

I might still be confused about the difference between an Invisible Force and an Immeasurable Force. I didn't necessarily expect to be clear on the difference when beginning this project, so I'm neither ashamed nor disappointed, and am perhaps more and differently confused than when I began, which seems like a success. In an early explanation of how invisible forces operate within scientific observation, our group's resident scientist put it like this:

Invisible forces are invisible because they are either a) Too Small to See (e.g. Subatomic Scales); b) Too Blurry to See (e.g. Quantum Mechanics); c) Too Fast to See; or Too Weird to See (e.g. The Uncanny).

In our initial meeting, in our first questioning of "invisible forces," desire and love were brought up as examples of invisible forces, as was memory. Subsequently I would add the force of habit to my own ideas about how we feel invisible forces, or compulsions, all of which fall under the blurry category of the "cultural." We often position "cultural" as an opposite of "scientific," though that's wrong. Science is also culture, and culture precedes and determines science. And here I can experience the confidence (or arrogance) of feeling certain about my reliance on blur. Quantum physics has nothing on the complexity of culture. Culture is also too weird to see, sometimes, and always too blurry, and too fast, and too small.

Within the history of economics there is a shift from the political (measuring cultural valuations of freedoms, of governance) towards the mathematical, which used the standardization and proliferation of data in the industrialized 19th and 20th centuries to calculate efficiencies and strategies for growth. A major figure in this shift was the British economist Alfred Lord Marshall, who mathematized the political arguments of his 19th century predecessor, David Ricardo. He applied mathematical models to a range of social data, and used the Latin phrase "ceteris paribus," which translates as "all other things being equal," as both a defense and warning. He was explicit that his mathematical models should be rejected in situations where they are used to pretend to a knowledge of the social behaviours of populations, or to make wider political points. He was aware that the cultural was too wild to be tamed with brackets.

I'm interested in the invisible forces that resist brackets. Very quickly, as a group, we started thinking about abstraction as a place for impossibilities. Abstraction is the recognition of energies that resist categorization, but that we feel and recognize nonetheless, on the edge of articulation: the negative spaces in diagrams. It therefore became a space of gathering, and co-learning. We courted the surprises of the aleatoric and of excess in our exchange of performance scores, gifting each other permissions to be confused, to escape the brackets of our thinking habits. Abstraction—as idea

and practice—began to function as a kind of prayer, a purposeful submission to the certainty of the unknowable, excluded by the brackets of our conventional understandings but just blurry, small, fast, and weird enough to capture and hold our hopes and wonder.