

**Stealth Science: How Immersive Storyworlds Can Foster Science Communication and Conversation**

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**Overview:** This paper analyzes how short interactive edgy science-and-art activities can engage members of the public without a strong connection to science with science concepts and practices.

**Audience:** Science communication practitioners; Informal learning educators; Researchers; Evaluators

**Key Points**

- Short-term science engagement opportunities can contribute to the development of science interest and identity.
- Edgy, theatrical “immersive storyworlds” can break down barriers to participation in science communication and foster a sense of belonging in science.
- Participants’ prior lives and interests serve as the means for participation thus advancing inclusive science engagement strategies.

**INTRODUCTION** Research suggests that people who attend short term science engagement activities such as science festivals, maker fairs, and citizen science are already inclined to engage with science. To reach those who do not already seek out science, Guerilla Science stages “stealth” science engagement activities at nightclubs, country fairs, and storefronts. Activities are organized around personal, titillating, and edgy content areas such as the science of hallucinogens, social media, or sexual attraction. This paper describes a study of short-term science engagement activities that used “immersive storyworlds” to place members of the public in the role of “diner counter patron” at a pop-up diner that only served insects. The roleplaying by “customer” and “waitstaff” (the science communicators) allowed sustained conversations about insect agriculture and the future of food. We draw on Mikhail Bakhtin’s analysis of “carnival”—public celebrations that use costume, pretend play, and ribaldry to enthusiastically disrupt power structures for a day—to describe how humor, disgust, embodiment, camaraderie, and art merge to foster active participation in science conversations.

**FINDINGS** Using unobtrusive research methods that did not stop the “pretend play” of the storyworld (e.g., by interviewing or surveying participants), we video-documented 31 different social groups (102 individuals) during a total of 363 minutes of interactions at the pop-up diner. The average length of interaction was almost 12 minutes. Our analysis of the video recordings integrated qualitative and quantitative methods to understand if and how the immersive storyworld engaged participants in science.

Using a Bakhtinian lens of carnival, main findings include:

- People were drawn to and kept at the counter by visceral disgust, curiosity, and laughter.
- Because people could create their own roles/personae at the diner counter, bringing their pasts and selves into the “play” to connect with the science communicator and with others, which created a sense of “belonging” in and with science and science conversation.
- A sense of belonging sustained participation and led to lengthier and more detailed science conversations.

**TAKEAWAYS** Integrating art and science—as in the theatricality of the storyworld—engages multiple roles and possibilities for people to participate in science activities. Designing interactions in open-ended ways can allow people to leverage their own pasts and interests as the means for participation, which can enhance and broaden participation. An alignment of the context (the social groupings of fair-going, the sense of adventure, the culture of food stands) and the intervention (a pop-up diner counter with roasted insects, aesthetically appealing sets and costumes, and humorous interactions) may be important for successful engagement. Designing and documenting short-term science engagement is important for understanding how public science engagement develops over the lifespan and across settings.

**Food for thought: Immersive storyworlds as a way into scientific meaning-making**