Memelab: Simulation of a Campus Population

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Ian D. Miller, University of Toronto, presents his research “Memelab: Simulation of a Campus Population,” at the 25th APS Annual Convention in Washington, DC.

How do you predict when a picture or video is going to become an online viral phenomenon? In this experiment, participants created memes using our online laboratory (“Memelab”) and shared them with friends. Over a 2-month period, our web server counted how many times each picture was viewed by Internet users. On that basis, we determined which pictures were “more viral.” Although it mattered whether the picture was funny and relevant, the creator of the picture had a greater impact in predicting meme popularity. Participants who “had something to say” and “were willing to say it” created the pictures that got the most online visits.

Next, we attempted a replication of our results using an agent-based simulation of the entire campus where the data were collected (n = 15,000). First, we created a model of an agent’s “intention to share,” then seeded our virtual campus with memes to share. When the parameters were just right, simulation results corresponded with actual observed results. We are cautious to interpret the simulation too literally, but this is a promising future direction of the research.

For more, visit Miller’s website or watch his presentation at the University of Toronto, St. George Workshops for Inter-Discipline Exchange and Novelty (WIDEN).

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