Bridging the Methods of Art and Science in a Documentary Web Series, *Curiosity: The Making of a Scientist*

Ellen Askey, 4th-Year, Cinema and Media Studies  
Mentor(s): Dr. Sunanda Prabhu-Gaunkar and Professor Nancy Kawalek, STAGE Lab, Pritzker School of Molecular Engineering

At STAGE Lab, a collaborative and interdisciplinary team is developing a documentary-style web series uncovering the lives of scientists, their motivations, and their thinking. *Curiosity: The Making of a Scientist* is made for a broad audience, demystifying science and dispelling stereotypes. I was co-director for the pilot episode of the series and contributed to cinematography, editing, and story building as well. In line with the art-science approaches fundamental to STAGE, a research process similar to that of experimental science influenced the creation of this episode. Key elements of such an art-science process include aspects of serendipitous discovery, peer-review, iterative development of scenes, and receptiveness to discoveries through iteration in story development. This process has a distinct fingerprint on the story. The pilot episode, “Superposition,” follows Nate Earnest, a graduate student in physics. Despite a challenging childhood of limited means and the loss of both parents by the age of sixteen, Nate makes his way to the University of Chicago to pursue his love of physics and struggles through years of failed attempts to create a quantum device. The scientist’s research topic is also a character that functions as a close metaphor for the scientist’s personal life. Nate’s research is to build a device that lives in “quantum superposition,” which means that it can be in two states—“on” and “off”—at the same time. This concept aligns with Nate’s state of mind. He struggles to balance his emotional and logical sides, which he calls “the two states of Nate.” In this way, the viewer becomes acquainted with conceptually abstract ideas and complex scientific topics by relating them to the scientist’s personal journey. In illustrating the research content with this intimate lens, the series invites viewers to discover the world of science through the little-told stories of those in the lab.
The 2020 University of Chicago Undergraduate Research Symposium Proceedings: Abstract

Re-envisioning Ibsen’s *The Lady from the Sea*: Dramaturgical Research and its Role in the Rehearsal Room
Alisa Boland, 3rd-Year, History, Creative Writing
Mentor(s): Nora Titone, Court Theatre

Directed by Shana Cooper, Henrik Ibsen’s ethereal drama *The Lady from the Sea*, will open for Chicago audiences this March as part of Court Theatre’s 2019/20 season. One of Ibsen’s more obscure works, *The Lady From the Sea* follows Ellida, a lighthouse keeper’s daughter, who must choose between the love of her husband and her unearthly desire for a stranger from her past, a visitor as terrifying and alluring as the sea itself. Shana Cooper’s production seeks to reimagine Ibsen’s critique of marriage for a contemporary audience: How can we reinterpret Ellida’s terror and attraction for her stranger in a society in which both desire and gender are allowed to be as fluid as the sea? How can a production use physical gesture to embody the subtext of a script—especially in an Ibsen production, where a character’s words are often at odds with their feelings? How can we use movement to convey and manifest both the literal plot of this play and the symbolic parable that lies beneath? This presentation will delve into the dramaturgical research that I have contributed to Court’s production as the assistant to resident dramaturg Nora Titone. In addition to featuring my textual analysis, this presentation will showcase the topics which I researched—namely Ibsen’s myriad influences—and materials which were collected for the production team: Charcot’s nineteenth-century lecture notes on hysteria as well as his medical photography, Ibsen’s folkloric inspiration, and the feminist theories of John Stewart Mill. Moreover, I will situate this research within a broader conversation on the role of research in the artistic process, especially within the collaborative environment of a rehearsal room. What does it mean to create research responses to a text? How can research illuminate and fuel artistic possibilities? In what ways does research done in an artistic context differ from research done in an academic context?
Even Better than the Real Thing
Abigail Henkin, 3rd-Year, Theater and Performance Studies & Cinema and Media Studies, Spanish
Mentor(s): Professor Chris Kennedy, Linguistics

A lot has changed since Turing wrote “Computing Machinery and Intelligence” in 1950, but his text has remained a conversation starter. It has been the subject of intense critique, perhaps most notably from John Searle’s Chinese Room argument, which criticizes the test’s assumption that we can determine intelligence based on behavior. Yet it is this very assumption that has paved the way for many of the derivations of the test that have followed. Of the tests described in this project, some are real (have actually been conducted by scientists), some are speculative (published by scientists but not conducted), and some fictional. What they all share is an appreciation for how quickly this technology has advanced and an understanding that, as it continues to do so, the line between human and machine thought is blurring. The screenplay Even Better than the Real Thing explores this blurring, as a former ballerina finds out that her reclusive celebrity crush owns several sex robots and decides to pretend to be one in order to start a relationship with him. The line between human and machine identity and thought is blurring. In 1950, Turing replaced the question of “do machines think?” with a test which a machine passes if it is indistinguishable from a human in a text-based conversation. My research investigates alternatives and derivations of the test to identify different elements of machine intelligence. The Alternative Turing Test Catalog lists and evaluates tests from scientific journals and from science fiction. It also analyzes several science fiction examples in which humanoid robots are difficult to discern from humans. Following a narrative tradition in which men mistakenly fall in love with dolls and women pretend to be them, and academic articles like those from the Second and Third International Conferences on Love and Sex with Robots, the screenplay Even Better than the Real Thing asks what happens when women and sex robots are indistinguishable, and utilizes several of the alternative Turing tests to determine how advanced the sex robots’ thought is.