

**Alexander Murray-Watters**  
**CURRICULUM VITAE**  
(revised Jan. 8, 2014)

*Current Address:* 101 N. Dithridge St., Apt 1205, Pittsburgh, PA 15213  
*Email:* amurrayw@cmu.edu  
*Citizenship:* Dual Citizen - USA & European Union (UK/Scotland). Place of Birth: USA

**Education**

**Carnegie Mellon University.** Pittsburgh, PA  
expected August 2014 - M.S. Logic, Computation and Methodology  
Advisors: Richard Scheines and Clark Glymour

**Carnegie Mellon University.** Pittsburgh, PA  
2013 - Dual Degrees: B.S. in Economics & Statistics and B.A. in Philosophy. Additional coursework in computer science.

*HSS Senior Honors Thesis* (Dietrich College of Humanities and Social Sciences): “Causal Discovery and MIMIC Models.” Advisor: Clark Glymour.  
[https://www.andrew.cmu.edu/user/amurrayw/papers/thesis\\_final.pdf](https://www.andrew.cmu.edu/user/amurrayw/papers/thesis_final.pdf)

**University of Nevada.** Reno, NV  
Additional coursework in mathematics. Summers: 2010, 2011, 2012.

**Employment and Other (Unpaid) Work Experience**

**Graduate Teaching Assistant.** Fall 2013. Conducted 2 weekly recitation sections for 80-100 (Introduction to Philosophy), graded assignments, and developed weekly instructional materials including lecture material when students had trouble with a concept.. Supervisor: Dr. Mara Harrell. Dept. of Philosophy, CMU.

**Graduate Research Assistant.** Summer 2013. Implemented algorithm from senior thesis in R, wrote, and ran simulations. Supervisor: Dr. Clark Glymour. CMU.

**Research Assistant** (unpaid). Summer 2012 – present. Developed and ran Monte Carlo simulations (using R) that demonstrate a flaw in a common method in the field of psychology and law. Co-author of paper in progress. Supervisor: Dr. Markus Kimmelmeier of the Dept. of Sociology and Interdisciplinary Social Psychology Graduate Program, University of Nevada, Reno

**Undergraduate Research Assistant.** March 2012 – August 2012. NSF Research Training Grant. *Algorithms, Experiments, and Implementation of Recommender Systems.* Implemented a Gibbs sampler and fixed faulty code in R. Supervisor: Dr. Mike Finegold, Dept of Statistics, CMU

**Volunteer Intern..** June-July 2007. University of Cambridge, England  
Dr. Keith Priestley’s seismology lab. Assist with computer/IT issues and use of specialized software. Integrated cultural experience/interaction with university community and British politics.

**Intern** (unpaid). Jan.-June 2007. Reno Diagnostic Medical Center. Reno, NV.  
Computer programming, trouble-shooting, skill development.

**Intern** (paid). 2006-2007. Patrick J. Martin Law Office, Reno, NV.  
Computer trouble-shooting, equipment setup & maintenance, document transport/courier, receptionist, filing. Opportunity to practice use of logic in handling/reviewing confidential cases.

## Honors and Awards

**CMU Senior Leadership Award.** 2013. Carnegie Mellon University.

**Dietrich College Senior Honors Program.** Carnegie Mellon University. 2013.

**Foreign Affairs Student Essay Contest.** 2011. Sponsored by the journal, *Foreign Affairs*, the Council of Foreign Relations, and the Association of Professional Schools of International Affairs. Six awards were given (first place and 5 honorable mentions); I received one of the 5 honorable mentions (from among 280 submissions from across the world). (See Publications section for essay details) Award announcement available on the journal's website:  
<http://www.foreignaffairs.com/classroom/bulletin-board/erik-mortensen-wins-foreign-affairs-student-essay-contest-1>

**Odyssey Program Member,** Carnegie Mellon University: Invited academic research program for students identified as graduate research potential. 2009-2011

**Dean's List, with Honors,** Humanities & Social Sciences, CMU (Spring 2009, Spring 2011, Fall 2012); **with High Honors** (Fall 2011)

**First Place.** Rotary Business Academy. Northern Nevada. Team leader of GNUWeb (website design & marketing competition). Student team: conceptualize, design & market a site for Rotary-identified client. \$1,000 prize. Site: <http://acorn.he.net/~rotaryc/RBANevada/History/2007/GNUWeb/index.php>

## Professional Memberships

American Statistical Association  
Western Economic Association International

## Publications

Kemmelmeier, M., Gortari, M., & Murray-Watters, A.J. (manuscript in development). "Statistical and Conceptual Issues in the Use of Verdict Certainty Scores in Jury Decision Making Research."

Murray-Watters, A. (2011). "Inevitable? I Think Not." *Foreign Affairs* award winning student essay in response to prompt, "Is the decline of the West inevitable?" My essay examined the trajectories of China and India in terms of 3 concurrent factors critical for economic growth, strength, and vitality – that is, stability, adaptability of institutions and policies, and the rule of law. I argue that 1) failure to attain these 3 aforementioned factors will lead to a relative economic decline of these newly industrialized countries, changing the decline of the West into a relative ascendance; or 2) if China and India embrace these 3 factors they will, in effect, be re-categorized as "western liberal democracies," again changing the overall West's relative decline into an ascendance. (1500 word maximum) [http://www.andrew.cmu.edu/user/amurrayw/papers/ForeignAffairsEssayCompetitionFinal12\\_2012.pdf](http://www.andrew.cmu.edu/user/amurrayw/papers/ForeignAffairsEssayCompetitionFinal12_2012.pdf)

Murray-Watters, A. (March 2, 2009). "North Korea plans missile launch." *The Tartan*, 103 (18), A-1.

## Statistical/Software Development

Authors in alphabetical order: Jason Capehart, Seung Su Han, Alexander Murray-Watters, and Elizabeth Silver. Developed Natural Language Processing (NLP) software used to build first- and second- order Markov models based on text. For use with R. In process of submission to the CRAN (R repository). I initiated the group's extension of this software's application to build a Markov model based on the blog of Professor Cosma Shalizi, and titled our results "Pseudo-Three-Toed

Sloth.” Shalizi posted this slide on his blog (Dec. 7, 2011); titled “My Work Here is Done (Intro to Statistical Computing).” Available: <http://bactra.org/weblog/843.html>

### **Conference Activity**

- 1) Attended. (October 25-27, 2013). “Workshop: Case Studies of Causal Discovery with Model Search.” Carnegie Mellon University
- 2.) Murray-Watters, A. (May 2013). “An Algorithm for Discover MIMIC Models.” Meeting of the Minds (undergraduate research conference). Carnegie Mellon University
- 3) Murray-Watters, A. (submitted Dec 2011). “US/ISAF Attributed Civilian Casualties and Insurgent Caused Violence.” Submitted for presentation at the annual conference of the Western Economic Association International. San Francisco, CA. July, 2012. (Statistical analysis utilizing the Wikileaks Afghan dataset.) I contacted them in advance of the deadline and was assured that undergraduates were entitled to submit. In 2012, I received notice that due to an unusually high number of faculty/graduate submissions they had reversed their original position, and that this year they were not accepting any undergraduate submissions. However, along with their apology they awarded me a 1 year extension of my student membership.
- 4) Attended. (July 2011) Western Economic Association International Annual Conference. San Diego, CA

### **Unpublished Manuscripts** (*available upon request*)

“The Effect of US/ISAF Attributed Civilian Casualties on Insurgent Caused Violence.” Carnegie Mellon University. Writing for Economists Course. (paper with statistical analysis using Wikileaks dataset).

“The Slave of Duty: A Fatal Flaw in Kant’s Description of Morality.” Carnegie Mellon University. Philosophy Course: Social Structure, Public Policy and Ethics.

“Food and Preconditions of Rural Subsistence Riots in Eighteenth Century England, France and Scotland.” Carnegie Mellon University. History Course: Feast and Famine.

“Taking the Blinders Off: French and British Travelers’ Reports of Pre-Famine Ireland.” Carnegie Mellon University. History Course: Feast and Famine.

“The *Sine Qua Non* for Violence.” Carnegie Mellon University. English Course: Interpretation and Argument.

“Will No One Rid Me of this Turbulent Priest?” Carnegie Mellon University. Philosophy Course: Introduction to Philosophy (honors).

### **Current Independent Research Projects /Interests**

“The Economics of Counterinsurgency in Afghanistan.” Initial conceptual development; will follow with secondary data set collection and testing of model derived from comparable work on Iraq by Eli Berman, Jacob Shapiro and Joseph Felter (e.g., National Bureau of Economic Research Working Paper No. 14606; published in the *Journal of Political Economy*, 2011).

“The Effect of Campaign Finance Reform on Roll Call Votes and Legislative Decision Making.” Initial investigation stage.

## Community Service, Activity, and Leadership (selected examples)

**The Tartan.** Carnegie Mellon University. 2009-2011. Contributing writer

**Nevada State Democratic Convention.** 2008. Youngest elected delegate

**Friends of the Washoe County Library.** Ongoing book collection activity

**Food Bank of Northern Nevada.** Ongoing food collection activity

**Volunteer Musician.** Red Cross & Hurricane Katrina Victim Fund Raising Labor Day Weekend Marathon. Sept. 2005. 4 hours playing jazz (alto saxophone) at E.J.'s Jazz Café Reno, NV

**Electronic Frontier Foundation.** Current member

**American Civil Liberties Union.** Current member

## Advanced Quantitative Coursework

### Statistics:

Introduction to Probability & Statistics I & II

Modern Regression

Data Mining

Statistical Graphics & Visualization

Statistical Computing

Advanced Data Analysis

Multilevel & Hierarchical Modeling

### Economics:

Advanced Microeconomics Theory

Behavioral Economics

Evolution of Economic Ideas and Analysis

Junior Honors Seminar

Advanced Macroeconomics Theory

Writing for Economists

Econometrics

## Mathematics: (\* Denotes courses taken at the University of Nevada, Reno)

Differential and Integral Calculus

Concepts of Mathematics

\* Integration, Differential Equations, and Approximations

\* Differential Equations

Calculus in 3-Dimensions

\* Linear Algebra

## Philosophy Coursework (examples; includes additional logic, proofs, & economics work)

Formal Logic

Honors: What is Philosophy?

Social Structures, Public Policy & Ethics

Rational Choice (philosophy & econ)

Logic and Proofs

Epistemology

Core Seminar I

Philosophy of the Mind

Ancient Philosophy

Philosophy, Politics, and Economics

Analytical Philosophy

Philosophy of Social Science

## Political Science, Culture and History Coursework

Advanced Placement Credit at Carnegie Mellon (CMU only accepts scores of 5 out of 5):

AP Government & Politics: United States

AP United States History

### CMU Courses:

Introduction to World History

Elementary Chinese

AP European History

History: Feast & Famine (Freshman Seminar)

Terrorism & Insurgency

## Skills and Interests

**Programming Languages:** R, HTML, CSS, C, Java, JavaScript, Ruby

**Operating Systems:** Windows XP/Vista/7, UNIX, Linux (Debian, Ubuntu, Fedora), MAC OS X

**Software:** MiniTab, SPSS, Eclipse, Photoshop, Apache, LibreOffice, Microsoft Office, LaTeX, Sweave

**Languages:** Native speaker of English; Basic knowledge of German; Some knowledge of Mandarin Chinese

**Music:** Alto saxophone (jazz and classical)

**International Experience:** Attended early primary school at Bun-Sgoil Bhorrodail, Isle of Skye, Scotland. Extensive travel throughout Scotland and England. Moderate travel in France.

## References

Clark Glymour, PhD  
Alumni University Professor  
Dept. of Philosophy  
Carnegie Mellon University  
Phone: 412-268-2933  
cg09@andrew.cmu.edu

Cosma Shalizi, PhD  
Associate Professor  
Dept. of Statistics  
Baker Hall 132  
Carnegie Mellon University  
5000 Forbes Ave.  
Pittsburgh, PA 15213-3890  
Phone: 412-268-7826  
cshalizi@stats.cmu.edu

Rebecca Nugent, PhD  
Associate Teaching Professor  
Dept. of Statistics  
Baker Hall 132  
Carnegie Mellon University  
5000 Forbes Ave.  
Pittsburgh, PA 15213-3890  
Phone: 412-268-7830  
rnugent@stats.cmu.edu

Markus Kemmelmeier, PhD  
Professor  
Dept. of Sociology and  
Interdisciplinary Social Psychology PhD Program  
MSS 0300  
University of Nevada, Reno  
Reno, NV 89557  
Phone: 775-784-1287  
markusk@unr.edu