



CoCo Seminar Series Spring 2020

Enhanced Ability of Information Gathering May Intensify Disagreement Among Groups

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Online (Zoom meeting link available on <http://coco.binghamton.edu/>)

Today's society faces widening disagreement and conflicts among constituents with incompatible views. Escalated views and opinions are seen not only in radical ideology or extremism but also in many other scenes of our everyday life. Here we show that widening disagreement among groups may be linked to the advancement of information communication technology, by analyzing a mathematical model of population dynamics in a continuous opinion space. We adopted the interaction kernel approach to model enhancement of people's information gathering ability and introduced a generalized non-local gradient as individuals' perception kernel. We found that the characteristic distance between population peaks becomes greater as the wider range of opinions becomes available to individuals or the greater attention is attracted to opinions distant from theirs. These findings may provide a possible explanation for why disagreement is growing in today's increasingly interconnected society, without attributing its cause only to specific individuals or events.

Dr. Hiroki Sayama is a Professor in the Department of Systems Science and Industrial Engineering and Director of the Center for Collective Dynamics of Complex Systems at Binghamton University. His research interests include complex dynamical networks, artificial life/chemistry, human social dynamics, interactive systems, and complex systems education.

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