scope
Contemporary Research Topics

art & design 23:

November 2022

https://doi.org/10.34074/scop.1023012

INTENTIONALITY IN ENGAGEMENT:

UNDERSTANDING THE MOTIVATIONS OF SCIART PRACTITIONERS

Sierra Adler and Jenny Rock

Published by Otago Polytechnic Press. Otago Polytechnic Ltd is a subsidiary of Te Pūkenga – New Zealand Institute of Skills and Technology.

Article https://doi.org/10.34074/scop.1023012

INTENTIONALITY IN ENGAGEMENT: UNDERSTANDING THE MOTIVATIONS OF SCIART PRACTITIONERS

Sierra Adler and Jenny Rock

Science and art practitioners contribute to wide-ranging collaborative 'SciArt' projects, using tools from each discipline to bring new interpretations and meanings to our lived experiences. Many SciArt projects demonstrate the value of art as a communicative platform for scientific complexities. In the right conditions, science and art can work hand-in-hand to situate scientific findings within a public context and generate new purpose and/or novel viewpoints.[1]

Art allows audiences to witness objective realities from their individual subjective perspective,[2] bringing with them their unique lived experiences and emotional ways of knowing. In this, art can be an invaluable resource for helping to navigate dialogue and decision-making around value-dependent problems, particularly challenging socio-ecological issues.[3]

SciArt allows its subjects to work in the abstract, to appeal to larger systems and human intuition, to address problems free from the demands of the scientific process to "pose wider cultural questions that scientists themselves are not always able or willing to ask".[4] This helps us gather around big and intangible issues that require community-level decision-making processes and solutions.

As such, SciArt provides an opportunity to nurture the "creative resilience of communities".[5] Such people-oriented interventions position SciArt practice as an essential element of community science communication and engagement platforms, particularly when it comes to creating change in lived environments.

However, in order for SciArt work to 'perform' accordingly, it must demonstrably achieve audience engagement. Although some research has assessed engagement in SciArt projects, (e.g. Amy Brady 2018; Paul Glinkowski and Anne Bamford 2009; Brett Wilson, Barbara Hawkins and Stuart Sim 2014), relatively little work has gauged practitioners' intentionality towards audience engagement within their creative process. Such insight might help guide future SciArt endeavors and begin a conversation about what 'success' in socially-engaged SciArt looks like.

Our recent research on New Zealand-based artists who practice SciArt aimed to identify the artists' motivations and communication goals with regard to audience engagement, focusing specifically on artists' intentionality within their creative process. Here, 'intentionality' is understood as the deliberate translation of ideological motivation into the tangible elements of a work, and the evolution of one's practice in reference to a given motivation in hopes of achieving a desired outcome. We summarise here some of the key findings from this research, emerging from content analysis of a series of in-depth interviews with eight practicing artists.

UNDERSTANDING AUDIENCE ENGAGEMENT

Engagement is a notoriously challenging behavioral outcome to measure.[6] Subjective, nuanced, and often internalised, engagement has proven difficult to assess, both in and outside of structured learning environments. The artists interviewed in our study reported using a variety of means to measure engagement, mostly limited to subjective and informal observation-based methods.

Those measures that leaned towards more objective assessment were typically only carried out during an event (e.g. a workshop), and thus did not include the ongoing engagement occurring as audience members processed information and emotions after the event. The majority of artists interviewed reported not feeling that they ever got a full understanding of the interactions and engagement that occurred with their work through the measurements they used.

The artists interviewed fell naturally into two categories of practice - those creating interactive works and those creating non-interactive works. Their work was also displayed in different locations, with the non-interactive work tending to be displayed in gallery settings and interactive works most often in public spaces (physical or online), or during workshops, etc.

Artists whose work was primarily displayed in galleries typically assessed audience engagement through their encounters with individuals at gallery openings, which they saw as providing valuable opportunity for interaction. These artists reported often being crowded with people coming up to them to discuss their interpretations of given works. Artists noted that such interactions obviously reflected certain viewer's personalities; some were more interested in vocalising reactions than others.

As might be expected, engagement was a crucial element for artists creating interactive works. They reported higher interest in assessing and enhancing their audience engagement. They often assessed such engagement by documenting audience interaction with specific components of their work – e.g. by the audience recording aspects of their interaction in writing, or through short questionnaires. Within the interview data, there was clearly a direct relationship between an artist's desire for audience interaction with their works and their intentionality of design to encourage such engagement, but also with their propensity to try to measure the extent of engagement.

ARTIST MOTIVATIONS

The work of artists interviewed in this research demonstrated an intentionality in applying arts practice to address issues surrounding resilience, environmental reclamation and restoration, corruption, and many other value-laden issues. However, our interviews also showed that artists' motivations and intentionality in creating for an audience vary widely.

Some referenced their work as a "social duty", some focused their work on transforming their own lived environments, and some used their practice as a means of "sanctuary" from the outside world. While most artists referenced distinct motivations, only some reported their work to have a desired effect on their audiences.

Interactive artists often reported motivations related to instigating change by transforming behaviors and/or mindsets, whereas artists producing non-interactive works tended to be focused on aesthetic and personal goals. Though some of the non-interactive artists reported positive experiences in engaging with their audiences at gallery openings or through social media, they did not seem to necessarily place value on pieces of work that elicited a greater amount of engagement. Some non-interactive artists even went as far as to say that they did not want more audience feedback, nor would feedback alter their work, as they preferred to create in solitude for personal purpose.

A CASE FOR MORE INTENTIONAL INTERACTIVE ENGAGEMENT IN SCIART

If the admixture of science and art into SciArt is to do more than inspire personal aesthetic expression, our results suggest benefits from greater intentionality in not only incorporating interactivity for engagement but also assessing its effectiveness. For instance, within the field of education, engagement is well-known as a crucial element of scientific information retention,[7] and that active learning conditions (versus passive) create more engaged and motivated students[8] and improve critical thinking skills.[9] In encountering works with intellectual rigor outside of structured learning environments, information appears to best be processed through authentic applications and experiences.

Together, this suggests that interactivity in SciArt is valuable for enhancing audience engagement through attention, retention and participatory motivation to contextualise the SciArt work within their lives. Works of SciArt can allow for these personal connections in two ways – first, they provide good scope for presenting new information applied in a real-world context, which ideally resonates with audiences within the course of their own lives. Second, artistic interpretations can reinforce information that audiences may have learned previously, but not fully processed.

Although the value of interactive audience engagement may be clear, ways to easily incorporate it into the creative process may not be. An emergent theme throughout our interviews was that virtual platforms can serve as a proxy for interactive engagement, particularly for non-interactive artists during periods in between gallery shows. Half of the non-interactive artists interviewed were frequent users of social media and/or blogs as an outlet for audience interaction. Digital platforms allow for large and diverse audiences, regular interaction with those audiences, and a forum for structured feedback. They also offer the potential to tap into analytics in order to compose a broad understanding of one's audience.

Some artists indicated that they also used public talks and presentations as forums for structured audience engagement. One envisioned a future where artists contributed articles to academic journals, outlining their process and intentions in creating an artwork, and in doing so, extending the work's reach outside of the gallery (similar to artists' digital presences). Several artists suggested that they felt that displaying their work in informal spaces promoted better quality of engagement for their audiences. They emphasized that the value of SciArt comes from the mixing of ideas, and informal environments grants viewers the freedom to engage with that which entices them.

Breaking down barriers of accessibility to bring their works of SciArt to unique groups remained a huge challenge for the artists interviewed. Many of them felt that, although displaying their work in informal spaces was an essential component for reaching broader audiences, finding new informal forums for those connections to occur was challenging. A combination of these and other engagement practices is perhaps the ideal situation enabling different audiences to absorb a work through a variety of mediums, and with differing levels of accompanying interpretation.

SciArt allows its subjects to work in the abstract, to appeal to larger systems and human intuition, to address problems free from the demands of the scientific process, and to "pose wider cultural questions that scientists themselves are not always able or willing to ask".[10] This helps to gather us around big and intangible issues that require community-level decision-making processes and solutions. As such SciArt provides an opportunity to nurture the "creative resilience of communities".[11]

Such people-oriented interventions position SciArt practice as an essential element of community science communication platforms, particularly when it comes to creating change in lived environments. The work of artists interviewed in this research demonstrated an intentionality in applying arts practice to address issues surrounding resilience, environmental reclamation and restoration, corruption, and many other value-laden issues.

FURTHER BARRIERS AND CHALLENGES

Throughout the interviews, artists referenced a variety of stumbling blocks to their SciArt process, but a recurring theme involved situations in which artist and scientist collaborators had differing expectations. Many artists reflected on times that they felt they had been brought into a project as "vessels for prettification", instead of practicing professionals with distinct communication intentions and skill sets. Ede suggests that SciArt enterprises require a thoughtful approach from all collaborators because art "cannot *directly* be 'about' science… if art is 'about' anything, it is a reflection of human experience in complexity and it emanates from an inventive individual with an unusual and sideways view on things".[12]

Many artists also expressed frustration that the arts and sciences continue to be siloed, and their practitioners are encouraged to proceed on separate paths. Most viewed their work as an attempt to bridge the two disciplines, and often, an effort to demonstrate the similarities between them. Though almost all of the artists had experienced some positive and valuable relationships with scientific partners, and had found forums to support their work, generally they found huge room for improvement.

It is apparent that the most important element for SciArt's continued proliferation and wider success, as we face daunting environmental changes and unceasing scientific advancements, is a culturally and financially supportive environment in which to grow. In no small part, this can also support artists in intentionally developing interactive elements to engage their audiences further, and in measuring the wide-reaching impact of their work. Generally, our interviews suggested that when an artist's motivation and intentionality were related to fostering change, they used their artworks as platforms for empowering stewardship, learning, or public engagement with their lived environments. They created works with intentionality related to those outcomes, and often attempted to produce measurable impacts.

More support for such endeavors will add further weight to the value of SciArt for scientists (to engage with artists to make meaning of their work for public enlightenment), for education (to situate SciArt as a teaching tool in classrooms and in informal learning environments), and for society (recognising art's value for communities worldwide in framing questions, decision-making and understanding our communal experience). SciArt will thrive where it is championed, supported and where its value is rendered towards meaningful endpoints.

Sierra Adler is a writer with a master's in science communication from the University of Otago in New Zealand. Her work focuses on public perception of science, the use of SciArt for science communication, and scientifically informed community-based decision-making practices.

Dr Jenny Rock (https://orcid.org/0000-0001-7250-6463) is has an interdisciplinary background in science and the arts/humanities, and is an applied and academic researcher in both spaces - often focusing on their integration. She currently holds lecturing and research positions at several academic institutions within NZ and internationally.

1 *Art, Science, and Cultural Understanding*, ed. Brett Wilson, Barbara Hawkins, and Stuart Sim (Champaign, IL: Common Ground Publishing, 2014).

2 Bronwyn Platten and Iain Biggs, "Engagement and Embodiment: A Body of Art in Healthcare," in *Art, Science, and Cultural Understanding*, ed. Brett Wilson, Barbara Hawkins, and Stuart Sim (Champaign, IL: Common Ground Publishing, 2014), 120-36.

3 Sacha Kagan, "Artistic Research and Climate Science: Transdisciplinary learning and spaces of possibilities," *Journal of Science Communication*, 14 (2015), 1-8.

4 Brett Wilson, Stuart Sim, Barbara Hawkins, and Iain Biggs, "Voices Off", in *Art, Science, and Cultural Understanding*, ed. Brett Wilson, Barbara Hawkins, and Stuart Sim (Champaign, IL: Common Ground Publishing, 2014), 152.

5 Sacha Kagan, "Artistic Research and Climate Science: Transdisciplinary learning and spaces of possibilities," *Journal of Science Communication*, 14:1 (2015), 1.

6 Jennifer Fredricks, Michael Filsecker, and Michael Lawson, "Student Engagement, Context, and Adjustment: Addressing definitional, measurement, and methodological issues," *Learning and Instruction*, 43 (2016), 1-4.

7 Larry Grabau and Xin Ma, "Science Engagement and Science Achievement in the Context of Science Instruction: A multilevel analysis of U.S. students and schools," *International Journal of Science Education*, 39:8 (20170, 1045-68.

8 Carl Benware and Edward Deci, "Quality of Learning with an Active Versus Passive Motivational Set," *American Educational Research Journal*, 21:4 (1984), 755-65.

9 Brittany Rodriguez, "Active Learning vs. Passive Learning: What's the best way to learn?," classcraft.com/blog, Classcraft Studios Inc., September 6, 2018, www.classcraft.com/blog/features/active-learning-vs-passive-learning/.

10 Brett Wilson, Stuart Sim, Barbara Hawkins, and Iain Biggs, "Voices Off", in *Art, Science, and Cultural Understanding*, ed. Brett Wilson, Barbara Hawkins, and Stuart Sim (Champaign, IL: Common Ground Publishing, 2014), 152.

11 Sacha Kagan, "Artistic Research and Climate Science: Transdisciplinary learning and spaces of possibilities," *Journal of Science Communication*, 14:1 (2015), 1.

12 Sian Ede, *Art & Science*, (London: I.B. Tauris & Co. Ltd., 2005), 3.