CSI Seminar - Friday, September 22, 2017

10:00 - 11:00 am - 338 Woodward Hall

Speaker: Bill Rand, Assistant Professor of Marketing, Poole College of Management, North Carolina State University

Topic: Can One Bad Apple Spoil the Bunch? How "Market Value" Can Increase Discrimination and Inequality Even When Most Firms Are Fair

Abstract: In 1957 economist Gary Becker first published "The Economics of Discrimination." In it Becker argued by way of verbal theorizing, formal and analytical modeling, and empirical analysis that efficient and competitive markets should eliminate discrimination in hiring over the long run. We explore a contrary proposition: the presence of even a single discriminating employer in a market otherwise composed of non-discriminators can, under certain circumstances, increase average discrimination in the market to the level of the single discriminator, or greater, over the long run. We build an agent-based model composed of hiring firms and job candidates. Candidates are endowed with a portfolio of skills as well as non-skill characteristics, the latter akin to demographic features such as race or gender classically. All firms have skill-based needs and look to hire candidates who best meet those needs. Some firms, but not all, also consider non-skill characteristics when making hiring and wage decisions and are therefore conceptualized as discriminators. For all the promise of Becker's original model we demonstrate an equally remarkable, but also very plausible, consequence. Discriminatory hiring practices and wage determination can spread through a market like an invisible virus, infecting even those who believe themselves immune.

BIO: Bill is an Assistant Professor of Marketing at the Poole College of Management at North Carolina State University, where he focuses on the application of computer science methods to marketing problems.

My research investigates the diffusion of information. I examine three large questions: (1) How do consumers find things out?, (2) What do consumers do with that information once they have it?, and (3) How do they pass their product insights along to others through online word-of-mouth? Given the explosion of new forms of Internet-based communication technologies, especially with the advent of social media, the answers to these questions are changing and new every day. Digital transformation is and will continue to fundamentally alter the way business is done, and at the base of this transformation is the flow of information among consumers. If we can understand that, then we can better prepare managers for the constantly changing future. I view this process through the lens of complex systems, i.e., that the best way to understand information diffusion is to model the consumers as individuals who are diffusing product insights and marketing information and their interactions, and then observe the emergent outcome of those models, such as product purchases, churn processes, and overall customer lifetime value.

I have applied my research to social media analytics, freemium network-based games, app adoption, not-for-profit donations, and innovation adoption. I have worked with a number of different companies and organizations while studying these research questions, including: Teradata, Expedia, American Red Cross, National Geographic, Brazil's Institute of Applied Economic Research, and many more.