



THE 2023 ROBERT H. WOODWORTH LECTURE IN THE SCIENCES

APRIL 6 | 7:00 PM | CAPA

SCIENCE AND THE WORLD OF
IDEAS: ALL I REALLY NEED TO
KNOW I LEARNED AT BENNINGTON

I argue that the concepts we apply to data, not simply the data itself, are the primary drivers of scientific progress. As an evolutionary biologist, I search for ways to connect ideas and the data we are capable of gathering right now, yet most scientists let the leaders of their field define what is interesting to study. However, in some fields, like evolutionary biology, the leaders that do the designing are often not very good at it. I believe that we would be better at driving scientific progress if scientists had learned the things that Bennington teaches: talk to your leaders, but don't always believe them. You are in charge of your own path. Your viewpoint empowers you.

SCIENCE WORKSHOP

APRIL 7 | 1:00 PM | DICKINSON 232

MEASURING EVOLUTION

Measurement theory is how we connect ideas with numbers. Scientists routinely think about experimental design and statistics, but there is little consideration of how to connect what you want to know with how you measure it. This connection is essential; putting numbers to ideas is what enables us to do science: to describe nature, formulate clear hypotheses about what we observe, and then to test those hypotheses. Measurement theory is integral to physics, and widely known in psychology, but almost unknown in biology. I will give examples of problems in evolutionary biology that enable us to clear away misconceptions, and make progress on neglected problems.



DAVID HOULE '77 is an evolutionary geneticist who investigates the connections between genomic, developmental and phenotypic variation. Houle grew up in California, then received his B.A. at Bennington College, majoring in Science and Photography. After working for four years as an art photographer, he studied evolutionary biology at SUNY Stony Brook. After all the marine mussels in his first experiment died prematurely, he turned to working on the fruit fly *Drosophila melanogaster*. These mostly did not die, allowing him to receive his Ph.D. in 1988. After his post-doctoral work, he took a faculty position at the University of Toronto and is now a professor at Florida State University. Houle is best known for introducing the concept of evolvability into quantitative genetics, for work on sexual selection and life-histories, and for his large-scale experiments characterizing the genetics of complex phenotypes, such as the fly wing.



BOTH EVENTS ARE FREE AND OPEN TO THE PUBLIC.

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