



## Synergy in art-science collaborations: Finding a common language to convey ocean research through art

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The ocean is at the heart of our climate system and understanding its role as a driver and modulator is critical in times of a changing climate, posing serious threats to our ecosystem and societies. This increases the need to communicate science in novel ways. Here we present outcomes, lessons-learned and future plans of artist-scientist collaborations as part of the *Synergy II* project – a collaboration between the Art League Rhode Island and the Woods Hole Oceanographic Institution. Self-selected pairs of scientists and artists collaborate with the goal to create a ‘common language’ using the arts to illustrate and communicate science. Through extensive conversations we examined the scientific and artistic process, and were surprised and delighted at the similarity of so many aspects of our work. We spoke in-depth about the challenges of communicating big ideas and numbers in meaningful ways and how we all had to be compelling storytellers. Produced artwork comprises a set of 3D kinetic sculptures created out of printed canvas, introducing the audience to a warming ocean and impacts of extreme temperatures on ecosystems and society more broadly. While the form captures the constantly moving and swirling motions of the ocean, the printed layers on the canvas also aim to convey the thrill of discovery and the complexity of our research, from data acquisition (now and in the past), coding to visualization and ultimately conveying a message. Other artwork highlights the role of ocean salinity in digitally layered 2D prints, capturing the central, yet underappreciated, role of the oceans for the global water cycle and ocean dynamics: the artwork conveys salinity as a critical metric tracking moisture export at the ocean’s surface, as well as different water masses being defined by different temperature and salinity compositions – and how new salinity sensing capabilities from space provide new insights into ocean dynamics and predictive capabilities for rainfall on land. As new collaborations begin, we strive to learn from our past experiences and venture into new exciting art projects that come together with existing artwork under the umbrella of *Synergy II* and expand on community engagement and outreach to involve K-12 education. These collaborations have added a new enriching dimension to all our work, both scientifically and artistically.

