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Delbrueck Prize Talk: “I Don’t Believe a Word of It”: My Struggles With Max Delbruck’s Ghost

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I never meet Max Delbruck, but I have worked with similarly great biological physicists. Because of this, I am familiar with the expression “I don’t believe a word of it” that Max Delbruck was known to say, and other great biological physicists have been known to say. Lately I have been working on evolution dynamics and how one might accelerate evolution of de novo mutations by standing on the shoulders of great theoretical evolution biologists such as Sewall Wright and Conrad Waddington and following their insights. I have found Delbruck’s pronouncement “I don’t believe a word of it” ringing in my ears. I will try to convince the ghost of Delbruck and his present day acolytes that Darwin did not have the final say on evolution, that biological organisms are quite creative when it comes to evolution of new traits, and that failure to understand this complexity in evolution has had a major impact on our struggles with the physics of cancer.