marine biologist Rachel Carson chose this rhetorical tactic for her famous book *Silent Spring* (1962), which explains the harmful effects of the chemical pesticide dichlorodiphenyltrichloroethane (DDT). In her opening chapter, “A Fable for Tomorrow,” she paints a picture of a peaceful American town inflicted by an “evil spell” that brings illness and death to all living organisms.\(^\text{18}\) It is a vivid and disheartening image that seems out of a fairy tale rather than scientific non-fiction.

As Carson continues with her argument, she maintains this dark rhetoric, describing an apocalyptic scene of environmental destruction caused by human actions.\(^\text{19}\) She calls chemical pesticides “Elixirs of Death” and speaks about “man’s assaults” on the environment.\(^\text{20}\) Carson is not incorrect in these explanations. Pollution from toxic chemicals and the possible genocide of all insect species would be an assault on all living organisms and the environment as a whole.

\(^{20}\) Carson, 15, 6.
However, her descriptive and dramatic language makes these dangers seem more terrifying and imminent than they necessarily are.

This fear-based mobilization tactic worked well for Carson. *Silent Spring* sparked public concern about the implications of chemical pesticides and eventually led to the banning of DDT for agriculture in the United States.\(^2^1\) This success is largely due to the fact that Carson knew her audience and targeted them through her choice of language. As *New York Times* reporter Eliza Griswold explains in “How ‘Silent Spring’ Ignited the Environmental Movement,” an article honoring the fiftieth anniversary of the book, “Carson used the era’s hysteria about radiation to snap her readers to attention, drawing a parallel between nuclear fallout and a new, invisible chemical threat of pesticides.”\(^2^2\) In other words, Carson used the fear and mistrust already brewing in Cold War America to connect her readers to her topic.

Today, many sustainability advocates continue Carson’s tradition by evoking an apocalyptic message to arouse supporters and inspire action. However, this tactic is no longer as successful. In his documentary, *The Inconvenient Truth*, former Vice President Al Gore explained the terrifying dangers of anthropogenic climate change using gloomy and frightening rhetoric. Nevertheless, over thirty percent Americans continue to deny that anthropogenic climate change exists.\(^2^3\) Undoubtedly, Carson-style rhetoric is no longer as effective.

Today’s world is very different than the world that Rachel Carson lived in during the 1960s. We are not in the midst of a Cold War and nuclear arms race. We have experienced increased globalization, changes in social and economic structures, and developments in digital

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\(^2^2\) Ibid.

and media technologies. Moreover, the environmental movement is not new. Significant amounts of environmental regulations are in place and environmental concerns are a mainstream topic. People have been hearing apocalyptic environmental rhetoric since Carson published her book fifty years ago, but that apocalyptic end has not come. As a result, the sense of severity and immediacy in the issues is fading.

By continuing this type of rhetoric, environmental advocates often become didactic and irritating. They tell people the right and wrong way to live their lives and blame everyone for the environmental problems that plague us. While effective in small doses, the overabundance of this type of language has the potential to become overbearing and off-putting. Therefore, it is time that environmentalism and its newest wave, sustainable development, evolve to fit the current era’s social and environmental situation.

This paper will argue that the arts, specifically dance, could be a part of that evolution. Through dance, sustainability experts could reframe their argument and better communicate their material to general audiences. As noted above, academic literature on this topic is limited. Therefore, much of the argument derives from evidence found in primary sources including reports, websites, articles, and interviews provided by organizations and individuals working in the intersection of dance and sustainability. Although these sources come from across the world, they focus on artists within the western modern dance genre. However, they are applicable to any dance style.

There are two ways that a dancer, choreographer, or dance company can become more environmentally sustainable. One, called the operations approach, makes company operations sustainable by implementing energy efficient technologies, waste reduction practices, and other similar measures. The second infuses sustainability principles into art by creating work inspired
by environmental themes. Both strategies have the potential to promote sustainability to audiences and raise awareness about environmental issues, but do so by focusing on different areas. The operations approach focuses on measurable and tangible solutions that have an immediate impact on the environment. For example, installing energy efficient lighting in a studio directly reduces carbon emissions and implementing a recycling program directly reduces waste. The artistic approach does not have direct quantitative results. Instead, the impact is conceptual and ideological, targeting the emotional, ethical, and cultural value systems that determine how humans interact with the environment around them. Neither of these techniques is necessarily better than the other. Sustainable development is a complex field that involves many elements. Both approaches target different, but equally important aspects of those elements.

The Operations Approach

Arts Council England

Arts Council England, England’s governmental arts development and funding agency, is a world leader in the operations approach. In 2012, the Arts Council announced that it would start embedding environmental sustainability requirements into its funding agreements with artistic and cultural programs as part of its ten-year plan. This plan was composed of five goals. First, Arts Council England hoped to achieve excellence in the performing arts, museums, and libraries. Second, it wanted to make those cultural organizations open and

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24 The author has previously written about this subject in Resilience and Sustainability: An Ethical Assessment of Environmentalism at Arts Council England (2016), an unpublished work written for the course Ethics of Sustainable Development taught by Adela Gondek at Columbia University.
accessible to everyone. Third, it introduced resilient and sustainable business practices to the organizations it funds. Fourth, it ensured that those organizations reflect the socio-economic diversity of the country and provide quality skill sets to artists and employees. Fifth, it sought to guarantee cultural and artistic opportunities for all children and young people.

While all of these goals are important for establishing a thriving arts community, the third goal about “resilience and sustainability” relates directly to sustainable development. Arts Council England defines “resilience” as “the vision and capacity of organisations to anticipate and adapt to economic, environmental and social change by seizing opportunities, identifying and mitigating risks, and deploying resources effectively.”27 The Arts Council defines sustainability along the lines of the Brundtland Commission, asserting that sustainability means “not [to] pursue short-term gain at the expense of future generations.”28 Copenhagen’s “notoriously disappointing climate talks, COP15” of 2009 inspired the Council to incorporate these concepts into its work.29 As explained in the Arts Council’s 2015 environmental report, Sustaining Great Art, the program “was designed to do what the talks had failed to achieve: to activate and inspire the arts community to make environmental sustainability a major priority.”30

In establishing the Resilience and Sustainability program, Arts Council England became the first major arts organization in the world to incorporate environmental stipulations into its work.31

The Resilience and Sustainability objective combines environmental and economic views equally into the Council’s overall mission. In Arts Council reports and promotional material, ideas about economic and environmental resilience and sustainability are used almost

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27 Ibid., 31.
28 Ibid., 32.
30 Ibid.
31 Ibid., 4.
interchangeably. Together, Arts Council England believes that economic and environmental efforts will help arts and culture organizations be “more adaptable to all elements of the external world” whether that means changing economic systems or environmental processes.32

The economic elements of the program focus on diversifying artists’ monetary support sources. Public funding is the foundation of art and cultural support in Great Britain, but its supply is limited and decreasing.33 Therefore, the Council aims to help arts and cultural organizations utilize funding and data-collecting technologies so that they can conduct more effective marketing and fundraising campaigns beyond the normal public and grant-based support sources.34 This will allow those organizations to target new audience demographics and to look to “a wider range of contributed or earned sources” including private sector funders and supplementary income sources.35 Diversifying income sources requires artists to creatively utilize their skills and assets. For example, in 2012, the Theatre Royal Plymouth refurbished its catering facilities because of a grant provided by the Arts Council. The theater utilized these new catering spaces as a profitable asset unrelated to the organization’s theatrical activities. Since the refurbishment, the theater has expanded its catering projects, and income and retail have risen by twenty-four percent.36

Environmental resilience and sustainability relates to this economic plan in multiple ways. First, environmental sustainability increases financial sustainability because it ensures that a company will not run out of resources.37 Making art or money is difficult if there is no energy, food, or water. In fact, running any business on a set of finite or easily polluted resources is

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34 Great Art and Culture for Everyone, 31.
35 Ibid., 51-2.
36 Bazalgette, 6
37 Great Art and Culture for Everyone, 32
ultimately unsustainable because those resources will eventually disappear. Second, energy efficient and waste-saving strategies often save money. In the first three years of the Resilience and Sustainability program, over half of the participating organizations saw financial benefits after implementing carbon-saving practices. 38 Between 2013 and 2015, Arts Council-funded organizations saved 12,673 tons of CO₂ equivalent, equaling a financial savings of £2.29 million. 39 This is because environmentally wasteful practices are often economically wasteful. For example, a building with inefficient insulation will do a poor job of maintaining indoor temperatures because it will allow heat to escape from the building. 40 To compensate for this heat loss, people have to raise their heaters or air conditioners, thus utilizing more energy and increasing electricity bills in order to maintain a steady indoor temperature. Proper insulation stops this heat flow, maintaining preferable indoor temperatures and reducing energy costs.

Third, implementing environmental sustainability standards could help arts organizations find new sources of income. The Arts Council provides grants specifically for environmentally minded artistic endeavors. Also, widening the scope of an arts organization’s business plan beyond art diversifies the organization’s business model. A broadened financial base could make an artist or arts company more appealing to a wider array of supporters who may be interested in environmental causes, but not necessarily artistic ones. Unfortunately, specific examples of this phenomenon in Arts Council funded organizations are difficult to locate. However, according to the Council, seventy percent of participating organizations found that having environmental

38 Sustaining Great Art Environmental Report, 28.
39 Ibid., 25.
policies as part of their business model was “useful when applying for funding” and that sixty-nine percent of organizations found these policies helped them “engage with stakeholders.”

To support the environmental element of the Resilience and Sustainability initiative, the Arts Council teams up with Julie’s Bicycle, a global charity that specializes “in environmental sustainability within the arts.” The goal of this collaboration is to 1) track the energy and water use impacts of the arts community, and 2) inspire other artists to make their creative practices more environmentally friendly.

To achieve these goals, Julie’s Bicycle provides technical training and tools that help arts organizations develop an understanding of their environmental footprint. Over 700 Arts Council-funded organizations are required to report information about their energy and water usages. They do so using Creative Industry Green carbon calculators, a free environmental impact tool that collects and analyzes a company’s carbon footprint. These calculators are adaptable to different arts sectors and measure five main areas: energy, water, waste, transportation, and materials. After submitting this information, an arts organization receives data about its carbon footprint from energy, water, waste, and transport as well as information about its energy mix, emission levels, water consumption, and waste generation. With this information, Julie’s Bicycle helps arts and culture groups make their operations more sustainable. They set benchmark indicators that allow organizations to compare their carbon

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41 Sustaining Great Art Environmental Report, 28.
42 Ibid., 3-4.
43 Ibid.
44 Ibid.
46 Energy mix refers to the distribution of energy sources in total energy consumption. Often, an area’s energy supply does not derive from one energy source but rather from a mixture of fossil fuels, nuclear energy, and various renewable energy technologies.
47 Ibid.
output with others. Also, Julie’s Bicycle organizes events, networks, research opportunities, and seminars for people interested in sustainable art practices.

Through their joint program, Arts Council England and Julie’s Bicycle have made important strides in improving the sustainability of the British arts and culture sector. Between 2013 and 2015, the number of participants that incorporated environmental sustainability measures into their creative practices rose from fourteen percent of all Arts Council-supported organizations to ninety-eight percent. Today, eighty percent of the over 700 participating organizations not only follow environmental standards, but also consider themselves to be “engaged or very engaged with environmental sustainability.” Between 2012 and 2015, fifty-one percent of member organizations saw financial improvements as the result of sustainability measures, sixty-seven percent saw morale improvements, and forty-three percent saw reputation enhancements. Most significantly, the Arts Council’s environmental measures have “reinforced a sustainability movement in culture with far-reaching potential.” Because of these successes, Arts Council England plans to continue its Resilience and Sustainability initiative, furthering its reach and instilling a deeper environmental mindset in England’s arts and culture sector.

While these statistics seem promising, the specifics of what actions arts organizations took and what regulations the Arts Council mandated to achieve them is unclear. It is difficult to find specific energy or waste standards that organizations are expected to meet. Instead, it appears like organizations report their consumption statistics to Julie’s Bicycle, but any action afterward is dependent on the company’s willingness to continue the collaboration. Moreover, it

48 Sustaining Great Art Environmental Report, 34.
49 Ibid., 4.
50 Ibid., 6.
51 Ibid.
52 Ibid., 7.
53 Ibid., 8.
is difficult to pinpoint exactly what actions organizations took to improve their sustainability, but it seems like most successes were achieved through small-scale efforts to improve the efficiency of buildings. This includes installing efficient lighting and water systems; improving insulation and heat infrastructure; reusing or recycling office supplies, building materials, sets, or costumes; and simply consuming less energy (i.e., turning off the lights more often). Some groups have also incorporated these ideas into their tours. The most extreme example is the Shakespeare theater company, HandleBards, which toured Europe on bikes in its 2013-2014 season.54

A major success story of the Resilience and Sustainability initiative is Siobhan Davies Dance. Led by the well-known British choreographer Siobhan Davies, this company has ingrained sustainability into the foundation of its values. The company’s studios were designed by architect Sarah Wigglesworth to be environmentally sustainable.55 As technology improves, the company makes efforts to continue developing the efficiency of the building and its operations.56 Also, Siobhan Davies leads cross-disciplinary artistic workshops that incorporate sustainability ideas and advocate for the use of environmental practices in art-making.

**Kidd Pivot**

Another dance company that takes an operations approach to the dance-sustainability partnership is Kidd Pivot, the Vancouver-based contemporary dance company under the direction of world-renowned choreographer Crystal Pite. Kidd Pivot’s sustainability efforts were initiated by the company’s rehearsal director, Eric Beauchesne. Growing up in rural Québec, Beauchesne has been an active outdoorsman since a young age. “My first love was not dance, it

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54 Ibid., 18.
was nature,” he explained in an interview. After joining Kidd Pivot, Beauchesne noticed the environmental impact of the company’s touring practices. In a “lightning talk” given at Velocity’s Seattle Festival of Dance Improvisation in 2014, Beauchesne explains how he had an epiphany during a tour in which he traveled from Canada to Tokyo on a Monday and returned that Friday, “spending literally as much time in the air as on the ground.” He did this only so that he could give a single performance of a thirteen-minute duet. According to Beauchese’s calculations, the trip emitted seven tons of CO₂, more than double the CO₂ emitted annually by a person living in a developing country.

My Tokyo epiphany was so strong that for a while I considered quitting my dream job in order to stop extensively pouring CO₂ in the atmosphere. I was rejecting more and more that the art form I had fallen in love with at 18 was creating dramatic and lasting effects, not only on the generations to come, but also on all living beings. I thought: “This is going exactly against the very nature of dance, which is to be ephemeral.”

Instead of leaving his dance career, Beauchesne decided to find a solution to his carbon emission problem. He determined that the main culprit of Kidd Pivot’s environmental footprint was its touring practices. When the company tours, ten to fifteen people travel across the globe in a staggered and unorganized schedule. For example, next year Kidd Pivot has scheduled a four-month tour. The company will fly from its home in Vancouver to Australia, where it stays for three weeks. Then, the company will fly to the United States. After three weeks in the United States, all ten to fifteen company members will travel back to their homes in various parts of Canada and the United States for a one-week break. Then, the company travels to France where it will remain for a month and then go to England. One month after that tour ends, the company

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57 Eric Beauchesne, interview, 20 October 2016.
58 Beauchesne, “Beyond the Ephemerality of Dance.”
59 Ibid.
60 Ibid.
61 Beauchesne, interview.
is scheduled to perform in Amsterdam, meaning that in one month the company will fly between North America and Europe four times.

This helter-skelter style of world travel has major environmental impacts. Transportation has a large carbon footprint, creating twenty-eight percent of CO$_2$ emissions in the United States and fourteen percent worldwide. The largest contributor to the transportation sector’s greenhouse gas output is cars and trucks, but air travel has a heavy impact as well. Airplanes emit pollutants including CO$_2$, nitrogen oxides, soot particles, and water vapor. When emitted at lower altitudes, nitrogen oxides can produce harmful ozone molecules, and when emitted at higher altitudes, they can harm beneficial ozone. The CO$_2$ and water vapor that airplanes emit are greenhouse gases, so their emission influences climate change. In fact, worldwide, airplanes account for two to three percent of total CO$_2$ emissions. Moreover, the contrails and cirrus clouds airplanes emit have a warming effect eight times greater than CO$_2$.

Overall, these climate impacts make the radiative forcing of airplanes on short- to medium-time scales higher than cars. According to a study conducted at the University of Oslo, at shorter time frames the per passenger hour impacts of air travel are six to forty-seven times higher than car travel. Flying as Kidd Pivot does only worsens these effects. In 2011, each member of Kidd Pivot emitted twenty-six tons of CO$_2$ from touring and transporting sets. This number does not include personal, everyday emissions from activities like electricity generation.

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64 Federal Aviation Administration, 15.


67 Ibid., 5705.

68 Beauchesne, “Beyond the Ephemerality of Dance.”
and food production. According to the International Energy Agency, in 2011 average total emissions per capita in the United States were seventeen tons of CO₂. Therefore, the carbon footprint of Kidd Pivot dancers solely from touring-related transportation was sixty-five percent higher than the total carbon footprint of the average American.

In order to combat these challenges, Beauchesne decided to offset Kidd Pivot’s touring-related carbon emissions. After extensive research, Beauchesne chose to work with the Canada-based carbon offsetting company, Offsetters. Offsetters purchases carbon credits from recognized and certified environmental projects. Working together with Kidd Pivot, Offsetters developed “The Synergy Portfolio: a collection of high quality projects” that Kidd Pivot supports with their carbon offsets. The portfolio is priced so that for every $25 Kidd Pivot donates one ton of CO₂ is taken from the atmosphere.

Kidd Pivot donates to three projects: Great Bear Forest Project, Lower Zambezi REDD+, and Uganda Efficient Wood Cook Stoves. The first two projects combat deforestation. The Great Bear Forest Project helps to protect a forest in British Columbia, Kidd Pivot’s home. Described as “a model for sustainable development in an economically valuable but ecologically and culturally vulnerable area,” the Great Bear Forest Project seeks to preserve the rights of the environment as well as native and Canadian populations. Lower Zambezi REDD+ aids conservation efforts of a wildlife corridor between Zambia’s capital, Lusaka, and the Lower Zambezi National Park. This area is heavily deforested for charcoal production and agriculture. The conservation project aims to slow deforestation by helping locals find alternative, non-

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69 Ibid.
70 Eric Beauchesne, email message to author, 20 October 2016.
charcoal energy sources and to improve farming practices so that they do not infringe on wildlife habitats. Like the Lower Zambezi REDD+ project, Kidd Pivot’s third project goes towards improving the energy sources of people in a developing country, this time concentrating on cook stoves in Uganda. This project funds the dissemination of fuel-efficient wood burning stoves to replace the inefficient, often charcoal-run stoves that many Ugandans currently use.73

The first phase of the Kidd Pivot-Offsetters relationship began in 2014 during a tour of Pite’s piece *The Tempest Replica*. During this phase, Offsetters sponsored Kidd Pivot.74 This means that Offsetters offset the greenhouse gas emissions generated by Kidd Pivot from touring in exchange for Offsetter visibility in Kidd Pivot’s programs and website.75 Therefore, the sponsorship put no financial or administrative burden onto Kidd Pivot. During this first phase, 206 tons of carbon was offset, making Kidd Pivot’s travel for that year carbon neutral.76

After 2014, Offsetters stopped sponsoring Kidd Pivot. This initiated the second phase of Kidd Pivot’s carbon offsetting program that required more sacrifice on Kidd Pivot’s part. Kidd Pivot stopped being sponsored by Offsetters and instead became a client.77 Now, membership in the partnership is voluntary. If a company member chooses to take part, he or she donates one paycheck a year to the carbon offsetting efforts. Kidd Pivot then matches the amount of each donation.78 For Beauchesne “it was very important that this should be voluntary.”79 He did not want to “twist arms” or shame dancers into taking part. Even so, in 2015 about seven of Kidd

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75 Beauchesne, interview.
76 Ibid.
77 Beauchesne, email.
78 Ibid.
79 Beauchesne, interview.
Pivot’s fourteen members participated. The donations made the company’s travel carbon neutral once again, this time offsetting thirty-five tons of CO₂. (The company toured much less in 2015 than it did in 2014.)

In retrospect, Beauchesne is glad that Offsetter’s original sponsorship of Kidd Pivot turned into this new, client-based partnership. “It forces us to be more involved,” he asserts. In the new system, Kidd Pivot members personally take part in the carbon offsetting process. This personal investment means that Kidd Pivot members are thinking about their environmental footprint and are personally involved in the process of fixing it. Therefore, the impacts of the project on Kidd Pivot members are likely more lasting.

However, carbon offsetting is not a perfect system. It is difficult to know if the money donated actually goes to effective carbon offsetting projects. Even the most responsible carbon offsetter risks donating to scamming organizations. To combat this problem, Beauchesne did extensive research before deciding on Kidd Pivot’s final portfolio with Offsetters. Moreover, many critics of carbon offsetting assert that it is merely a “license to pollute” and an excuse to continue an unsustainable and consumptive lifestyle. One critic, George Monbiot, compared the sale of carbon offsets to the sale of indulgences by the Catholic Church during the fifteenth and sixteenth centuries, which traded money for an absolution of sin. Such a comparison implies that carbon offsets are an ineffective way of altering human behavior, just as indulgences did little to deter sin. If people can pay their way out of sin, what stops them from committing it? Similarly, if people can pay away their carbon footprint, what is to stop them from altering their overly consumptive and polluting habits? These habits, enforced by a culture of heavy

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80 Ibid.
consumerism, are one of the main causes of current environmental problems. To many, carbon offsets seem like a cop-out, keeping us from solving a more complicated issue.

Beauchesne understands these complaints and agrees that carbon offsets are not the perfect solution.\textsuperscript{83} Offsetting is only one piece of the puzzle to solving our climate problems. The largest change is going to require “changing how we produce and how much we consume.”\textsuperscript{84} However, Beauchesne believes that carbon offsetting is beneficial in the long run, if only symbolically. The act of calculating carbon footprints and researching offsetting possibilities can be an awakening moment for those unaware of their carbon footprint. Moreover, taking part in carbon offsets forces people to have a conversation about their environmental impact. Without the conversation, we will never reach the ultimate solution.

Kidd Pivot is not the only company that struggles with unsustainable travel routines. Touring is an essential part of any large dance company’s livelihood. It is how a company makes money and shows its work to larger audiences. Unlike film or painting, it is hard to transport dance. One cannot send a digital file or a canvas to a museum or presenter. Instead, an entire company along with any necessary sets or costumes must travel there. In a perfect world, dance companies could decrease their environmental impact by flying less and having longer home seasons, but that is not the reality. The next best option would be for dance companies to organize their tours along a more logical schedule. Instead of hopping between continents every couple of weeks, companies could organize their tour schedules so that they fly to individual regions only once every year or so, then rely on less polluting forms of ground transportation like trains to travel around the region.

\textsuperscript{83} Beauchesne, interview.
\textsuperscript{84} Beauchesne, email.
However, this type of touring schedule is difficult to organize. Touring schedules are determined by the presenter, not the company. Companies tour to a theater when the theater is available, not when the company happens to be nearby. To fix this problem, each region would need one presenter who would bring individual companies to travel across the region for large chunks of time.\textsuperscript{85} However, this type of scheduling could have negative effects. Specifically, it would likely decrease diversity because the same people would be showing the same work across the region.\textsuperscript{86} Beauchesne believes that there is a solution to this touring problem, but at the moment it is hard to consider.\textsuperscript{87} Eventually, the dance world is going to be forced to consider these options because environmental conditions will necessitate changes in human behavior.

\textbf{Discussion}

Arts Council England, Siobhan Davies Dance, and Kidd Pivot focus on the operations-side potential for dance to interact with sustainable development. While all of these companies have made important strides and achieved notable successes, they do have room for improvement.

On the whole, the Arts Council’s Resilience and Sustainability program is an “empowering statement” on the role of the arts and cultural sector in societal development.\textsuperscript{88} As Dance UK asserts, the program makes a powerful stance, implying,

that regardless of a lack of political will to respond meaningfully to climate change and environmental degradation, the arts and culture are setting their own ethical and practical standards for environmental management, through voluntary compliance that's placing sustainability at the heart of their business models.\textsuperscript{89}

\begin{itemize}
\item \textsuperscript{85} Beauchesne, interview.
\item \textsuperscript{86} Ibid.
\item \textsuperscript{87} Ibid.
\item \textsuperscript{88} “Growing Environmental Sustainability in the Performing Arts Sector.”
\item \textsuperscript{89} Ibid.
\end{itemize}
However, the program is young and imperfect. Some question its emphasis on private sector funding. Speaking specifically about heavily subsidized theaters, theater critic Lyn Gardner questions what will happen to the “core values” of theater as more emphasis is put on private and commercial funding. “Does it change the sort of work they make, and the level of risk they are willing to countenance?” she asks. “It makes me wonder what it will be, in the future, that really distinguishes these theatres from the commercial sector.”

Maintaining the integrity of the art being created is absolutely necessary to any artistic sustainability endeavor. Without innovative or legitimate art, the impact of the sustainability initiative will be much less powerful. Consequently, considering the implications of a sustainability initiative onto the quality of art is vital when assessing the potential for art-sustainability collaborations.

The environmental side of the Arts Council’s program also has its drawbacks. Specifically, the Resilience and Sustainability initiative focuses almost entirely on energy consumption. It utilizes some information about water and waste, but does so through the lens of carbon footprints. While decreasing carbon emissions is crucial to sustainable development, it is not the only aspect of the field. A similar criticism could be made of Kidd Pivot’s carbon offsetting program. Like the Arts Council, Kidd Pivot only assesses its carbon footprint and ignores other environmental problems. Moreover, the company focuses solely on transportation, not taking into account carbon emissions produced by the food dancers eat, the costumes they wear, or the electricity used to power studios and theaters. Beauchesne is well aware of these limitations and hopes to expand the initiative in the future. Specifically, he would like to better

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organize the company’s food consumption during tours, finding restaurants and food sellers that provide sustainably grown and prepared foods.\textsuperscript{91}

However, this raises questions about administrative and financial burdens of sustainability initiatives. Arts organizations like Kidd Pivot do not generally have extra money to pay sustainability managers. Groups like Julie’s Bicycle and Offsetters seem to do basic sustainability management for a low price, but if a company wants to expand its environmental program beyond the scope of these organizations, much of the burden falls on the company members. Beauchesne does most of the work of arranging and calculating Kidd Pivot’s carbon offsets not because he is paid to do so, but because he cares about the cause. Most people do not share his commitment to environmental sustainability, and few have the time or money to sustain a strong and unpaid commitment to such a project.

The other drawback to these projects is that they focus only on the day-to-day operations of a dance company. Consequently, they ignore a major asset available to these artists, namely the art they are creating. This is not necessarily a bad thing. Improving the sustainability of a company’s operations is a valuable endeavor. However, art itself is another powerful tool that can be added to the potential relationship between dance and sustainable development.

\textsuperscript{91} Beauchesne, email.
The Artistic Approach

Art is a driver and creator of culture. As Arts Council England explains, “The creative community, the epicentre of culture, has a special contribution to make to the world: it shapes and builds culture, identity, communities, and values.” Artists and arts organizations can affect culture in multiple ways. For one, they can take advantage of their roles as public figures to speak for or against a certain cause. In this way, artists can be “celebrity activists” who use their fame to become spokespersons for a movement separate from the sector that brought them fame. For environmentalism today, figures such as Al Gore and Leonardo DiCaprio take on this role using platforms such as the Academy Awards to speak out in favor of sustainability (as DiCaprio did in his 2016 Best Actor acceptance speech). Similarly, a dancer or dance company could promote sustainability by implementing sustainable practices into company operations or art-making. Kidd Pivot does this with their carbon offsets. The project is advertised on the company’s website and in programs at performances. Fans of Crystal Pite’s choreography may see this and become more interested in sustainability issues simply because a choreographer they like advocates for them.

Artists shape and build culture not only because of their public standing, but also because of the art that they create. That art is what shapes and expresses ideas. It is what delves into the psyche of a culture, exposing and possibly transforming the social status quo and the value system. Therefore, the actual art that artists create could be an immensely useful tool for sustainability advocates.

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92 Sustaining Great Art, 11
Eiko & Koma
Dance artists Eiko & Koma are known for their stark, dramatic, and moving performances. Their work reflects influences of Japanese Butoh and early twentieth-century German expressionism, but remains unique with characteristically slow and extreme movements.\(^{94}\) The environment around the dance (whether natural or manmade) is key to Eiko & Koma’s choreographic process.\(^ {95}\) The use of environmental factors in movement invention came early in the duo’s career and has remained throughout. Since beginning to choreograph in the 1970s, they have danced with beach seals, on top of landfills, in lakes and streams, and in front of the World Trade Center (before and after the September 11th attacks).\(^ {96}\)

River (1995) is a powerful example of Eiko & Koma’s exploration into environmental subject matter.\(^ {97}\) Tired of working inside studios and theaters, they moved their performance to an outdoor space.\(^ {98}\) Premiering in the Delaware River in Easton, Pennsylvania, this dance is entirely dependent on the body of water in which it is performed. The performers start upstream

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\(^{97}\) The following analysis is not based on a live performance of *River*. Instead, it comes from video excerpts of the piece, interviews with Eiko & Koma, and critical reviews of the work.

\(^{98}\) Otake *et al.*, “Movement as Installation,” 28.
of the audience and let the river’s natural current pull them downstream. At the end of the seventy-minute dance, Eiko & Koma use the river’s natural flow as an exit to carry them off stage.\textsuperscript{99} In between that entrance and exit, as Koma explains, “we dance and linger a little longer.”\textsuperscript{100} Wearing white draping fabrics and painted faces, Eiko & Koma drift in the river alongside a floating sculpture of wooden branches and accompanied by a gentle flute melody. In Dancing in the Water, a documentary about the making of River, Koma asserts that the driftwood sculpture frames and accentuates the vast river.\textsuperscript{101} The movement around this sculpture is slow, simple, and purposeful. There are few displays of virtuosity or technical brilliance, but the simplicity of the movement reflects the tranquility of the river. As dance critic Joan Acocella explains in The New Yorker, Eiko & Koma become “part of nature—something bumping out of the tree, the leaves, as slowly as changes take place in those elements.”\textsuperscript{102}

However, the dance is by no means peaceful. Although slow and simple, the movement is full of tension. As Acocella writes, “…they seemed to be in pain. Think of those war stories one hears in which, after a massacre, the arriving troops find, under a pile of corpses, an arm or a leg feebly waving, or a child crying.”\textsuperscript{103} New York Times dance critic Jennifer Dunning described how Eiko, who appears at first like a “Pre-Raphaelite rendering of a water-bound, long-haired Ophelia” is so transformed by her movement that by the end of the piece, she appears more like a drowned soldier.\textsuperscript{104}

River is an inherently sustainably-minded work. As Dunning affirms, River is “quintessential outdoor art: something come upon unexpectedly, privately, an odd and

\textsuperscript{99} Ibid.
\textsuperscript{100} Dancing in the Water: The Making of River, Eiko & Koma, 2009.
\textsuperscript{101} Ibid.
\textsuperscript{102} Acocella, “Bare Truths.”
\textsuperscript{103} Ibid.
unfathomable phenomenon of nature.”105 Beginning at sunset, the dance makes use of the Earth’s natural dimming of light.106 Although stage lights do come on once the sky blackens, this use of natural light draws the audience’s attention to an important natural feature (the sun). Also, it allows the production to use less electricity than it would if it were artificially lit. Eiko & Koma are not the only artists to use natural lighting in their productions. Belgian choreographer, Anne Teresa De Keersmaeker did so in Cesna, which premiered at the Avignon Festival in 2011.107 Performed outside the ancient Palais Des Papes, the piece began at 4:30 a.m. in darkness and continued for two hours until the sun had risen.

Eiko & Koma go beyond simply utilizing natural features in their pieces. At each new site, they collaborate with locals who are often interested in environmental preservation.108 Through these locals, Eiko & Koma learn about the science and history of the location.109 Frequently, they also clean the river with local volunteers so that it is safe enough for Eiko & Koma to perform.110 The cleaning process involves checking and improving water quality as well as removing debris from the riverbed.111

While sustainability themes are apparent in Eiko & Koma’s work, they are not its main focus. Rather, Eiko & Koma continually use natural features in their creations simply because it interests them. “We like to dance about something that is compelling to us, and so, often, that is the tree, it is the mountains, and it is seals.”112 However, the environment is more than an inspiration or starting point. In reality, Eiko & Koma use the setting around them as a

105 Ibid.
106 Otake et al., “Movement as Installation,” 28.
107 “Growing Environmental Sustainability in the Performing Arts Sector.”
108 Kloetzel and Pavlik, 187.
110 Kloetzel and Pavlik, 181.
111 Ibid.
112 Otake et al., “Movement as Installation,” 27.
choreographic tool. “Nature has an infinite vocabulary,” Eiko explains.\textsuperscript{113} Through the landscape and the resources it provides, the duo uses nature’s vocabulary to generate material. Ultimately, the natural features become an integral part of the work. They determine where audiences view the work from and how Eiko & Koma conduct their movement. As Eiko asserts, “The leaves, water, etc., are all a part of our body extension, which provokes us to move in a certain way. They become both our house and our costume.”\textsuperscript{114}

The setting of River highlights these environmentally-inspired choreographic implications. The direction of the river’s flow shapes the development of the piece. In a theater, the different areas of the stage are the same.\textsuperscript{115} Stage right and stage left have the same slope, temperature, and air flow. In a river, the direction of the water’s flow makes the parts of the “stage” different. This difference between areas “creates an unmistakable story and texture” that would not have been present on a static proscenium stage.\textsuperscript{116}

Beyond choreographic tools, Eiko & Koma see nature as a means of better communicating with their audiences. Through their dance, they seek to “have a more universal exchange.”\textsuperscript{117} This exchange relies not on an appreciation or excellence of technique, but instead on an understanding of physicality and setting, concepts innate to life on Earth. Everyone experiences movement and everyone experiences space. Through their work with natural materials, Eiko & Koma seek to reconnect their audiences with these two fundamental parts of life, making audiences aware of the environment as well as their shared humanity. “It’s not that

\textsuperscript{113} Ibid., 35.
\textsuperscript{114} Ibid.
\textsuperscript{115} Kloetzel and Pavlik, 182.
\textsuperscript{116} Ibid.
\textsuperscript{117} Otake \textit{et al.}, “Movement as Installation,” 27.
we are only interested in animals or plants,” Eiko explains, “but we’re interested in life as life, and sometimes it is not necessarily only about the human.”\textsuperscript{118} She goes on to say,

Our primary concern, though, is how to be part of something larger than who we are. In that sense, we are visitors to the river. During our visit, we share the time with the river and then we disappear and the river is left alone. People who live in the community have a sense of seeing the river in a very new, different way…This will hopefully stay with the audience. We hope that we are giving some kind of awareness to the environment as much as to the community.\textsuperscript{119}

The fact that Eiko & Koma create environmental work from something other than an environmentalist perspective makes their work all the more powerful. Enlisting the environment as a choreographic tool rather than a political statement seems to allow Eiko & Koma to avoid the trap of depressing and overbearing language that environmentalists often fall into. Their work most definitely raises attention to issues about sustainability and environmental health, but it does so by drawing attention to the beauty and uses of nature. It does not preach the reasons that nature must be saved, but instead exposes the benefit and importance of it.

\textbf{Vertigo Dance Company}

Vertigo, an Israeli contemporary dance company, incorporates both the operations and artistic approaches of dance sustainability into its work.\textsuperscript{120} Based in the Eco-Arts Village built by artistic directors Noa Wertheim and Adi Sha’al, Vertigo is known for its social and environmental activism.\textsuperscript{121} Located at Kibbutz Netiv HaLamed-Hey in the Elah Valley between Jerusalem and Tel Aviv, this Eco-Arts Village allows the company to operate sustainably. The studios are refurbished chicken coups that were renovated using recycled wood and other local

\begin{flushright}
\textsuperscript{118} Ibid.
\textsuperscript{119} Otake \textit{et al.}, “Movement as Installation,” 28.
\textsuperscript{120} As with Eiko & Koma, the following discussion sources information from interviews, articles, and video excerpts of the discusses works, not viewings of live performances.
\end{flushright}
building materials. The Village utilizes renewable energy technologies, such as solar panels, and its gardens are run with sustainable agricultural practices. Moreover, Wertheim and Sha’al organize workshops and artistic residencies at the Village for people who are interested in green technologies, building techniques, and gardening.

The sustainable principles that Vertigo Dance Company practices in its operations inform the choreography that Wertheim (the company’s main choreographer) creates. Wertheim’s choreography derives from a characteristically Israeli lexicon of contemporary dance. It is extreme and physical, making use of a low center of gravity, intricate joint articulations and extensions, and energetic dynamics. Reflecting Sha’al’s experience as a member of the Batsheva Ensemble, Wertheim’s style has aesthetic similarities to the sensation-based movement of Ohad Naharin’s Gaga Technique. However, Wertheim does have a unique voice. According to Stacey Menchel Kussell, a dance journalist for The Forward (a New York-based publication that reports on Jewish arts and culture), Wertheim’s choreography is different from Naharin’s “expressive ferocity.” Instead, Wertheim’s interest in social and environmental issues makes her work distinctively “sinuous, organic and rooted to the earth.”

Environmental themes are obvious in Wertheim’s piece, Birth of the Phoenix (2004). Inspired by soil and a desire to no longer perform indoors, Wertheim choreographed a dance that “examines the human relation to and alienation from the earth.” Like River, Birth of the

125 Ibid.
126 Ibid.
Phoenix is performed outdoors, taking place within a bamboo geodesic dome (Figure 4) and on top of a circular stage covered in dirt. The dirt is an integral aspect of the dance. As the dancers spin, leap, and roll through this layer of soil, it flies into the air and sticks on their clothing. Like the water in River, the dirt becomes an important feature of the performance as a set, a prop, and a costume.

Although River and Birth of the Phoenix are performed outdoors, they are not necessarily site-specific. They require specific natural features—a body of water or a large open area—but those features exist in multiple places. As a result, they are transportable. River and Birth of the Phoenix have been performed in multiple outdoor locations. Eiko & Koma even adapted their work for indoor spaces at the American Dance Festival and Lincoln Center. Bringing environmentally inspired dance into a theater is inevitably going to alter the implications that the work has on sustainable development. These differences provide ample space for further research.

Nevertheless, sustainably minded indoor work is possible. Both Eiko & Koma and Vertigo Dance Company have created it. Wertheim’s White Noise (2008) takes place on a traditional proscenium stage and like Birth of the Phoenix, explores human disconnect with the

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natural world, this time focusing on material consumerism.\textsuperscript{128} Israeli art critic Merav Yudolevich noted that *White Noise*, "casts doubt on modern life, questioning the departure from the essential, the earth and the backbone of individual identity amidst the hustle of social life."\textsuperscript{129}

During *White Noise* performances, Vertigo asks audience members to bring old, unused items that they can barter and trade with other audience members. Called "From Hand to Hand," this program encourages audiences to recycle unwanted items and makes them aware of their consumptive habits.\textsuperscript{130} It provides audiences with insight into the anti-consumerism message behind *White Noise*, but also takes direct action to reduce waste and overconsumption.

\textbf{Discussion}

The aesthetic differences between Vertigo Dance Company and Eiko & Koma make the sustainability implications of their work different. Eiko & Koma’s intensely slow, intentional dancing that is intimately connected to the landscape puts more attention on the environment.

\textsuperscript{128} Kussell, “Bringing Modern Dance Down to Earth.”
than on the humans. Eiko & Koma become features of the space, not humans moving through that space. Consequently, the dancing draws the audience’s attention more to the space itself. Alternatively, Wertheim’s physical and dynamic choreography highlights humans in contrast to the environment around them. Rather than making the dancers a part of the surrounding space, Wertheim seems to focus on the evolving relationship between humans and space. From a sustainability point of view, both of these messages are important. Neither strategy is necessarily better, but could be used in tandem to target separate messages and audiences.

Even with these differences, the way in which these dances impact sustainability is similar. The effect that they have in terms of increasing environmental appreciation is subtle, but infinitely more optimistic than the usual depressing and dramatic environmental rhetoric. They delve into a much deeper, yet more impactful form of environmental advocacy. These dances do not tell people what to do or criticize their lifestyles. Instead, they reframe the conversation, bringing environmental concepts into a new context. This new context is potentially less politically polarizing than sustainability’s usual setting because it is not coming from the usual sources, namely politicians, media outlets, and scientists who foster and receive prejudice based on their affiliations with certain environmental issues.

Nonetheless, even if the dance is political it can be a useful tool for sustainable development. Reshaping any argument (through dance or through words) makes that argument stronger. The new versions of the argument will highlight different elements and draw attention to issues in new ways. A reframed argument has the potential to appeal to new audiences who may not receive or care about a message when it is framed differently. A climate skeptic may not be receptive to discussions about climate change from climatologists or journalists who they perceive as biased. However, they may be more receptive to the conversation if it comes in a
new location from new agents who have new arguments. If, for instance, this person saw a dance that expressed the importance and value of natural resources through abstraction and creativity, they may gain a more emotional and value-based connection to those resources and have a greater interest in preserving them.

Sustainably-informed dances, especially the outdoor works discussed above, reshape peoples’ perceptions of the space around them.\textsuperscript{131} Dancing alters any space, transforming it into a place of action and human connection. When dancing in an everyday space, the area transforms into a place with a unique story, memory, or emotion. After seeing River, one audience member commented, “All summer, I have been bringing my kids to this place, and I have never seen this river as a ‘river.’”\textsuperscript{132} By watching dance in a familiar river, this woman saw the river differently. It gained its own intrinsic value. Many philosophers dating back to the time of Plato and Aristotle have asserted that intrinsic valuing (seeing the good in something for its own sake) is more profound than utility valuing (seeing the good in something for the services it provides). Therefore, valuing a space for its own sake rather than because of the resources it provides is a deeper type of appreciation that will likely lead to a greater compassion for that space.

Environmentally motivated choreography like Wertheim’s and Eiko & Koma’s gets at a more poignant solution to sustainability issues. It helps to reconstruct our perception of the environment and to instill a sustainable set of values that derive from a place of appreciation and understanding rather than one of rapprochement and fear. In the long run, this tactic is more lasting because it gets at the underbelly of culture, altering the way that we see and interact with the world around us.

\textsuperscript{131} Kloetzel and Pavlik, 183-4.
\textsuperscript{132} Ibid., 184.
There are drawbacks to the environmental impacts of dance. The main obstacle is visibility. Dance does not have the pop cultural appeal of other art forms like music or film. Eiko & Koma and Vertigo Dance Company are well known in the modern dance community, but their work is not widely displayed to the general public. Moreover, their work would probably be distasteful to certain audiences because it is highly experimental. With its minimal and slow movement patterns, it lacks the sensational overload of more popular performance styles. Wertheim’s choreography, which is dense with vigorous, sensation-based movement, would likely appeal to a wider audience, but it also incorporates unusual elements that non-dancers might find strange. This includes a liberal use of the pelvis and torso that may appear sexual to unaccustomed viewers. It is likely that both of these choreographic styles will appeal to viewers who already appreciate dance. The work could also interest people involved in sustainability. However, it is unlikely that many people without backgrounds in either field would seek out the opportunity to see these shows.

Appealing to a general audience is a problem throughout the dance world. Kidd Pivot discovered this during the first phase of its collaboration with Offsets. Initially, Offsets had agreed to sponsor Kidd Pivot in exchange for visibility in the company’s promotional materials. However, Offsets realized that Kidd Pivot does not offer much visibility, at least compared to the other organizations that Offsets sponsors such as the Canadian Olympic Team. The work that Offsets put into the Kidd Pivot sponsorship did not equal the visibility that Kidd Pivot—an internationally renowned dance company—could give back to Offsets.

Improving the visibility of dance will be crucial if it is used as a communication tool for sustainability. However, it is possible that collaborative work between the two fields could aid

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133 Kloetzel and Pavlik, 188.
134 Beauchesne, interview.
this endeavor. Work about sustainable narratives could entice audiences and funders interested in sustainability but not necessarily dance, thus widening dances’ support network. This idea is central to Arts Council England’s Resilience and Sustainability campaign, but examples of it happening are so far limited. Moreover, by interacting with a scientific field, dance could gain legitimacy among academics and society. Unlike the visual arts, music, or theater, dance has a small academic wing and is less widely understood by the general public. Interacting with scientists and scientific ideas could help dance appear more legitimate to unknowledgeable viewers. This aspect of the dance-sustainability collaboration is beyond the scope of this study, but has great potential for further research.

**Conclusion**

Dance is an inherently spatial and ephemeral art form. These qualities give dance the possibility of being a leader of sustainability, but dance is not living up to that potential. There is ample space for the dance community to become more sustainable by improving the inefficient and wasteful practices that many dancers and dance companies commit. Programs originated by Arts Council England, Kidd Pivot, Siobhan Davies Dance, and Vertigo Dance Company (with its Eco-Arts Village) are excellent examples of the potential for this type of work. However, these projects are only starting points. They are initiating the conversation, but in the process are also exposing the inadequacies of the dance community’s current relationship to sustainability.

Improving this dance-sustainability partnership also requires that dancers and choreographers start incorporating their artistic voices into the sustainability conversation. If utilized correctly, dance could be an especially potent tool to communicate ideas and information
about sustainability issues. It could reframe the environmental conversation so that it appealed to broader audiences and focused on deeper cultural sources of unsustainability.

This is not to say that dance is the only solution to our environmental problems. It is also not asserting that all dance should be about environmental themes. Rather, it emphasizes a potential partnership between the dance and sustainable development communities that could improve the education and communication methods available to sustainability advocates and environmental scientists.

A true shift toward a sustainably minded society will come from many sources. It will come from improvements in technology, changes to economic structures, and implementations of political tools. However, all of these changes point toward one main solution to our current environmental problems: culture. No matter how many renewable energy technologies we develop or environmental restrictions we place, a long-lasting change toward a sustainable society is ultimately going to result from a shift in our culture and the values that it creates. The arts, a driver and innovator of culture, are therefore an important asset to sustainability. They could help to shift the values of our society in a sustainably minded direction, creating much more lasting impacts on the future of dance, sustainable development, and the planet as a whole.
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Figures and Images


