



Evolution of Fairness in the Not Quite Ultimatum Game

Dr. Genki Ichinose

Visiting Scholar, CoCo Research Group
Binghamton University

Assistant Professor, Anan National College of
Technology, Japan



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Conference Room)**

The Ultimatum Game (UG) is an economic game where two players decide how to split a certain amount of money. One player (proposer) makes only one offer to the other player (responder). If the responder accepts the offer, the money will be split between them accordingly, but if not, neither receives anything. Although making minimal offers and accepting any offers is the most rational choice in UG, human subjects tend to behave more fairly in experiments. Previous studies suggested that extra information such as reputation or empathy is needed for fairness to evolve in UG. Here we show that fairness can evolve without additional information if the game is probabilistic, which we call the Not Quite Ultimatum Game (NQUG). In NQUG, players make decisions probabilistically and may continue interactions when the offer is rejected. These simple extensions greatly promote evolution of fairness in both proposers' offers and responders' acceptance thresholds.

Dr. Ichinose is a Visiting Scholar of the CoCo Research Group since April 2013. His research interests include agent-based modeling, evolution of cooperation, computational social science, and artificial life.

For more information, contact Hiroki Sayama (sayama@binghamton.edu)

<http://coco.binghamton.edu/>