

# UCLA

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Peer reviewed

BY ALICE WEXLER

# Edge of the Map

AN EXPERIMENT IN SCIENCE AND IN THEATER



*It seemed extravagant to fly to Boston from Los Angeles just to see a play, but in the end I couldn't resist.*

EARLY IN FEBRUARY OF 2013 I had received an email from my friend Jonathan Beckwith, a distinguished microbiologist and geneticist at Harvard Medical School, telling me about a new project he had organized. Jon had recently participated in a collaboration at the Free University of Berlin with science students and members of the English Theater Berlin. They had all read Caryl Churchill's play, *A Number*, on the subject of human cloning, and discussed the social issues it raised. Excited by this experience, Jon decided to try something similar with his students at Harvard. But instead of having them discuss existing plays, he and a former student, Ben Morris, recruited Sightline theater director Calla Videt to work with students in his "Social Issues in Biology" class to create a new theater piece altogether.

Their collaboration produced *Edge of the Map*, a collage based on real-life and invented scenarios involving ethical and social dilemmas in genetics. One of the texts for the "Social Issues" class was *Mapping*

Marisol Pettee as Leilani Muir in *Edge of the Map*, 2013.  
Photo by Chris Masterson, courtesy Sightline.

Anna Hagen as Alice and Eli Wilson Pelton as her father Milton on a road trip, *Edge of the Map*, 2013. Photo by Chris Masterson, courtesy of Sightline.





*Fate*, an autobiographical book of mine about Huntington's disease experience and research.<sup>1</sup> One of the real-life narratives in the theater piece involved a character named Alice, based on the book, who learns she is at 50% risk for this disease.

It was certainly flattering to learn that I was going to be a character in a play! But even more intriguing was the opportunity to see how experimental theater might engage with difficult ethical and social dilemmas emerging out of the new molecular genetics—dilemmas posed by the increasing number of predictive genetic tests, by new technologies for manipulating genes, and by the commercial possibilities of genetics research. As a long-time lover of theater as well as an influential science activist (he was one of the founders of *Science for the People* in the 1970s), Jon was excited by the opportunity to explore new ways of communicating scientific knowledge and of investigating the social dimensions of science. He also thought that the process of creating a theatrical performance could open up new ways of thinking about science. Calla Videt too had thought deeply about these issues. As a Harvard undergrad with a major in theater and physics, she had created a highly successful theater piece, *The Space Between*, about theoretical physicist and Nobel Laureate Richard Feynman. Her New York theater company Sightline was specifically interested in exploring scientific questions. Calla and other members of Sightline tossed ideas back and forth with the science students, who sat in on rehearsals with the student actors

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and created materials and visuals for the piece. Everyone wished they had more time.

Genetics was not Calla's field, but she learned fast and the students in Beckwith's class helped focus the major questions for the piece—how much do we want to know about our genetic identities? How much of our biology can we or should we try to control? What do we wish to pass on to our children and what do we think our genes say about who we are? Can theater create new ways of learning and communicating about science? Can science help create new forms of theater?

On Saturday evening, April 13, at the first performance I attended (I went twice!), I joined other attendees seated in rolling chairs lining the corridor outside a converted classroom/physics lab/performance space in the Harvard Science Building. Roaming actors blindfolded us. After a while they rolled us into the large concrete space where we

were bombarded with genetic and genealogical data from young voices that seemed to be dancing around us. Suddenly we were told to remove our blindfolds, as if we were about to make our own discoveries. A somewhat frantic young scientist in front of a whiteboard was explaining the basics of DNA while other actors moved among video projections and changing scrims. Stories unfolded in fragments—a young woman is institutionalized and, on a table surrounded by a screen, sterilized against her will, a sequence based on the historical case of Leilani Muir, who sued the Canadian province of Alberta for forcibly sterilizing her in 1959. A stressed-out young couple try to create a “perfect” baby, producing instead a whining monster. A young man on a TV talk show broadcasts that his sperm is genetically “perfect” and finds himself besieged with seductive phone calls from women seeking a donation. The young scientist we encountered

at the start discovers to his horror that his sperm sample has been mislabeled and lost. And then there is Alice, who learns her mother suffers from Huntington's disease and is confronted with her own 50/50 risk. Her father Milton takes her on a road trip across the country while they consider what to do.

All of these narratives unfold in pieces, interrupting each other across different parts of the space, blending dialogue, dance, physical movement, video and slide projections, sounds, music, and changing lights. Playing out over the course of an hour, the piece disturbs and exhilarates, engaging all the senses at once. At the close the actors walk around and address audience members individually, intoning "your child will inherit your grandmother's blue eyes," "your offspring will possess your uncle's musical talent," "you have inherited your father's weak heart." But they deliver their lines with a sense of irony, knowing that such straightforward predictions are precisely the problem they wish to engage.

What then did we come away with? Certainly the piece focused on the ways that genetics has been exploited for negative social purposes, such as the forcible eugenic sterilization of women deemed inferior and the promotion of stigmatizing notions of biological perfection and control. For this reason, perhaps, my scientist friends were somewhat critical, although they enjoyed the experience. One wanted the piece to include a story about the

medical benefit of a genetic discovery. Another found the fragmented form confusing, the moving chairs distracting and dizzying. A third, a medical student, worried that the piece could have drawn on more recent discoveries.

And yet, for me the multiple dimensions in which the piece unfolded brilliantly evoked the interconnectedness of our biological and social natures and the complexity of our so-called "genes." It beautifully satirized the ways in which our consumerist culture of competitive acquisitiveness and desires for control extended even to our genomes. The sterilization story was devastating (an indication of the historical time frame would have been helpful), conveying the anguish of Muir through the stark beauty and restraint of Mariel Pettee, an accomplished dancer as well as actor. The Alice sequences were also haunting, with Anna Hagen as Alice and Eli Pelton Wilson as her father projecting a sense of ambivalence and uncertainty—feelings I had tried to describe in *Mapping Fate*—as Alice learns of her 50/50 risk for Huntington's and considers the potential consequences of getting more precise genetic information through testing.

I came away from the Sunday evening performance of *Edge of the Map* with a sense of exhilaration that was tempered only by the tragedy of the following day, the day when two young men launched deadly explosives in the midst of the Boston Marathon. At least no one was talking about their genes.

**Alice Wexler** has been a CSW Research Scholar since 1994. She received a Ph.D. in History from the Indiana University in 1972 after completing a dissertation entitled "Historians, Society, and the Spanish-Cuban-American War of 1898." She has taught at UC Riverside, California Institute of Technology, Claremont Graduate School, Occidental College and UCLA. Her books include *Emma Goldman in America* (1984), *Emma Goldman in Exile* (1989), *Mapping Fate: A Memoir of Family, Risk, and Genetic Research* (1996), and *The Woman Who Walked Into the Sea: Huntington's the Making of a Genetic Disease* (2008).

#### Note

1. Huntington's disease is a fatal genetic, neurological and psychiatric illness emerging typically in mid-life and causing involuntary movements (chorea), emotional disturbances such as depression, irritability, and apathy, and cognitive decline often leading to dementia.