

 **Spotlight on Climate****Art Moves the Needle on Climate Change****TED MARTINEZ**

(702 words)

Climate change is often discussed in terms of data and numbers that don't necessarily connect with everyone; perhaps Art can help. A friend once told me in conversation that good art has two requirements; one is that it can be interpreted in many ways, and the other is that it be worthy of discussion. Those seem like good starting points and climate change certainly needs discussion. I can imagine looking at a modern abstract painting that may have as many interpretations as there are viewers and the same for a modern sculpture. It also makes me think of a good novel that sparks much debate in which people remember and identify with different characters and parts of the book. Each reader of the book or viewer of the art piece can enter into dialogue with the artist and lend their perspective as each person is moved differently by the emotion of the piece.

This is known as the theory of transportation and identification. When a person reads a novel, they are transported to the scene of that novel for as long as it takes them to read it; days, weeks, or months. Readers are also said to increase their empathy and understanding of fictitious characters when they identify with the life story or experiences of those characters. Thus the reader is transported and identifies with the setting and characters.

These concepts apply and become all the more important when reading climate fiction or "cli-fi," a literary sub-genre of science fiction where climate change features prominently into the plot of the book. Mainstream authors such as Barbara Kingsolver, Kim Stanley Robinson, and Octavia Butler have been pioneers in "cli-fi." Kingsolver creates a world where monarch butterflies are disrupted by climate change and no longer migrate to Mexico; Robinson shows his reader a flooded New York city that continues to be the center of commerce and trade and functions like a futuristic "Super Venice"; and Butler portrays a dystopic future of Los Angeles that the reader may or may not want to imagine. These novels transport the reader into the future of a climate change world and allows them to empathize with the characters and our potentially shared future.

From 2014 to 2019 I gave students enrolled in my literature of climate change course the Climate Change Perceptions survey developed by the Yale Program on Climate Communication. I wanted to know if reading climate literature changed student perceptions, so I gave them a pre- and post-course survey. The survey asks questions such as “Do you think climate change is happening?” and “Do you think climate change will harm people in your community?”. Then it asks them to agree or disagree with a statement that reads “The arts have much to contribute to solving global warming.” The survey has been given since 2008 and uses the term global warming over climate change. Results from my classes showed that perceptions of art as a climate change solution significantly shifted from “somewhat agree” to “strongly agree” based upon statistical analysis.

After teaching this course for the last eight years I have come to the conclusion that art and literature increase the number of access points for climate change discussion. In the past the main way we discussed climate change was by arguing the science. Thus, only experts seemed qualified to discuss climate change. This left people, with the exception of the most dedicated or scientifically trained, unable to enter into climate change conversations. Looking back, this seems intentional by the climate deniers. Fiction and art lower the threshold for conversation and allow more participation. I am remembering the graph for activation energy from my plant physiology class where there is an activation energy hump to overcome, but with a catalyst the graph moves quickly downhill, producing products and free energy. In this way art lowers the activation energy for climate change conversations. The catalyst is the book, poem, photograph, or painting. The products are conversation, emotion, empathy, and understanding. Art broadens participation in climate change discussions. In this way art can be a climate change solution for everyone. The future of climate change solutions lies in science art, technology, engineering, and math (STEAM). The future is collaboration.

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