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Using theatre and art-based pedagogy to achieve the practices of science in the student body, Abstract

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BODY of KNOWLEDGE

Using theatre and art-based pedagogy to achieve the practices of science in the student body

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One of the most important goals of university science education is to prepare students to design and carry out their own experiments. Despite a well-developed literature on science-practice teaching, however, this goal is difficult to realize in conventional science education. The most intractable problem is that an experimenters' knowledge of potential scientific objects immures the agency of matter which by definition currently eludes disclosure. As Barbara Maria Stafford shows in her work on "Body Criticisms" and analysis of "Echo Objects", however, the non-linguistic pedagogy of performance has potential for developing the silent, kinesthetic and effective sensitivities project the materially plausible, yet also imagined contours of a future experimental research project.

In this paper we describe an art-based pedagogical model informed by the "Imagine a Spectacle" theatre concept. In particular we show how this idea and its consequential actions achieve the elusive goals of learning science practice through a gradual disclosure of latent material potentialities. We exhibit our approach in documentary of one interdisciplinary performance: "Performing Antibodies" in which student of the arts, the sciences and social sciences collaborate with young artists, dancers, and musicians, bringing to light an embodied drama of antibody structure in and of their corporeal bodies. Drawing on contemporary philosophy of art and science, including the feminist turn of science studies and Andrew Pickering's account of the dialectics of resistance and accommodation in experiment, our analysis exhibits how human and non-human protagonists can interact in unfolding drama in order to bring about science-like discovery. Our paper exhibits the essential features of our model and illustrates the stages of disclosure using the students' choreography and emerging script of "being antibodies".