Andrei Popa, Ph.D.

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BACKGROUND

Human activity is a series of discreet choices, like *keep reading* or *move on*, *retweet or not*, *this link or that link*, etc. For the past fifteen years I researched the factors that influence the likelihood to choose A over B (now), and the preference patterns that emerge from these discrete events. Between 2007 and 2011 I worked exclusively with synthetic data generated by a computational model of learning; in 2011 I expanded this work to human behavior. In time, I became increasingly passionate about the applied side of my scholarship, passion that eventually led me towards web development and artificial intelligence.

TECH

Python (pandas, scipy, matplotlib, tkinter, nltk, spacy,);
D3.js, React.js, Node.js; HTML, CSS; DynamoDB, RDS, Firebase, MongoDB;
SQL, VB.Net, Tableau, Excel (pivot, macros), Octave, SPSS;

RELEVANT EXPERIENCE

Behavioral Scientist[1], Emory University, Atlanta, GA — Aug 2007 – Jan 2015[2]

- brought formal contributions to the quantitative analysis of behavior [1], [2], [3].
- showed functional parallels between computational parameters and real-world variables that affect choice behavior in important ways [3], [4], [5].
- showed that computational models can be used to simulate behavioral constellations with social relevance (impulsivity) [3], [5].
- *Principal Investigator (*04/2011 – 04/2013): I used computational data to formulate predictions about human behavior and I verified them experimentally. ► I designed the experiment; programmed the procedure; interfaced with Emory's Institutional Review Board; collected the data; I turned sequences of mouse clicks into a compelling story about human behavior [5].

Visiting Assistant Professor, Agnes Scott College, Decatur, GA — Aug 2015 – May 2016

- I investigated the effects of context and aversive conditioning on choice and preference in humans; it resulted in seven original contributions to the field (see Website, SpARC 16). ► I guided my mentees through all stages of research; interfaced with ASC's Institutional Review Board; programmed the experimental procedures; supervised data collection; recruited and trained research assistants;

Adjunct Assistant Professor, Oxford College of Emory University, Covington, GA — Aug 2017 – May 2018

- I investigated the effects of positive and negative reinforcement on learning (under Emory's IRB).

SELECTED PUBLICATIONS

[1] J. McDowell and **A. Popa**, "Toward a mechanics of adaptive behavior: Evolutionary dynamics and matching theory statics," Journal of the Experimental Analysis of Behavior, 94, 241-260, 2010.
[2] J. McDowell and **A. Popa,** "Selection Dynamics in Joint Matching to Rate and Magnitude of Reinforcement," Journal of the Experimental Analysis of Behavior, 98, 199-212, 2012.
[3] **A. Popa** and J. McDowell, "Behavioral Variability in an Evolutionary Theory of Behavior Dynamics," Journal of the Experimental Analysis of Behavior, 105 (2), 270-290, 2016.
[4] **A. Popa** and J. McDowell, "The effect of Hamming distances in a computational model of selection by consequences," Behavioural Processes, 84, 428-434, 2010.
[5] **A. Popa**, "An Evolutionary Theory of Behavior Dynamics: Complexity, Darwinism, and the Emergence of High-Level Phenotypes," **PhD thesis**, Emory University, 2013. https://etd.library.emory.edu/concern/etds/9880vr10s?locale=en

EDUCATION

Ph.D. in Psychology, Emory University, Atlanta, GA	Dec 2013
M.A. in Psychology, Emory University	Dec 2009

CERTIFICATIONS

SQL Bootcamp (Udemy)	Jan 2019
Machine Learning by Stanford University (Coursera)	Dec 2018
Python 3.0 Bootcamp (Udemy)	Oct 2018
Data Science Career Track with Python (by DataCamp)	Sep 2018

[1] Laboratory for Mathematical and Computational Behavior Analysis
[2] After graduation, in 2013, I continued collaborating as an affiliated researcher for another year.