



NORTHWESTERN INSTITUTE
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NORTHWESTERN
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**Northwestern Institute on Complex Systems
invites you to its
Weekly Seminar**

Speaker: Florian Herold, Kellogg School of Management, Northwestern University

Title: Carrot or Stick: The Evolution of Reciprocal Preferences in a Haystack Model

When: Wednesday, May 16, 2007

Where: Chambers Hall, 600 Foster Street, Lower Classroom Level

Time: 12:00 – 1:00

NICO Coffee Hour will follow for questions, networking, and collaboration

Abstract

This paper studies the evolution and co-evolution of both characteristics of reciprocity - the willingness to reward friendly behavior and the willingness to punish hostile behavior.

Firstly, both preferences for rewarding and preferences for punishing can survive in evolution provided individuals interact within separate groups. This holds even with randomly formed groups and even when individual preferences are unobservable. Secondly, preferences for rewarding survive only in coexistence with self-interested preferences, but preferences for punishing tend either to vanish or to dominate the population entirely. Finally, the evolution of preferences for rewarding and the evolution of preferences for punishing influence each other decisively. The existence of rewarders enhances the evolutionary success of punishers, but punishers crowd out rewarders.