

Honors 177

MIDTERM EXAMPLE

Title:

**Breathing Lung Box:
Air Pollution Exposed**

Name:

Major:

ABSTRACT

Through the manufacture and public display of a room-size breathing machine, the user will physically and spatially feel the bodily impact of living in polluted air. The intent of the project is to educate the participants in conceptually quantifiable terms of the relative pollution between cities and raise awareness of many of the worst polluted cities, which many people have never heard of.

CONCEPT / TOPIC

Specifically, I am interested in exploring digital art and its relation to educating the public about air pollution or climatic and environmental change.

The term "climate change" refers to changes in our current climate, which the Intergovernmental Panel on Climate Change claims are 90-95% likely to have been in part caused by human action¹.

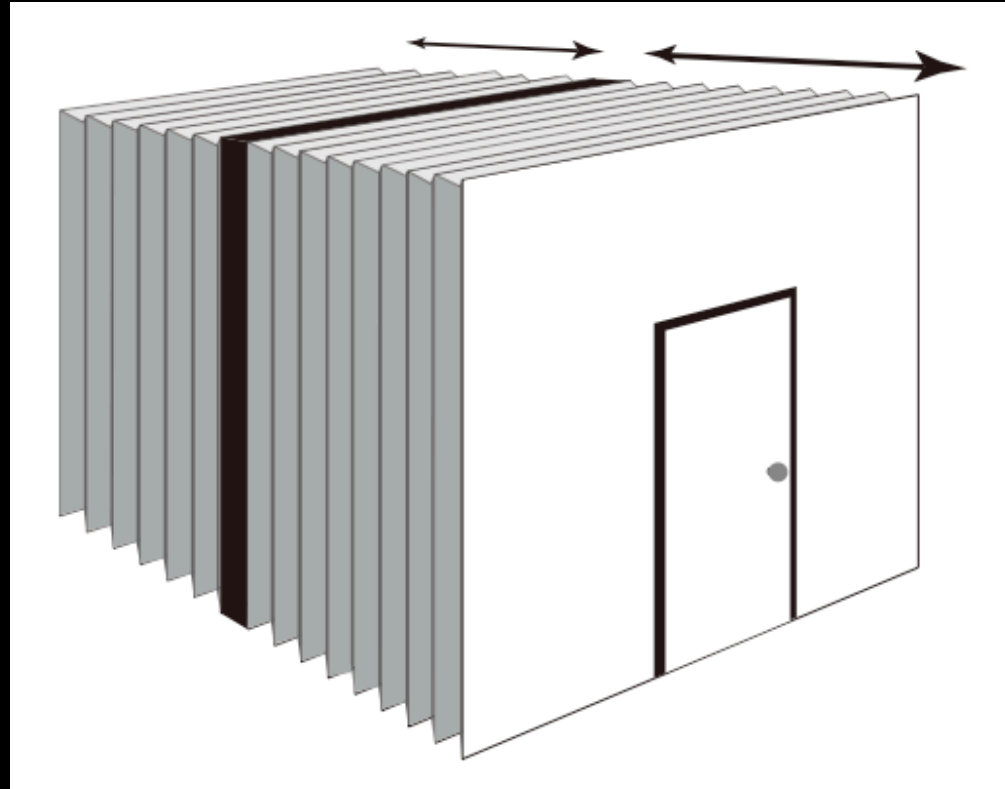
This is also known as anthropogenic climate change or more commonly in the media as global warming.

CONTEXT & PRECEDENTS

The U.N.'s issuing and development of the Kyoto protocol raised global public awareness of our changing climate². It assigned mandatory emission limitations for the participating nations. In more recent memory, many "natural disasters" are speculated to be the repercussions of the industrial age and man-made pollutants.

Several artists have explored issues of climate change. One good example is the Cape Farewell project, which exposed climate change in the Arctic³. In this project, 16 leading artists and scientists over the course of three expeditions to an archipelago south of the North Pole worked on pieces to raise awareness to this issue

PROJECT PROPOSAL



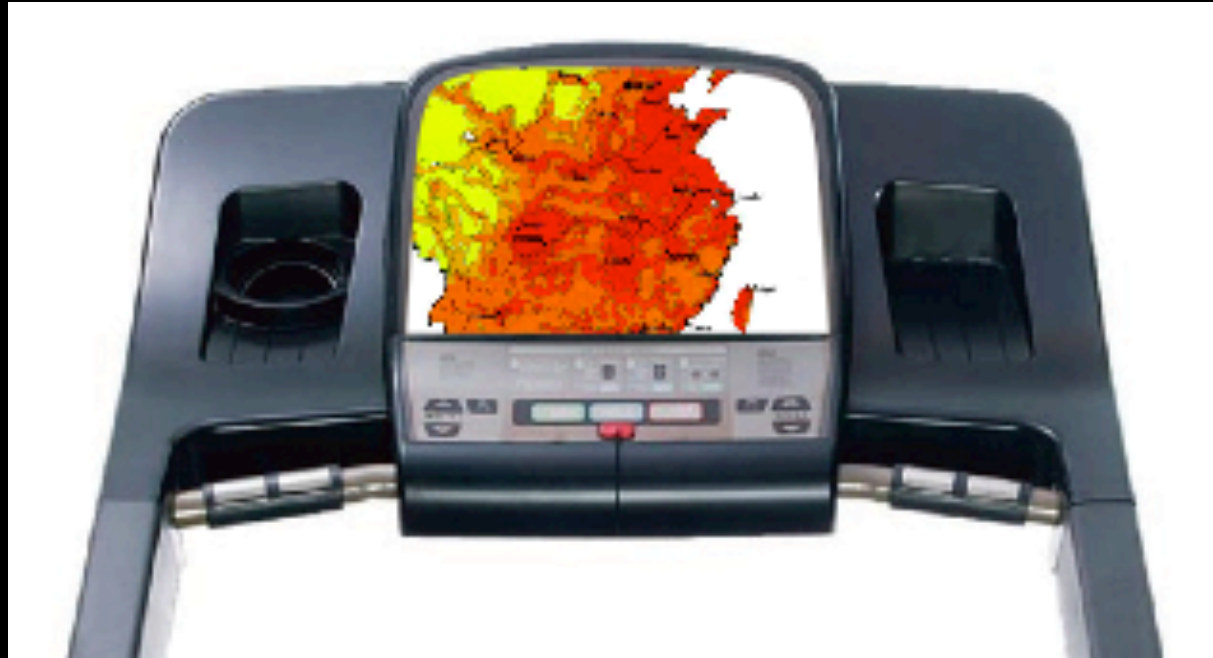
A room composed of two moveable walls, connected by two collapsible accordion walls will be constructed. The two moveable walls will rest on ball bearings. The accordion walls will be spring-loaded and connected to a generator, which will be powered by a treadmill. Participants will enter the Breathing Lung from an opening on either of the moveable walls. Inside the room, they can operate the treadmill. A LCD display screen located on the treadmill will instruct the participant.

Project Proposal (cont.)



At the start, they will begin walking at a comfortable pace, that will operate the breathing box's moving walls. Once the participant gets acclimated to the rhythm of the walls inhaling/expanding and exhaling/retracting, they will be instructed to choose a location on a map. The locations displayed will be of the world's most polluted cities, including Linfen, China, Haina, D.R., and Chernobyl, Ukraine. Next, the participant will notice the speed of the walls dramatically decrease. The screen will instruct the participant that in order to maintain the base speed, he must provide enough energy for the breathing box, directly correlated to how hard the lungs must work in order to provide a similar amount of oxygen to the blood stream, in the newly selected location. That is, given a location with a greater concentration of pollution, the participant must run faster or longer to move the lung box an equal distance.

Project Proposal (cont.)



While, the participant works on moving the walls, the display screen will run a generative software program showing a society of organisms depopulating and repopulating, also related to the pollution level of the participant's chosen location. Embedded in the program, will be rules that say that an organism will die if it is within proximity to a certain density of pollutants per square inch.

Conclusion

Anthropogenic climate change is a phenomena that is perhaps hard to perceive during our daily routines. This project confronts the user with this reality in making them work harder on the treadmill to the point of becoming short of breath. Further, a metaphor to the suffocating nature of increased pollutants in the air is alluded to by the changing constricting space of the breathing box. A further layer of public education and synthesis with visualization through digital media is obtained through the display of the generative software program directly related to the selected location's air composition.

[NOTE: This section could also talk about a means to evaluate the project or further projects that may arise.]

References

1 "Need reference for statistic." Intergovernmental Panel on Climate Change. Publisher, 2007.

2 "Kyoto Protocol." United Nations Framework Convention on Climate Change. 2007-10-24
<http://unfccc.int/kyoto_protocol/items/2830.php>.

3 Raising Awareness About Climate Change." Cape Farewell. 2007-10-24
<<http://www.capefarewell.com>>.

Bibliography / Links

"Air Quality Health" World Health Organization Regional Office for Europe. 2007-10-24 <<http://www.euro.who.int/air/>>.

An Inconvenient Truth. Directed: Davis Guggenheim, Producer: Lawrence Bender Productions. DVD. 2006.
<<http://www.climatecrisis.net/>>

Black, Richard. "Finding Green in the Concrete Jungle." BBC News. 2006-06-19
<<http://news.bbc.co.uk/1/hi/sci/tech/5072642.stm>>

Buckland , David, Ian McEwan et al. Burning Ice - Art & Climate Change. Cape Farewell, 2006,

"Champs d'ozone." HeHe. 2007. 2007-10-24 <<http://hehe.org.free.fr/hehe/champsdozone/>>

"Kyoto Protocol." United Nations Framework Convention on Climate Change. 2007-10-24
<http://unfccc.int/kyoto_protocol/items/2830.php>

"MLA Handbook: Bibliographic Format for References." University of Georgia Libraries. 2007-10-24
<<http://www.libs.uga.edu/ref/mlastyle.htm>>

"Need reference for statistic." Intergovernmental Panel on Climate Change. Publisher, 2007

"Particulate Matter." U.S. Environmental Protection Agency. 2007-10-24. 2007-10-24 <<http://www.epa.gov/air/particles/>>

Raising Awareness About Climate Change." Cape Farewell. 2007-10-24 <<http://www.capefarewell.com>>