## Jon Atwell

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Information Northwestern University E-mail: atwell@northwestern.edu

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Current Northwestern University

Position Data Science Scholar

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

RESEARCH Culture, cognition, information theory, complex adaptive systems, computational text anal-INTERESTS ysis, formal modeling.

Fellowships, Diverse Intelligences Summer Institute, 2018

GRANTS AND
AWARDS
Sociology Department Dissertation Research Grant, 2017

Rackham Dissertation Research Grant, 2016

Big Ideas Generator Seed Grant, 2015

from the 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

Santa Fe Institute Graduate Workshop in Computational Social Science, 2013

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 and Economics)

PUBLICATIONS Atwell, Jon and Robert Savit. 2016. "The Emergence of Groups and Inequality Through

Coadaptation" PLoS ONE. 11(6):e0158144. doi:10.1371/journal.pone.0158144

Bruch, Elizabeth and Jon Atwell. 2015. "Agent-Based Models in Empirical Social Science"

Sociological Methods and Research. 44(2):186-221

## ARTICLES IN PREPARATION

Atwell, Jon. "The Value of Unstructured Signals for Social Cognition and Coordination: Quantifying Information Gained from Extra-network Sources" (Under review, PNAS)

Atwell, Jon. "The Production of Shared Meanings Among Readers of Literary Fiction: Detecting an Evolution of Topics Using the Hierarchical Stochastic Blockmodeling Approach"

Atwell, Jon and John Padgett. "The Value of Niches for the Emergence and Stabilization of Novelty: Combining Niche Construction and Hypercycles"

#### BOOK IN PREPARATION

Padgett, John and Jon Atwell. The Emergence of Language

# Presentations in 2018

Diversity Intelligences Summer Institute, St. Andrews University "Diverse Cultural Encodings and Automated Text Analysis"

International Conference on Computational Social Science, Kellogg School of Management. "The Production of Public Meaning: Evidence from an Online Literary Community (poster)"

International Network of Analytical Sociologists, *Stanford University*. "The Value of Niche Signals for Self-Organization: An Experimental Study in the Emergence of Conventions"

Social Science Research Council: Networks and Linguistic Autocatalysis workshop, *Stanford University*. "The Hypercycle and Niche Construction"

Northwestern Institute on Complex System colloquium series, *Northwestern University*. "The Value of Niches for the Stabilization of Novelty"

Advanced Quantitative Methods Workshop, *Northwestern University*. "The Production of Meaning in a Networked Public"

Sociology Department Culture Workshop, *Northwestern University*. "The Production of Meaning in a Networked Public"

Computational Social Science research luncheons, *Northwestern University*. "The Role of Niche Signals in Self-Organization in Society"

#### Teaching

#### Instructor of Record

Computing Essentials for Social Scientists - Northwestern University - Summer 2018 Social Dynamics - University of Michigan - Fall 2013

#### Graduate Student Instructor

Introduction to Sociology - University of Michigan - Winter 2013 (w/ Dr. Robert Jansen) Sociology of Sports - University of Michigan - Fall 2012 (w/ Michael Ybarra) Children and Childhood - University of Michigan - Winter 2012 (w/ Dr. Karin Martin)

#### Workshop Teaching

"Preparing Text as Data" workshop - Northwestern University - 2018

"Introduction to APIs and Web Requests" workshop - Northwestern University - 2018

"Text Analysis Using Word Embeddings" workshop - Northwestern University - 2017

"Data Analysis with Python" workshop - University of Michigan - July 2013

## Programming Skills

Python, R, Stata, Java, JavaScript, D3.js, HTML, CSS, PHP, SQL, Netlogo, Repast,  $\LaTeX$ 

## PROFESSIONAL MEMBERSHIP AND SERVICE

Member: American Sociological Association, Academy of Management

Occasional Reviewer: American Journal of Sociology, American Sociological Review, Demography, Rationality and Society, Advances in Life Course Research

Organizer: Complex Systems Advanced Academic Workshop, ICOS Big-Data Group,

Co-chair of Sociology Graduate Students 2011-2012