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Memorial: Making Audible the Silence of Extinction

Abstract

The value of art, according to the theory of cognitive aesthetics, lies in the way that art can enlarge our understanding and knowledge of life. *Memorial: The Silence of Extinction* is a community art project designed to heighten awareness of the annual loss of plant and animal species due to extinction. People from around the globe were invited to commemorate the loss of a species by creating an image that was placed in a pocket in a panel in the *Memorial* work of art. As images were added, *Memorial* grew until it spanned over fifty metres, revealing thousands of images. *Memorial* was exhibited at venues in Australia and globally. During one of these exhibitions, participants were asked to complete a survey about their understandings of extinction before, during and after creating their image. Findings from their surveys showed that involvement in this community art project was engaging and thought provoking. Further, participants seemed to gain an enhanced understanding of the scale and currency of extinction.

Introduction

The value of the arts in our society is well recognized. Experiences of beauty and pleasure are associated with the arts (Graham 2005). Further, the arts are valued and held to be significant due to the manner in which emotions can be expressed and communicated (Allen 1995). Another reason for valuing the arts is their capacity to make a contribution to the advancement of understanding (Graham 2005).

As works of art can convey knowledge, we are able to learn from art and, therefore art has a cognitive value (Gibson 2008). In this research, the cognitive theory of art is explored in relation to a community engagement art project. The project developed from the troubling knowledge that an estimated twenty-seven thousand plant and animal species are lost each year to extinction (Sax and Gaines 2008). This high number of annual extinctions caused the researchers to reflect on the extent to which other people are aware of the currency, significance and scale of species extinction. This research aimed to examine whether participation in a community art project can influence people's understanding of extinction. In order to conduct this research, the community engagement art project, *Memorial: The Silence of Extinction* was created.

Memorial

Memorial: The Silence of Extinction aimed to draw attention to and increase awareness of the significance and immensity of extinction. The vast size, scale,

duration and worldwide reach of the project were conceived to reflect the magnitude of annual extinctions. *Memorial* was created in a visual form, so that the drama of the loss of twenty-seven thousand could be clearly seen and cognitively grasped. To create a visual portrayal of the number twenty-seven thousand, thirty-six panels were fabricated from silk organza. Each of the thirty-six panels contained seven hundred and fifty pockets, creating a total of twenty-seven thousand pockets. People from around the globe were invited to create an image to commemorate the loss of a plant or animal species and the image was placed in a pocket in *Memorial*. An example of these images is shown below, in Figure 1.



Figure 1. Memorial: The Silence of Extinction. Detail. 2012.

Given that *Memorial* consists of thirty-six separate panels, individual panels could be circulated to schools and institutions worldwide. *Memorial* panels were distributed to schools and institutions in national and international countries including Canada, Germany, Thailand, South America and the United Kingdom. Images were created and placed in pockets of the *Memorial* panels in these distant locations and then returned to the researchers. Images were also added to the *Memorial* panels during exhibitions held in three Australia cities. People who viewed exhibitions of *Memorial* were also able to create and contribute images to a panel. *Memorial* continued to grow as contributions were added during the exhibitions. Over a period of eight years, panels were filled, thereby creating a substantial work of art that measured two metres

in height and spanned fifty metres in length. Figure 2 (below) shows students creating an image to place in a *Memorial* panel.



Figure 2. Students creating an image for *Memorial*

Memorial aimed to provide a poignant mental image to assist people to fathom the extent of extinction. For some people, the process of relating to high numbers such as twenty-seven thousand can be difficult; however, images can be useful in forming a mental concept of high numbers (Dietz 2015). The idea that a mental image may help people comprehend the veracity of extinction reflects the ancient Greek philosopher, Aristotle's claim, that, "the soul never thinks without a mental picture" (cited in Paivio 2014). Therefore, the idea of a mental image was formative in the design of the *Memorial*. Graham (2005, 73) writes that the value of art lies in the way it "enables us to understand what it is to be human, by providing images through which our experience may be illuminated". *Memorial* provided a large-scale image for comprehending and illuminating the extent of extinction.

For many people the loss of thousands of species each year requires a new way of comprehending our ethical 'being-in-the world' (Mathieu 2014, 214). Palmer (2014,

70) suggests that art can help us to “imagine new ways of feeling (and) alternative ways of thinking about our contingent place within ‘nature’ and all forms of collective empathy towards all manner of human and non-human others”. *Memorial* aimed to provide a forum for people from many countries to collectively engage in the commemoration of lost species.

Creating an image for *Memorial* involved a purposeful, original act. The concept for *Memorial*, and the production of the panels, was designed by one of the researchers, however, the images were created and contributed by thousands of people around the world. Dewey (1916) claimed that the arts have the capacity to promote civilization by breaking down barriers between people. The people who created and contributed an image held collective ownership of *Memorial*. This shared, creative act of contributing an image to *Memorial*, and the collective ownership of the piece, resonated with the need to foster global ownership and stewardship of the environment (Corner et al. 2013).

Memorial is one of a number of a community engagement art projects that have been created to generate an awareness of environmental concerns. A community art project was run by the sister cities of Kushiro in Japan and Burnaby in Canada (Cipywnyk 2005). In an effort to raise awareness of the critically endangered red-crowned Japanese crane, citizens of Kushiro created a mural consisting of painted metal cranes. The cranes were hung on wire fences throughout the city. The effort in Japan was supported in the sister city, Burnaby, where children in eleven schools were taught about the plight of the red-crowned Japanese crane. These children painted and exhibited two thousand cranes on fences throughout their city.

In Australia, Margaret and Christine Wertheim instigated the *Coral Reef Project* in response to warnings by climate scientists about the impact of global warming (Smith 2011). Thousands of people from around the world joined the project, contributing crocheted coral forms using yarn and recycled plastic. The crocheted corals were exhibited together to evoke the beauty of the reef and to remind people that the wonders of the marine world are disappearing (Ibid).

Memorial is related to a range of community engagement art projects, however, in this research, the impact of contributing to a project about people's understanding of extinction has been investigated. This research was undertaken during an exhibition of *Memorial* at a university gallery in northern Australia. The research question investigated in this study was: *What can people learn about extinction through participation in the Memorial community art project?*

Extinction

The term 'extinction' denotes a situation where all representatives of a species have died, or where there are insufficient living members of a species to enable breeding to occur (Oxford Dictionary 2014). There have been five mass extinctions in the history of the Earth and we are now approaching a sixth mass extinction (Pievani 2013). According to Dirzo et al (2014), over the past five hundred years, "humans have triggered a wave of extinction, threat and population decline that may be comparable in rate and magnitude with the five previous mass extinctions."

The current rate of species extinction is exceptionally high, running at about 1000 times the rate considered to be normal (Pimm et al. 2014). Extinctions began to increase and move out of the normal range during the agricultural revolution, roughly ten thousand years ago, when improved tools for hunting and fishing gave people a significant advantage in terms of killing animals (Ehrlich cited in Lawton 1995). The post-industrial revolution and subsequent increased consumption has overloaded the atmosphere with emissions, outstripping the Earth's capacity to reabsorb the excesses (Ortiz et al. 2014). The conditions that have coalesced to create this high rate of extinction include augmented climate dynamics, changed atmospheric compositions, ecological stress and increased per capita consumption (Pievani 2010; Pimm et al. 2014).

The large quantity of greenhouse gas stored in the atmosphere from past decades of emissions has led to climate change (Ortiz et al. 2014). Climate change will have a long-term impact and it "is likely to become the biggest driver of extinctions over the next several decades" (Davies 2014). Species extinctions serve as a 'report card' on how effectively we are interacting with the environment. Humans have become a

dominant evolutionary force, with the dubious honor of creating an accelerated extinction rate (Pievani 2013).

This high rate of extinction causes concerns about biodiversity as diverse systems, or those with a greater number of species, are more productive and more stable than those with a limited species range (Pimm et al. 2014; Davies 2014). The ecosystem provides people with provisioning, regulating and cultural services, such as food timber, climate buffering and flood prevention (Davies 2014). Given the relationship between biodiversity and the services natural systems provide to humanity, there is a need to protect biological diversity to sustain life (Ibid). The environmental scientist, Edward O. Wilson, wrote, “when we destroy ecosystems and extinguish species, we degrade the greatest heritage this planet has to offer and thereby threaten our own existence” (2002, 39).

In addition to humanity’s dependence upon natural systems to provide resources, plants and animals provide opportunities for affiliation or relationships with other forms of life (Ramzy 2015). The ‘biophilia hypothesis’ introduced and popularized by Wilson in the 1980’s, seeks to explain humanity's innate affinity for the natural world (McMahana and Estes, 2015). The ‘biophilia hypothesis’ suggests that the desire of people to live in a world inhabited by other living things originates from the environment in which humans evolved (Wilson 2002). Given that humanity spent several million years in the savannas and transitional woodlands of Africa, before taking up agriculture and moving into urban environments, “a sense of genetic unity, kinship and deep history are among the values that bond us to the living environment” (Wilson 2002, 136). Biophilia may explain the concerns that some people experience when they learn of the extinction of a species.

The impact of extinctions has ramifications now and in the future, as the possibility of relationships with extinct species ends (Ortiz et al. 2014). When species are lost to extinction, there is a loss of diversity and, at times, a loss of natural beauty. The extinction of plants and animals may cause us to reflect on the impact of humans on the environment. This calls into focus consideration of the nature/human relationship. As the concept of nature is entwined in the *Memorial* research, an overview of how people consider nature is worthy of review.

Human/Nature Relationships

Concepts relating to the relationship between people and nature have been a subject of speculation from the time when ancient Greek philosophers considered the question. Ancient Greek philosophers tended to see people as a part of, rather than separate from, the wider world (Carone 2003, 70). A life in harmony with nature was advocated by the pre-Socratic thinkers, who suggested that, “true wisdom is to speak and act in accordance with nature” (Ibid, 68). Plato indicated a connection between people, plants and animals, noting that they have a nature that is “akin to a human one” (Ibid, 72).

Judeo-Christian views described in the Old Testament noted that people are “responsible holders of domination over nature” (Ibid, 97). Domination of plants and animals was contingent on responsible stewardship and, while this did not preclude the use of animals as a source of food, there was a “humble recognition of the intrinsic value of fellow-creatures” (Attfield 2003, 107). Thomas Aquinas, writing in the middle ages, “persistently defended the goodness of nature” (Ibid, 103). According to Attfield (2003), theistic beliefs in creation encapsulate a view that is supportive of the environment.

In the eighteenth century, the fascination of Romanticism was embraced by dominant philosophers, Immanuel Kant and Jean-Jacques Rousseau (Brennan 2003). Rousseau advocated respect for the intrinsic value of other forms of life and emphasized the continuities between humans and animals (Ibid). Kant identified the capacity of nature to demonstrate the limitation of the human imagination (Ibid). According to Kant, nature makes people aware of their limitations, because “try as they might, nature is so vast and powerful and potentially dangerous as to defeat our attempts to grasp it” (Mothersill 1995, 410).

In the nineteenth century, Jean Louis Agassiz considered nature to be “a storehouse of divine thoughts expressed in living realities”; therefore establishing grounds for the protection and preservation of nature (Brennan 2003, 150). Romantic views of nature continued to be maintained in the mid-nineteenth century, with wilderness areas viewed as restorative and worthy of protection, particularly by people who had moved into cities to find work (Ibid).

However, romantic notions of nature were challenged by the increased sway of scientific rationalism during the Age of Enlightenment (da Silva, 20140). The relationship between people and nature was affected by Charles Darwin's Theory of Evolution, published in 1859. Darwin believed that natural selection determined both the form and moral behavior of a species (Brennan, 2003). Alfred Wallace agreed that evolution, based on natural selection, determined the form of a species, but he did not agree that people's mental nature was developed by the same causes (Brennan, 2003). The two views presented by Darwin and Wallace continues to be debated today and the problem of nature and its relationship to culture is still contested (Ibid).

In the twentieth century, Karl Marx claimed that people were the measure and creator of beauty with nature "as mechanical and inorganic, providing resources that were only given value due to human labor" (cited in Brennan 2003, 151). The mechanistic, utilitarian framework that viewed nature as 'dead matter' and a resource, as claimed by Marx, challenged the Romantic view that considered nature to be sacred, pristine and worthy of preservation (Scholz 2014). The tension between utilitarian discourse and environmental discourse continued to reverberate throughout the twentieth century and on to the twenty-first century (Ibid). However, the division is not absolute, with examples such as corporate environmentalism indicating the willingness on the part of some companies to exercise stewardship by preserving natural resources in order to ensure their long-term availability (Ibid).

The nature/human relationship remains a complex and debated subject because nature can be viewed as either a physical substance or an abstract essence "that transcends the material realm and even the realm of representation" (Morton 2007, 16). Morton questions the relevance of the concept of 'nature' in an age of ecological change, arguing that, "the very idea of 'nature' will have to wither away in an 'ecological' state of human society" (Morton 2007, 1). Indeed the theory of deep ecology suggests that rather than viewing nature through an anthropocentric lens, where nature is in the service of people, we should change our view to one of ecocentrism" (Ibid). This suggests our world-view may be best directed towards ecological concerns, rather than contemplating the idea of nature. However within a

framework of ecology, extinctions continue to feature as a subject and a reality worthy of consideration.

About art and understanding

Ulan (1998 in Russell-Bowie 2006, 20) said that the arts “were the most powerful and most overlooked resources to intensify learning”. In their many forms, the arts not only help us to understand life events and how we feel about them, but also to communicate this understanding to others (Allen, 1995). According to Reimer (1989, 11) the arts are a “basic mode of cognition” and “a basic way humans know themselves and their world”. In the arts, the body is thought to be central to the process of inquiry and embraces an approach of knowing (Bresler 2004), as participants view, draw, paint, move, act, sing, dance, photograph what they see and what they imagine. Further, experiences of art lead people to reflect, discover and uncover issues and challenges faced in life (Gibson and Ewing 2011).

Art makes information available to people through the senses of sight, sound and touch. The form in which art is presented is important if art is to direct people’s attention to a particular idea. According to the Cognitive Theory of Art, the form of “imaginative creations... can be brought to everyday experience as a way of ordering and illuminating” (Graham 2005, 74). The large scale of *Memorial*, with its thousands of images, gave multiple readings of extinction to illuminate the extent of the problem.

Art can be viewed as a prop in a game of ‘make-believe’ (Walton 1990). Art is not ‘real life’, but it has to do with real life and therefore can enrich our understanding (Graham, 2005). A further aspect of the Cognitive Theory of Art that is relevant to this research is the manner in which art can contribute to reflective understanding. Art is similar to other forms of communication, such as propaganda, because both art and propaganda seek to secure belief. While propaganda may use images and words skillfully to assert a view, art secures belief through educating, by enhancing or enriching our understanding (Graham, 2005). Thus there is a difference between a poster stating, “Stop extinction now!” and a work of art such as *Memorial*, that may function as a prop to advance understanding of extinction.

As Cornett (2007, 2) notes, “The arts are viewed as indispensable sources of cultural and historical information, givers of diverse perspectives and values and

remarkable tools to make meaning”. Meaning making is particularly important in the area of extinction, as extinction usually occurs out of sight in remote environments. Furthermore, developing ways of thinking about extinction are complicated due to possible feelings of regret regarding the role people have played in contributing to species loss (Palmer, 2014) and the propensity of people to form bonds with other life forms, as suggested by the biophilia hypothesis.

Methodology

This research was based in a qualitative research paradigm. Creswell (2012) notes that qualitative research measures observable data to test hypotheses or answer specific questions. In this paradigm, the researcher aims to understand individual meaning and descriptions of events as they occur (Lankshear and Knobel 2010). A qualitative researcher looks at phenomena in naturalistic settings or settings that are not manipulated by the observer (Denzin and Lincoln 1998). In naturalistic settings, researchers attempt to interpret or make sense of the meanings people bring to the situation (Ibid).

Within this paradigm, this research was conducted as a survey. As Lankshear and Knobel (2010, 164) note, surveys can be both a “research design and data collection method”. Further, Lankshear and Knobel (2010) classify data collected from a single event that focuses on a limited number of variables as a ‘simple descriptive survey’. The surveys were undertaken by a small number of participants, thirty in total. Surveys consisted of eight open-ended questions, asking participants to describe their understandings of extinction before, during and after contributing an image and viewing *Memorial*.

Following approval from the Human Ethics committee, information sheets, consent forms and surveys were made available on a table at the entrance to the *Memorial* exhibition. A sign inviting people to contribute to *Memorial* by cutting out a shape or drawing an image and placing it in a pocket, was on the entrance table. The sign also stated that twenty-seven thousand species are lost to annually to extinction and that the researchers were inviting people to complete surveys while participating in the exhibition. As the gallery did not have an attendant, people who elected to participate in the research did so without influence by the researchers. No personal

data were required and participants in the research provided their consent by filling in the survey form. When the survey was completed, participants submitted it through a locked dropbox on the table.

At the close of the exhibition, the dropbox was opened and surveys were removed for coding. Open or emergent coding was used to analyse the data. It is a process of breaking data into discrete parts and examining them for similarities and differences; followed by questioning what phenomena are emerging (Strauss and Corbin 1990 in Lankshear and Knobel 2010). From this process, emergent themes were identified to address the research question.

Trustworthiness was addressed by including negative cases in the analysis and by providing a rich description of the process and findings. As the exhibition was held in a public gallery on a university campus, participants in the research were drawn from a cross-section of people who work, study, and visit the campus. This cross section of people may not be representative of the wider community in terms of age and the level of education and this was identified as a limitation of the study. Further, not everyone who viewed and contributed to *Memorial* also participated in the research. Because of this, a small number of participants are another limitation of the study. This study is a small case study, however results may be transferrable to other community art projects where there is a desire to raise awareness of environmental concerns.

Findings

While the survey asked participants eight specific questions, findings are reported under four themes: awareness of extinction prior to participating in the *Memorial*; awareness of extinction during participation in *Memorial*; thoughts and understanding after participation in *Memorial*; and overall opinions of the *Memorial* community engagement art project. These themes are presented below.

Awareness of extinction prior to participating in the Memorial

Of the thirty participants, nineteen claimed to have good awareness of the issue of extinction. From this group, three reported that they were studying environmental science or geoscience at the university. A further three mentioned the names of

threatened animals and three others mentioned factors that have contributed to extinction, such as “human pollution”, “global warming” and “deforestation.” Two people gave an emotional response; one person stating, “It is a deep global tragedy and a dark shame on humans.” while the other, said, “ I am so sad seeing some plants and animals die.”

Nine of the thirty participants claimed to have “little” or “limited” awareness of extinction and a further two, reported that they had no awareness of extinction. From this group, one commented, “As the media does not make society aware; [I have] very little [awareness]”.

Of the nineteen participants who reported an awareness of extinction, only ten were able to quantify the number of extinctions each year; supplying numbers within the range of one thousand to twenty-seven thousand. Twenty did not know or suggested a lower number, such as between one and fifty; and one suggested the very high number of ten billion.

Memorial participation and awareness of extinction.

Participants were asked, “What impact do the visual images have on your understanding of extinction?” Twenty indicated that *Memorial* had an impact. Half of this group reported a strong impact while viewing the exhibition, with comments such as, “The visual impact is vast, due to the extent of the artwork”; “ The images have a huge impact - to know the amount”; “Very significant. The numbers here are extraordinary”; “mind-blowing”; and “heart bleeding”. One participant stated that *Memorial*, “staggered my mind by sheer volume and moved me to tears by the scope and phenomena.” The visual display of twenty-seven thousand images was noted by a participant, who commented that *Memorial*, “gives some perception of what twenty-seven thousand looks like.” Another participant commented that the scale was “scary” and that it “really makes a difference.” A further participant commented on the aesthetic quality of the piece, where “the fragility of nature is echoed in the fabric.”

Thoughts and understandings after participating in the Memorial

Participants were asked to describe their feelings after creating and adding an image to a *Memorial* panel. One participant wrote that they felt “Weird - as if I am

contributing to extinction.” Two people made no comment and the other twenty-seven responses were positive. One participant stated, “I feel good about being able to contribute to an educational exhibition.” Another participant wrote, “Feels like I am contributing to something that makes people aware.” The interactive nature of the work and being able to contribute to the panel was noted by a participant, who communicated that they felt as if they were, “doing something worthwhile” while another participant noted that they were, “working on a project with meaning.”

When asked how participants’ understanding of extinction had changed through contributing to *Memorial*, three people said that their understanding had not changed, as they were already aware. A further five reported no change. Of the twenty-two people who commented that their understanding of extinction had changed, sixteen cited the scale of extinction or the number of extinctions as the attribute that had changed. One of these wrote, “I have realized the scope and scale of extinction and feel an urgency and sadness in the face of it”.

When asked how participants’ behavior would be influenced as a result of contributing a shape to *Memorial*, twenty participants reported that they believed their behavior would be influenced. Examples of anticipated influences on behavior included: “greater awareness of personal energy consumption”; “increased recycling”; and “recording environmental impacts and more research of the topic.” One person mentioned supporting environmental issues generally and doing voluntary conservation work: “I am more likely to be more active in raising awareness and supporting conservation and sustainability issues.” Another wrote that they would, “take more care of the environment.”

Care of the environment was reiterated by another participant, who wrote, “reminders always help us continue to work for a better future for all on this planet.” One participant, who said that their behavior had not been influenced, communicated that they would be continuing “with the fight and plans to help stop extinction and be more aware.”

Overall Opinions of the Memorial project

The final survey question asked participants for their opinions of community engagement art projects, such as *Memorial*. All but one participant had a positive opinion of *Memorial* and two people did not make a comment. The sole participant who did not feel positive about the exhibition, wrote that it was “[It] was rather pointless, doing nothing to actually change the world.” Of the twenty-seven positive comments, one respondent wrote, “Fantastic medium for an important message”. Another wrote, “It is a great way to make people stop and think. It gives you a time out from the everyday to think of bigger things.” A further comment was, “confronting rather than comforting.”

Discussion

Two thirds of participants reported an awareness of extinction prior to the exhibition, mainly attributed to University study or an active interest in conservation. Despite this, an understanding of the scale of extinction was only present in one third of total participants.

Twenty participants reported a heightened awareness of the scale and veracity of extinction as a result of contributing to *Memorial*. The process of drawing or cutting out an image and placing it in a pocket requires thought, decision-making, commitment and action. People who contributed an image to *Memorial* may have felt a sense of empathy with the many others who had indicated concern for extinction by contributing an image. As one participant noted, “loved seeing the variety of other people’s perceptions” and another wrote, “more people than I thought care about the issue.” This connection with other people recalls Dewey’s (1916) claim that the arts have the capacity to promote civilization by breaking down barriers between people. An outcome identified in this research is the capacity of the *Memorial* project to enable people to experience a shared vision. Even the sole participant who reported that the exhibition was “rather pointless, doing nothing to actually change the world”, still flagged that extinction is an ongoing problem.

The visual demonstration or presentation of the large number of species lost to extinction each year was noted by half the participants. As one participant wrote, “it gives some perception of what twenty-seven thousand looks like!” This response

reinforces Aristotle's idea that the "soul thinks in mental pictures"(cited in Yates 1966, 32). It also indicates that the thousands of images in *Memorial* enabled people to fathom the magnitude of extinction. Even though the number of annual extinctions was listed on the invitation to participate, the visual impact was noted as being significant by half of the participants.

Following participation in *Memorial*, twenty-seven people reported positive feelings such as "nice to do something tactile and to be part of something greater". Two thirds of the participants reported that *Memorial* had influenced them and that they would show stronger support for environmental issues; reduce their energy consumption; and be more mindful and caring toward the environment. The overall response to *Memorial* was that it was a great concept, with participants stating that it would help them to communicate the issue of extinction to others.

Conclusion

Memorial was constructed to raise awareness about extinction, and this research indicated that a community engagement visual arts project of this type could be effective to achieve this end. A majority of participants conveyed that they had enjoyed the *Memorial* experience and gave positive accounts of their participation, such as "fantastic medium in conveying important messages." An outcome of the research, then, is that involvement in this project was a pleasurable experience that afforded an opportunity for reflection and understanding of the scale of extinction.

This study also indicated that participants' behaviour would be influenced following involvement in *Memorial*. The aim was to generate awareness; the hope for changed behavior was not anticipated. While it remains untested as to whether behavioral changes did follow participation in *Memorial*, this could be the focus of further research into the impact of the project. The data to date suggests that community engagement in art can help people to form a deeper understanding of global issues, such as extinction.

A further outcome of the research is in relation to the value of the visual nature of art as an effective means to depict concepts and to enlarge and enrich understanding.

The visual and interactive nature of *Memorial* enabled people to “know themselves and their world” (Reimer 1989, 11) and to recognize the scale of extinction. The results of this study suggest that community art projects may be useful tools to build understandings that lead to the possibility of change; which will hopefully have a positive impact on the environment in the future.

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