

Philosophy Department Colloquium Series

Thursday, January 31, 2019

4:30 p.m.

D-631

Everyone is welcome

“Living in a Dangerous Universe: Fermi’s Paradox, Lotka’s Law, and What It Takes to Beat the Odds”

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Physicist Enrico Fermi had an uncanny knack for making accurate back-of-the-envelope estimates. In a famous lunch-time conversation he showed that it is virtually certain that Earth should have been visited by aliens by now. And yet, we have no reliable evidence of any sort for the existence of life elsewhere in the universe than on our humble planet. *Where are they?* I argue that a statistical rule called *Lotka’s Law* could help to explain this troubling discrepancy, which has been made only worse in recent years by the discovery of thousands of exoplanets. What little we know about life in the cosmos shows that we apparently live in a universe that generously allows for the possibility of life, yet ruthlessly culls life once it arises. Our response to this should not be lazy fatalism, however, but a thoughtful examination of what it may take to stay ahead of the odds in a tough game where the house *almost* always wins.

