

# Andrew R. A. Conway

## Curriculum Vitae

Department of Psychology  
Claremont Graduate University  
Claremont, CA, 91711 USA

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### Employment

Claremont Graduate University  
Professor, Department of Psychology, 2015 – present

Princeton University  
Senior Lecturer, Department of Psychology, 2007 – 2015  
Faculty Affiliate, Princeton Statistics & Machine Learning Center, 2013 – 2015  
Faculty Affiliate, Princeton Neuroscience Institute, 2013 – 2015  
Lecturer, Department of Psychology, 2004 – 2007

University of Illinois at Chicago  
Associate Professor, 2002 – 2004  
Assistant Professor, 1996 – 2002

### Education

University of South Carolina, Ph.D., 1996  
Major: Experimental Psychology  
Minor: Statistics

University of South Carolina, M.A., 1993  
Experimental Psychology

Union College, B.S., 1991  
Computer Science & Psychology

### Editorial Positions

Associate Editor: *Journal of Experimental Psychology: General*, 2017 – present

Editorial Board: *Journal of Intelligence*, 2013 – present

Associate Editor: *Journal of Cognitive Psychology*, 2007 – 2012

Consulting Editor: *Memory & Cognition*, 2005 – 2013

## **Publications (62) (h-index = 30)**

- Kovacs, K., & Conway, A. R. A. (in press). The evolution of fluid intelligence meets formative *g*. *Behavioral and Brain Sciences*.
- Kovacs, K., & Conway, A. R. A. (2016). Process overlap theory: A unified account of the general factor of intelligence. *Psychological Inquiry*, 27, 151-177.
- Kovacs, K., & Conway, A. R. A. (2016). Has *g* gone to POT? *Psychological Inquiry*, 27, 241-253
- Chow, M., Macnamara, B. N., & Conway, A. R. A. (2016). Phonological similarity in working memory span tasks. *Memory & Cognition*, 44, 937-949.
- Gonthier, C., Macnamara B. N., Chow M., Conway A. R. A., & Braver T. S. (2016) Inducing proactive control shifts in the AX-CPT. *Frontiers in Psychology*, 7, 1822.
- Alfano, M., Holden, L., & Conway, A. R. A. (2016). Intelligence, race, and psychological testing. In N. Zack (Ed.), *The Oxford Handbook of Philosophy and Race*. Oxford University Press.
- Macnamara, B. N., & Conway, A. R. A. (2015). Working memory capacity as a predictor of simultaneous language interpreting performance. *Journal of Applied Research in Memory and Cognition*
- Conway, A. R. A., & Kovacs, K. (2015). New and emerging models of human intelligence. *Wiley Interdisciplinary Reviews: Cognitive Science*, 6, 419-426.
- Moreau, D., Morrison, A. B., & Conway, A. R. A. (2015). An ecological approach to cognitive enhancement: Complex motor training. *Acta Psychologica*, 157, 44-55.
- Conway, A. R. A., Moreau, D., & Holden, L. (2015). Educational assessment in a MOOC: The case of Statistics One. In M. Valdes-Corbeil & J. Corbeil (Eds.), *The MOOC Case Book: Case Studies in MOOC Design, Development, and Implementation*.
- Chow, M., & Conway, A. R. A. (2015). The scope and control of attention: Sources of variance in working memory capacity. *Memory & Cognition*, 43, 325-339.
- Kool, W., Conway, A. R. A., & Turk-Browne, N. B. (2015). The sequential dynamics of visual short-term memory. *Attention, Perception, & Psychophysics*, 76, 1885-1901.
- Conway, A. R. A. (2014). A new era of intelligence research. *Journal of Intelligence*, 2, 33-35.
- Moreau, D., & Conway, A. R. A. (2014). The case for an ecological approach to cognitive training. *Trends in Cognitive Science*, 18, 334-336.

- Van Snellenberg, J. X., Conway, A. R. A., Spicer, J., Read, C., & Smith, E. E. (2014). Capacity estimates in working memory: Reliability and interrelationships among tasks. *Cognitive, Affective, and Behavioral Neuroscience, 14*, 106-116.
- Morrison, A. B., Conway, A. R. A., & Chein, J. M. (2014). Primacy and recency effects as indices of the focus of attention. *Frontiers in Human Neuroscience, 8*:6.
- Macnamara, B. N. & Conway, A. R. A. (2014). Novel evidence in support of the bilingual advantage: Influence of task demands and experience on cognitive control and working memory. *Psychonomic Bulletin & Review, 21*, 520-525.
- Conway, A. R. A., & Kovacs, K. (2013). Individual differences in intelligence and working memory: A review of latent variable models. *Psychology of Learning and Motivation, 58*, 233-270.
- Thornton, M. A., & Conway, A. R. A. (2013). Working memory for social information: Chunking or domain-specific buffer? *Neuroimage, 70*, 233-239.
- Moreau, D., & Conway, A. R. A. (2013). Cognitive enhancement: A comparative review of computerized and athletic training programs. *International Review of Sport and Exercise Psychology, 6*, 155-183.
- Conway, A. R. A., Macnamara, B. N., & Engel de Abreu, P. M. J. (2012). Working memory and intelligence: An overview. In T. P. Alloway, R. G. Alloway (Eds.), *Working Memory: The Connected Intelligence*. Frontiers of Cognitive Psychology.
- Macnamara, B. N., Moore, A. B., & Conway, A. R. A. (2011). Phonological similarity effects in simple and complex span tasks. *Memory & Cognition, 39*, 1174-1186.
- Macnamara, B. N., Moore, A. B., Kegl, J. A., & Conway, A. R. A. (2011). Domain-general cognitive abilities and interpreter skill prediction. *Interpreting, 13*, 121-142.
- Moore, A. B., Lee, N. Y. L., Clark, B. A. M., & Conway, A. R. A. (2011). In defense of the personal/impersonal distinction in moral psychology research: Cross-cultural validation of the dual process model of moral judgment. *Judgment and Decision Making, 6*, 186-195.
- Moore, A. B., Stevens, J., & Conway, A. R. A. (2011). Individual differences in sensitivity to reward and punishment predict moral judgment. *Personality and Individual Differences, 50*, 621-625.
- Burgess, G. C., Braver, T. S., Conway, A. R. A., & Gray, J. R. (2011). Neural mechanisms of interference control underlie the relationship between fluid intelligence and working memory span. *Journal of Experimental Psychology: General, 140*, 674-692.

- Chein, J. M., Moore, A. B., & Conway, A. R. A. (2011). Domain-general mechanisms of complex working memory span. *Neuroimage*, *54*, 550-559.
- Conway, A. R. A., Getz, S. J., Macnamara, B., & Engel de Abreu, P. M. J. (2011). Working memory and intelligence. In Sternberg, R. J. & Kaufman, S. B. (Eds.). *The Cambridge Handbook of Intelligence*. Cambridge, UK: Cambridge University Press.
- Engel de Abreu, P. M. J., Conway, A. R. A., & Gathercole, S. E. (2010). Working memory and fluid intelligence in young children. *Intelligence*, *38*, 552-561.
- Sanchez, C. A., Wiley, J., Miura, T. K., Colflesh, G. J. H., Jensen, M. S., Ricks, T. R., & Conway, A. R. A. (2010). Assessing working memory capacity in a non-native language. *Learning and Individual Differences*, *20*, 488-493.
- Conway, A. R. A., & Getz, S. J. (2010). Cognitive ability: Does working memory training enhance intelligence? *Current Biology*, *20*, 362-364.
- Conway, A. R. A., Moore, A. B., & Kane, M. J. (2009). Recent trends in the cognitive neuroscience of working memory. *Cortex*, *45*, 262-268.
- Conway, A. R. A., Skitka, L. J., Hemmerich, J. A., & Kershaw, T. C. (2009). Flashbulb memory for September 11, 2001. *Applied Cognitive Psychology*, *23*, 605-623.
- Shamosh, N. A., DeYoung, C. G., Green, A. E., Reis, D. L., Johnson, M. R., Conway, A. R. A., Engle, R. W., Braver, T. S., & Gray, J. R. (2008). Individual differences in delay discounting: Relation to intelligence, working memory, and anterior prefrontal cortex. *Psychological Science*, *9*, 904-911.
- Colflesh, G. J. H., & Conway, A. R. A. (2007). Individual differences in working memory capacity and divided attention in dichotic listening. *Psychonomic Bulletin & Review*, *14*, 699-703.
- Kane, M. J., Conway, A. R. A., Miura, T. K., & Colflesh, G. J. H. (2007). Working memory, attention control, and the N-back task: A cautionary tale of construct validity. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *33*, 615-622.
- Conway, A. R. A., Jarrold, C., Kane, M. J., Miyake, A., & Towse, J. (2007). *Variation in Working Memory*. Oxford University Press. [Edited book]
- Conway, A. R. A., Jarrold, C., Kane, M. J., Miyake, A., & Towse, J. (2007). Variation in working memory: An introduction. In A. R. A. Conway, C. Jarrold, M. J. Kane, A. Miyake, J. Towse (Eds.), *Variation in Working Memory*. Oxford University Press.
- Kane, M. J., Conway, A. R. A., Hambrick, D. Z., & Engle, R. W. (2007). Variation in working-memory capacity as variation in executive attention and control. In A. R. A. Conway, C. Jarrold, M. J. Kane, A. Miyake, J. Towse (Eds.), *Variation in Working Memory*. Oxford

University Press.

- Cowan, N., Kane, M. J., Conway, A. R. A., & Ipsa-Cowan, A. (2006). Stupid brain! Homer's working memory odyssey. In A. Brown and C. Logan (Eds.), *D'oh! The Psychology of the Simpsons* (pp. 49 – 64). Dallas, TX: BenBella Books.
- Heitz, R. P., Redick, T. S., Hambrick, D. Z., Kane, M. J., Conway, A. R. A., & Engle, R. W. (2006). WM, EF, and gF are not the same. *Behavioral and Brain Sciences*, *29*, 135-136.
- Conway, A. R. A., Kane, M. J., Bunting, M. F., Hambrick, D. Z., Wilhelm, O., & Engle, R. W. (2005). Working memory span tasks: A methodological review and user's guide. *Psychonomic Bulletin & Review*, *12*, 769-786.
- Cowan, N., Elliott, E. M., Saults, J. S., Morey, C. C., Mattox, S., Hismjatullina, A., & Conway, A. R. A. (2005). On the capacity of attention: Its estimation and its role in working memory and cognitive aptitudes. *Cognitive Psychology*, *51*, 42-100.
- Kane, M. J., Hambrick, D. Z., & Conway, A. R. A. (2005). Working memory capacity and fluid intelligence are strongly related constructs: Comment on Ackerman, Beier, and Boyle (2004). *Psychological Bulletin*, *131*, 66-71.
- Watson, J. M., Bunting, M. F., Poole, B. J., & Conway, A. R. A. (2005). Individual differences in susceptibility to false memory in the Deese-Roediger-McDermott paradigm. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, *31*, 76-85
- Conway, A. R. A. (2005). Cognitive mechanisms underlying intelligence: Defense of a reductionist approach. In O. Wilhelm and R. W. Engle (Eds.), *Understanding and Measuring Intelligence*. Sage.
- Bunting, M. F., Conway, A. R. A., & Heitz, R. P. (2004). Individual differences in the fan effect and working memory capacity. *Journal of Memory and Language*, *51*, 604-622.
- Conway, A. R. A., Kane, M. J., & Engle, R. W. (2003). Working memory capacity and its relation to general intelligence. *Trends in Cognitive Science*, *7*, 547-552.
- Conway, A. R. A. (2003). Book review of Andrade (2001), Working memory in perspective. *Quarterly Journal of Experimental Psychology*, *56A*, 766-768.
- Conway, A. R. A., Cowan, N., Bunting, M. F., Theriault, D. J., & Minkoff, S. R. B. (2002). A latent variable analysis of working memory capacity, short term memory capacity, processing speed, and general fluid intelligence. *Intelligence*, *30*, 163-183.
- Conway, A. R. A., Cowan, N., & Bunting, M. F. (2001). The cocktail party phenomenon revisited: The importance of working memory capacity. *Psychonomic Bulletin & Review*, *8*, 331-335.

- Conway, A. R. A., & Kane, M. J. (2001). Capacity, control and conflict: An individual differences perspective on attentional capture. In C. Folk and B. Gibson (Eds.), *Attraction, Distraction and Action: Multiple Perspectives on Attention Capture* (pp. 349 – 372). Amsterdam: Elsevier Science.
- Kane, M. J., Bleckley, M. K., Conway, A. R. A., & Engle, R. W. (2001). A controlled-attention view of working memory capacity: Individual differences in memory span and the control of visual orienting. *Journal of Experimental Psychology: General*, *130*, 169-183.
- Conway, A. R. A., Tuholski, S. W., Shisler, R., & Engle, R. W. (1999). The effect of memory load on negative priming: An individual differences investigation. *Memory & Cognition*, *27*, 1042-1050.
- Conway, A. R. A. (1999). The time-course of negative priming: Little evidence for episodic trace retrieval. *Memory & Cognition*, *27*, 575-583.
- Engle, R. W., Tuholski, S. W., Laughlin, J., & Conway, A. R. A. (1999). Working memory, short-term memory and general fluid intelligence: A latent variable model approach. *Journal of Experimental Psychology: General*, *128*, 309-331.
- Conway, A. R. A., Kane, M. J., & Engle, R. W. (1999). Is Spearman's g determined by speed or working memory capacity? Book review of Jensen on Intelligence-g-Factor. *Psychology*, *10* (074), article 16.
- Kane, M. J., Conway, A. R. A., & Engle, R. W. (1999). What do working memory tests really measure? A comment on Caplan and Waters (1999). *Behavioral and Brain Sciences*, *22*, 101-102.
- Engle, R. W., & Conway, A. R. A. (1998). Comprehension and working memory. In R. H. Logie and K. J. Gilhooly (Eds.), *Working Memory and Thinking*. Lawrence Erlbaum Associates.
- Conway, A. R. A., & Engle, R. W. (1996). Individual differences in working memory capacity: More evidence for a general capacity theory. *Memory*, *4*, 577-590.
- Engle, R. W., Conway, A. R. A., Tuholski, S. W., & Shisler, R. J. (1995). A resource account of inhibition. *Psychological Science*, *6*, 122-125
- Conway, A. R. A., & Engle, R. W. (1994). Working memory and retrieval: A resource-dependent inhibition model. *Journal of Experimental Psychology: General*, *123*, 354-373.

## External Grant Funding

### *Dual Mechanisms of Cognitive Control*

National Institutes of Health (April 1, 2013 – June 30, 2016)

Role: Co-Principal Investigator

PI: Todd Braver, Washington University in St. Louis

### *The Effects of Mind-Wandering on the Learning and Retention of STEM Content: Experimental and Individual Differences Investigations*

National Science Foundation (August 1, 2013 – June 30, 2015)

Role: Statistics Consultant

PIs: Mike Kane, Univ. of North Carolina, Greensboro & Akira Miyake, Univ. of Colorado

### *Longitudinal Assessment of Brain Structure and Function in Sports-related Concussion*

New Jersey Department of Health and Senior Services (June 1, 2010 – May 30, 2013)

Role: Statistics Consultant

PI: Dan Osherson, Princeton University

### *Afghan Language Aptitude Battery*

Department of Defense (April 1, 2011 – August 17, 2011) [Contract terminated]

Role: Co-Principal Investigator

PI: Michael Bunting, University of Maryland

### *The Role of Epistemological Beliefs and Cognitive Processing on Engineering Students' Ability to Solve Ambiguous Problems*

National Science Foundation (August 1, 2009 – July 31, 2012)

Role: Statistics Consultant

PI: Elliot Douglas, University of Florida

### *Peer Effects on Neural and Behavioral Markers of Risk-taking in Adolescents*

National Institutes of Health (September 1, 2006 – September 1, 2009)

Role: Statistics Consultant

PI: Laurence Steinberg, Temple University

### *Neural Substrates of Emotion-Cognition Interactions*

National Institutes of Health (September 1, 2003 – September 1, 2006)

Role: Co-Principal Investigator with Jeremy Gray, Yale University and Todd Braver, Washington University in St. Louis

### *A Test of Flashbulb Memory: Tuesday, September 11, 2001*

National Science Foundation (September 18, 2001 – September 18, 2003)

Role: Principal Investigator

## Teaching Experience

Course	University	Semester(s) taught
Undergraduate Statistics	UIC Princeton	F96, S97, S98, F99, F03 S05, S06, S07, F07, S08, S09, S11, F11, S12, F12, S13, F13, S14, F14, S15
Undergraduate Advanced Statistics	Princeton	F07, F08, F09
Undergraduate Research Methods	USC	F94
Undergraduate Cognitive Psychology	UIC	S98, F98, S02
Undergraduate Lab in Cognition	UIC	S00, F01
Graduate Statistics (Univariate)	UIC Princeton	F97, F99, F00, F01 F04 – F14 (every Fall)
Graduate Statistics (Multivariate)	UIC Princeton	S97, S99, S01, S03 F05, S07, S08, S09, F10
Graduate Seminar (Advanced Statistics)	UIC Princeton	F98, S02 F10
Graduate Seminar on Working Memory	UIC	F98, F00, S02
<b>Online Course</b>	<b>Provider</b>	<b>Semester (Initial Enrollment)</b>
Statistics One	Coursera	F12 (81,170)
Statistics One	Coursera	F13 (144,950)

## Graduate Advisees (Primary)

1. Michael Bunting, 1997 – 2003, Current position: Area Director, The University of Maryland, Center for the Advanced Study of Language (CASL)
2. Rebecca Schrader, 1999 – 2002, Terminal M.A.
3. Timothy Miura, 2001 – 2005, Current position: Instructor, University of Loyola: Chicago
4. Gregory Colflesh, 2001 – 2009, Current position: Research Scientist, The University of Maryland, Center for the Advanced Study of Language (CASL)
5. Adam Moore, 2006 – 2011, Current position: Assistant Professor, The University of Edinburgh
6. Brooke Macnamara, 2008 – 2014, Current position: Assistant Professor, Case Western Reserve University
7. Michael Chow, 2011 – 2016, Current position: Software Engineer, DataCamp.com
8. Tasha Holden, 2012 – present, Current position: Graduate student, Princeton University
9. Jean-Paul Snijder, 2015 – present, Current position: Graduate student, CGU
10. Ester Navarro Garcia, 2016 – present, Current position: Graduate student, CGU
11. Kevin Rosales, 2016 – present, Current position: Graduate student, CGU



## **University Service (Claremont Graduate University)**

Internal Review Board (IRB), Committee Chair (2015 – present)

## **University Service (Princeton)**

Statistics consultant for the Department of Psychology (2004 – 2015)

New building planning committee (2009 – 2012)

Undergraduate curriculum committee (2010 – 2012)

Freshman Scholars Institute (FSI), Instructor (2012, Summer)

Organizer of weekly “coglunch” series (2012, Spring; 2015; Spring)

Faculty committee on online courses (2012 – 2014)

Faculty advisor, Princeton Summer Undergraduate Research Experience (PSURE, 2014)

## **University Service (UIC)**

Computer facilities and data management (Committee Chair, 1997 – 2004)

Departmental Internal Review Board (IRB) for the protection of human subjects (2003 – 2004)

Department faculty hiring priorities committee (2002 – 2004)

College of Liberal Arts and Sciences, Faculty Senate (2003 – 2004)

Faculty sponsor for local chapter of American Psychological Society (1998 – 2004)

Faculty sponsor for local chapter of Golden Key International Honour Society (1999 – 2004)

Honor’s College fellow (mentor undergraduates) (1999 – 2004)

Faculty search committee member (1997 – 98, 99 – 00, 00 – 01)

Organizer of the weekly cognitive “brownbag” series (1997 – 1999, 2003 – 2004)

## **Other Service**

Variation in Working Memory, Conference Chair (2003)

MPA Program Committee (2003 – 2006)

APA Division 3, Convention Program Chair (2004)

International Society for Intelligence Research, Symposium Organizer (2010)

Psychonomic Society Program Committee Chair (2013)

Psychonomic Society Convention Manager (2012 – 2016)

## **Professional Affiliations**

Fellow of the Psychonomic Society

Member of the Association for Psychological Science

Member of the International Society for Intelligence Research

Member of the Society for Applied Research in Memory and Cognition

## **Honors & Awards**

UIC Nominee for USA Professor of the Year, 2001

*Sponsored by the Carnegie Foundation for the Advancement of Teaching*

Excellence in Teaching Award, 2000

*Awarded by the Provost and Vice Chancellor for Academic Affairs (UIC)*

Teaching Recognition Program Award, 1999

*Awarded by the Council for Excellence in Teaching and Learning (UIC)*

The Silver Circle Teaching Award, 1999

*Awarded by the graduating class (UIC)*

## **Personal Information**

Date of Birth: December 31<sup>st</sup> 1969

Birthplace: Albany, New York, USA