

Immersion Lecture: Collective Motion, Collective Decision-Making, and Collective Action

Time of Event:

Tuesday, April 12, 2016 - 11:15 to 12:00

Video:

In this lecture on public goods and common pool resources, Dr. Simon Levin characterizes collective behavior as macroscopic pattern that emerges from microscopic interactions. He notes the temporal and spatial challenges of managing common pool resources, and draws on ideas of discount rate and externalities to help explain decision-making that erodes these resources. He also highlights the parallels between economic and ecological perspectives on collective action to manage public goods, and identifies cooperation and coercion as to concepts in both disciplines that help explain group behavior. Cooperative action to manage public goods in complex adaptive systems at times requires both modularity and polycentricity, and he emphasizes the organizational challenges that uncertainty brings to collective action. He concludes by emphasizing that managing common pool resources is a foundational challenge for both human and ecological systems, and that patterns of cooperation and collective action will need to be interconnected and scaled up to address global challenges.

Reading list

Levin, S.A. 2014. Public goods in relation to competition, cooperation, and spite. *Proceedings of the National Academy of Sciences*, 111(Supplement 3), 10838-10845.

Arrow, K. J., Ehrlich, P. R., & Levin, S. A. 2014. Some Perspectives on Linked Ecosystems and Socio-Economic Systems. *Environment and Development Economics: Essays in Honour of Sir Partha Dasgupta*, 95-119.

Presentation slides

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[Simon A. Levin](#) [2] is the George M. Moffett Professor of Biology at Princeton University and the Director of the Center for BioComplexity in the Princeton Environmental Institute. His research examines the structure and functioning of ecosystems, the dynamics of disease, and the coupling of

ecological and socioeconomic systems. Levin is a Fellow of the American Academy of Arts and Sciences and the American Association for the Advancement of Science, a Member of the National Academy of Sciences and the American Philosophical Society, and a Foreign Member of the Istituto Veneto di Scienze, Lettere ed Arti, and the Istituto Lombardo (Milan). He has over 500 publications, and is the Editor of the Encyclopedia of Biodiversity and the Princeton Guide to Ecology. Levin's awards include: the Heineken Prize for Environmental Sciences, Kyoto Prize in Basic Sciences, Margalef Prize for Ecology, the Ecological Society of America's MacArthur and Eminent Ecologist Awards, the Luca Pacioli Prize (Ca'Foscari University of Venice), the Tyler Prize for Environmental Achievement, and most recently, the National Medal of Science.

Event type:

Immersion Speaker

Event Attendance:

Private Working Group

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