Achievements and lessons learned from Avatars of Human Creativity: Exploring the ArtSci Connect

Barb Glassey, Catherine Arseneau and Katherine Jones, Cape Breton University

Introduction

This project united scientists, artists, students and the public at the intersection of art and science, and the Mi'kmaq guiding principle of *Etuaptmumk*, or Two-Eyed Seeing, which brings together Indigenous knowledge and Western science. We used this guiding principle to address how Indigenous art intersects with science by connecting contributors of aboriginal identity and heritage through cross-cultural exchange. During Fall 2017, we explored these connections through 3 methods of delivery:

1. ARTSCI Gallery Exhibit - highlighted real-world examples of the use of art in science and technology
2. ARTSCI STEAM Conference featured invited speakers and panel discussions that focused on the value of collaborative and cultural concepts
3. BioArt Workshops engaged the broader public, students and faculty, to explore science concepts and methodologies integrated with visual arts techniques

Our primary goal was to explore creative interdisciplinary and transcultural connections at the intersection of art and science.

ARTSCI STEAM Conference

The ArtSci STEAM Conference explored the connections between art and science by focusing on the visual arts as they exist in the STEM fields, creating "STEAM" (Science, Technology, Engineering, Arts and Mathematics).

The principle of Two-Eyed Seeing shaped the discussion of how we can more holistically integrate scientific inquiry and creative expression.

Conference Photos (top to bottom): 1) **Elder Albert Marshall** giving the opening address. He articulated the hope that the intersection of art and science can be seen in a similar light to the blending of Indigenous and Western worldviews inherent in Two-Eyed-Seeing. 2) Keynote speaker **Dr. Andrew Pelling** speaking about how his interdisciplinary lab fosters curiosity and creativity. 3) Invited speakers and panelists **Alan Syliboy**, **Elder Albert Marshall** and **Jordan Bennett.** 4) Invited speakers and organizers. Back Row: **Alan Syliboy**, Dr. Arja Vainio-Mattila, Dr. Barb Glassey, **Elder Albert Marshall, Andrew Pelling, Jordan Bennett,** Greg Davies. Front Row: **Dr. Sally McKay**, Catherine Arseneau, **Mireille Bourgeois, Elizabeth Goluch**, Dr. Dana Mount, **Dr. Jennifer Willet.** (missing: **Gerald Gloade**, Dr. Katherine Jones)

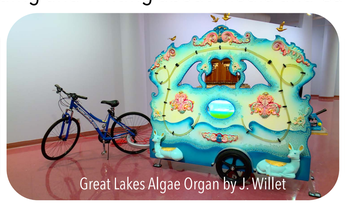
ARTSCI Gallery Exhibit

The ArtSci Exhibit featured three contemporary artists whose practices are informed by the natural world and intersect with science: **Jordan Bennett**, **Jennifer Willet** and **E. Goluch**.

Reach of the Exhibit:

- engaged students through internship, volunteer, and work placements
- built capacity through shared networks e.g. Inverness County Centre for the Arts (ICCA), The Art Room (New Dawn Centre for Social Innovation), ACAP Cape Breton and The Lumiére Arts Festival Association
- enhanced community and transdisciplinary learning experiences (e.g. Cape Breton Naturalists Society, Girl Guides, SPEC Drama Group, CBU courses: The Art and Science of Environmental Studies, Cell and Molecular Biology, Reading and Writing about Science, Reading and Writing about Media and Culture)


Skull Stories by J. Bennett


Great Lakes Algae Organ by J. Willet


BioArt in the Gallery by J. Willet


Carpenter Ant by E. Goluch

BioArt Workshops

BioArt Workshops highlighted the place of the arts in shaping and reflecting environmental values. They provided opportunities for hands-on learning, and encouraged transdisciplinary research through hybridized laboratory practices.

The **Cape Breton Yeast Workshop** took place in a traditional science laboratory. Below, **Jennifer Willet** explains how to cultivate samples of yeast from the local environment (bottom left); yeast was grown on historical images of Industrial Cape Breton and participants' works were displayed in the Art Gallery (2nd from left). The **Great Lakes Algae Organ Workshop** took place in the Gallery. Dr. Willet's Algae Organ serves as a portable lab for education, workshops, and tasting. Participants learned how to cultivate *Spirulina*, engage in algae microscopy, taste test *Spirulina*, and create BioArt (bottom right photos).

Achievements and Lessons Learned/Going Forward

- These activities: 1) inspired the mobilization of research and practice that enhanced art through the incorporation of science and science through art, 2) helped delegates learn how to integrate artistic practices in teaching and learning curricula in the STEM fields.
- We learned that it is useful to merge art and science through non-traditional uses of spaces (e.g. art in science labs, and science in the art gallery), and that the dialogue surrounding the interconnectedness of art, science, technology, and the natural world is deepened through a holistic approach that incorporates the principle of Two-Eyed Seeing.
- SNAPPER videos were created for 4 artists (**G. Gloade**, **J. Willet**, **J. Bennett**, and **E. Goluch**) to leave a virtual legacy of these ArtSci/STEAM/BioArt activities that explored the connections of art, science, technology, and the natural world to the creative process and learning.
- The ArtSci icon (center) was commissioned from **Gerald Gloade** to celebrate the achievements of the ArtSci initiatives. It resonates the interconnectedness of art, science and the principle of Two-Eyed Seeing. The iconography incorporates artistic renditions of "Skull Stories" (**J. Bennett**), the Great Lakes Algae Organ (**J. Willet**), and the Harlequin Bug/Cabbage Bug/Shield Bug (**E. Goluch**) created in Gerald's digital style of artwork. It also incorporates the Two-Eyed Seeing symbol, used with permission (C. Bartlett).

Acknowledgments

These activities would not have been possible without the interdisciplinary collaborations and contributions by Dr. Dana Mount, Dr. Arja Vainio-Mattila (School of Arts and Social Sciences), and Greg Davies (CBU Art Gallery). Special thanks to Karie Liao, Faryal Shehzad, Emily Frith, Chris Jones (CBU/Rotary Music Performance and Analysis Room), Sarah Jones (SNAPPER videos), and Dr. Cheryl Bartlett. Sincere appreciation is extended to the Social Sciences and Humanities Research Council (SSHRC), Cape Breton University and The Lumiére Arts Festival Association for funding and in-kind support. Bicycle provided by S. Ayers-Glassey. Photo credits: J. Gainer, The Art Room.

Social Sciences and Humanities Research Council of Canada
Conseil de recherches en sciences humaines du Canada
Canada

Cape Breton University

Cape Breton University Art Gallery

Cape Breton University BIOLOGY