

Jon Atwell

CONTACT INFORMATION	Northwestern Institute on Complex Systems Northwestern University Evanston, IL USA	<i>Office:</i> Room 150, Chambers Hall <i>E-mail:</i> atwell@northwestern.edu <i>Website:</i> jonatwell.com
POSITION	Northwestern University <i>Data Science Scholar</i> Northwestern Institute on Complex Systems Institute for Policy Research	
EDUCATION	University of Michigan , Ann Arbor, MI USA Ph.D. Sociology, 2017 M.A. Sociology, 2014 Graduate Certificate, Complex Systems, 2014 University of Wisconsin-Madison , Madison, WI USA B.S. Mathematics, Economics, and Philosophy (Honors Conferred) December, 2007	
FELLOWSHIP, GRANTS AND AWARDS	Sociology Department Dissertation Research Grant, 2017 Rackham Dissertation Research Grant, 2016. Big Ideas Generator Seed Grant, 2015. from University of Chicago, with John Padgett Third Century Initiative, 2014-2016. Project Name: Studying Social Behavior with Big Data Co-PI with Elizabeth Bruch, University of Michigan. Rackham Research Grant, 2013 Rackham Centennial Fellowship, 2013 IGERT Fellowship, National Science Foundation, 2011-2012	
DISSERTATION	“The Role of Niche Signals in Self-Organization in Society” Committee: Elizabeth Bruch and Mark Mizruchi (co-chairs), Robert Savit (Physics), John Padgett (University of Chicago), Scott Page (Complex Systems).	
PUBLICATIONS	Atwell, Jon and Robert Savit. 2016. “The Emergence of Groups and Inequality Through Coadaptation.” <i>PLoS ONE</i> . 11(6):e0158144. doi:10.1371/journal.pone.0158144 Bruch, Elizabeth and Jon Atwell. 2015. “Agent-Based Models in Empirical Social Science.” <i>Sociological Methods and Research</i> . 44(2): 186-221.	
IN PREPARATION	Atwell, Jon. “Meaning Production for Cultural Objects in a Networked Public” Atwell, Jon. “The Value of Niche Signals in the Emergence of Conventions: An Experimental Study.” Atwell, Jon and John Padgett. “Niche Construction by Hypercycle: A Powerful Means of Self-Organization.”	

BOOK IN PREPARATION	Padgett, John and Jon Atwell. <i>The Emergence of Language</i> .
RECENT PRESENTATIONS	<p>“Breaking Barriers to Self-Organization with Endogenously Structured Environments: A Mathematical Model.” - Complex Systems Workshop - October 2016.</p> <p>“The Emergence of Groups and Inequality Through Co-adaptation” The International Network of Analytical Sociology - Harvard University - June 2015.</p> <p>“Markets as Sites of Constructive Processes.” Computational Social Science Summit - Northwestern University - May 2015.</p>
OTHER WORK	<p>Studying Social Behavior with Big Data - with Elizabeth Bruch, University of Michigan.</p> <p>We secured funding to produce a tool for introducing students to computation approaches and methods in the social sciences. Development is ongoing.</p>
TEACHING	<p>Instructor of Record</p> <p>Social Dynamics - SOC/CMPLXSYS 260 - Fall 2013</p> <p>Graduate Student Instructor</p> <p>Introduction to Sociology - SOC 100 - Winter 2013 (w/ Dr. Robert Jansen)</p> <p>Sociology of Sports - SOC 102 - Fall 2012 (w/ Michael Ybarra)</p> <p>Children and Childhood - SOC 102 - Winter 2012 (w/ Dr. Karin Martin)</p> <p>Other Teaching</p> <p>“Data Analysis with Python” workshop - Advanced Research Computing - University of Michigan - July 2013.</p>
METHODOLOGIES	Statistics, mathematical formalization, differential equations, agent-based models, behavioral lab experiments, network analysis, graph theory, game theory, information theory, web-scraping, topic modeling, sentiment analysis, qualitative interviews.
COMPUTER SKILLS	<p>General: Big data related management and analysis including some machine learning techniques, Statistical modeling in Stata and R, formal and empirical agent-based model construction and analysis, Web scraping and scripting, behavioral experiment interface implementation, high performance and cluster computing, general backend management.</p> <p>Languages: Python, R, Stata, Java, JavaScript, D3.js, HTML, CSS, PHP, SQL, Netlogo, Repast, L^AT_EX</p> <p>Key Python Packages: BeautifulSoup, Django, Gensim, Matplotlib, NetworkX, Numpy, Otree, Pandas, Requests, Scipy.</p>
PROFESSIONAL MEMBERSHIP AND SERVICE	<p>Member: American Sociological Association</p> <p>Reviewer: <i>American Journal of Sociology</i>, <i>American Sociological Review</i>, <i>Demography</i>, <i>Rationality and Society</i>, <i>Advances in Life Course Research</i></p> <p>Organizer: Complex Systems Advanced Academic Workshop, ICOS Big-Data Group</p> <p>Co-chair of <i>Sociology Graduate Students</i> 2011-2012</p>
OTHER EDUCATION	<p>Participant - ICPRS Summer Camp - Designing and Conducting Experiments in the Laboratory - Summer 2015</p> <p>Participant - Santa Fe Institute - Graduate Student Workshop in Computational Social Science - Summer 2013</p>