

ALEXANDER P. BURGOYNE

Department of Psychology, Michigan State University

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EDUCATION

- 2020 (expected) Doctor of Philosophy
Cognition and Cognitive Neuroscience
Michigan State University, Department of Psychology
Advisor: D. Zach Hambrick, Ph.D.
- 2018 Master's Degree
Cognition and Cognitive Neuroscience
Michigan State University, Department of Psychology
Advisor: D. Zach Hambrick, Ph.D.
Committee: Kimberly M. Fenn, Ph.D. & Lauren J. Harris, Ph.D.
- 2014 Bachelor of Arts in Psychology
Michigan State University, College of Social Science

SUBMITTED ARTICLES

- Burgoyne, A. P.**, Hambrick, D. Z., & Altmann, E. M. (under review). Incremental Validity of Placekeeping as a Predictor of Multitasking.
- Burgoyne, A. P.**, Hambrick, D. Z., & Macnamara, B. N. (under review). How Firm Are the Foundations of Mindset Theory?
- Hambrick, D. Z., **Burgoyne, A. P.**, Stec, K., Fenn, K. M. (under review). The ACT Predicts Academic Performance, but Why? The Mystery Remains.
- Burgoyne, A. P.** & Macnamara, B. N. (under review). The Reliability and Validity of the Mindset Assessment Profile Tool.
- Hambrick, D. Z. & **Burgoyne, A. P.** (under review). Accelerating the Acquisition of Expertise.

JOURNAL ARTICLES

- Burgoyne, A. P.**, Hambrick, D. Z., & Altmann, E. M. (in press). Placekeeping Ability as a Component of Fluid Intelligence: Not Just Working Memory Capacity. *American Journal of Psychology*.
- Burgoyne, A. P.**, Harris, L. J., & Hambrick, D. Z. (2019). Predicting Skill Acquisition in Music: The Role of General Intelligence, Music Aptitude, and Mindset. *Intelligence*, 76.
- Burgoyne, A. P.**, Hambrick, D. Z., & Altmann, E. M. (2019). Is Working Memory a Causal Factor in Fluid Intelligence? *Psychonomic Bulletin & Review*, 26, 1333-1339.
- Hambrick, D. Z., & **Burgoyne, A. P.** (2019). Beyond nature vs. nurture in expertise research – comment on J. Baker and N. Wattie. *Current Issues in Sport Science*, 4, 104.
- Burgoyne, A. P.**, Nye, C. D., Macnamara, B. N., Charness, N., & Hambrick, D. Z. (2019). The Impact of Domain-Specific Experience on Chess Skill: Re-Analysis of a Key Study. *American Journal of Psychology*, 132, 27-38.
- Burgoyne, A. P.**, Hambrick, D. Z., Moser, J. S., & Burt, S. A. (2018). Analysis of a Mindset Intervention. *Journal of Research in Personality*, 77, 21-30.
- Mix, K., Hambrick, D. Z., Satyam, V. R., **Burgoyne, A. P.**, & Levine, S. C. (2018). The Latent Structure of Spatial Skill: A Test of the 2 x 2 Typology. *Cognition*, 180, 268-278.
- Hambrick, D. Z., Altmann, E., & **Burgoyne, A. P.** (2018). A Knowledge-Activation Approach to Testing the Circumvention-of-Limits Hypothesis. *American Journal of Psychology*, 131, 307-321.
- Sisk, V., **Burgoyne, A. P.**, Sun, J., Butler, J. L., & Macnamara, B. N. (2018). To What Extent and Under Which Circumstances Are Growth Mindsets Important to Academic Achievement? Two Meta-analyses. *Psychological Science*, 29, 549-571.
- Hambrick, D. Z., **Burgoyne, A. P.**, Macnamara, B. N., & Ullén, F. (2018). Toward a Multifactorial Model of Expertise: Beyond Born Versus Made. *The New York Academy of Sciences*, 1423, 284-295.
- Sala, G., **Burgoyne, A. P.**, Macnamara, B. N., Hambrick, D. Z., Campitelli, G., & Gobet, F. (2017). Checking the “Academic Selection” Argument. Chess Players Outperform

Non-Chess Players in Cognitive Skills Related to Intelligence: A Meta-Analysis. *Intelligence*, 61, 130-139.

Burgoyne, A. P., Sala, G., Gobet, F., Macnamara, B. N., Campitelli, G., & Hambrick, D. Z. (2016). The Relationship Between Cognitive Ability and Chess Skill: A Comprehensive Meta-Analysis. *Intelligence*, 59, 72-83.

CHAPTERS

Hambrick, D. Z., **Burgoyne, A. P.**, & Altmann, E. M. (in press) "Problem Solving and Intelligence." *Thinking and Problem Solving (Handbook of Perception and Cognition)*, Volume 3. Ed. Sternberg, R. J. Academic Press.

Hambrick, D. Z., **Burgoyne, A. P.**, & Oswald, F. L. (2019) "The Role of Interests in the Development of Expertise: A Multifactorial Perspective." *Vocational Interests in the Workplace: Rethinking Behavior at Work*. Eds. Nye, C. D., Rounds, J. Routledge.

Hambrick, D. Z., **Burgoyne, A. P.**, & Oswald, F. L. (2019). Domain-General Models of Expertise: The Role of Cognitive Ability. In P. Ward, J. M. Schraagen, J. Gore, & E. Roth (Eds.), *The Oxford Handbook of Expertise*. Oxford, UK: Oxford University Press.

Hambrick, D. Z., **Burgoyne, A. P.**, Campitelli, G., & Macnamara, B. N. (2018). "Working Memory, Thinking, and Expertise." *International Handbook of Thinking and Reasoning*. Eds. Ball, L. J. & Thompson, V. A. Psychology Press.

Macnamara, B. N., Hambrick, D. Z., Frank, D. J., King, M. J., **Burgoyne, A. P.**, & Meinz, E. J. (2018). "The Deliberate Practice View: An Evaluation of Definitions, Claims, and Empirical Evidence." *The Science of Expertise*. Eds. Hambrick, D. Z., Campitelli, G., & Macnamara, B. N. Psychology Press.

POPULAR WRITING

Hambrick, D. Z. & **Burgoyne, A. P.** (2019, May 29). Looks Matter, but So Do Smarts, *Scientific American*. Retrieved from <https://www.scientificamerican.com/article/looks-matters-but-so-does-smarts/>

Burgoyne, A. P. & Hambrick, D. Z. (2017, January 12). Intelligence and the DNA Revolution, *Scientific American*. Retrieved from <https://www.scientificamerican.com/article/intelligence-and-the-dna-revolution/>

Burgoyne, A. P. & Hambrick, D. Z. (2017, August 22). Flagging Fake News or Bad Sources Won't Work, *Slate*. Retrieved from http://www.slate.com/articles/health_and_science/science/2017/01/educating_people_about_sources_won_t_stop_fake_news.html

Hambrick, D. Z. & **Burgoyne, A. P.** (2016, September 18). The Difference Between Rationality and Intelligence, *New York Times*, p. SR12.

PRESENTATIONS AND SYMPOSIA

Hambrick, D. Z., **Burgoyne, A. P.**, & Altmann, E. M. (2019, June). *Placekeeping Ability as a Cognitive Control Construct: Validity and Malleability*. Presentation at the annual Office of Naval Research Program Review (Hawkins ONR 341), Arlington, D.C.

Burgoyne, A. P., Hambrick, D. Z., & Macnamara, B. N. (2019, April). *How Firm Are the Foundations of Mindset Theory?* Presentation at the annual conference of the Midwestern Psychological Association, Chicago, IL.

Burgoyne, A. P., Altmann, E. M., & Hambrick, D. Z. (2018, November). *Placekeeping Ability as a Component of Fluid Intelligence*. Poster presented at the annual Psychonomics convention, New Orleans, LA.

Macnamara, B. N. & **Burgoyne, A. P.** (2018, May). *How Important Are Growth Mindsets for Learning and Achievement?* Symposium at the annual convention of the Association for Psychological Science, San Francisco, CA.

Burgoyne, A. P., Hambrick, D. Z., & Harris, L. J. (2018, May). *The Role of Cognitive Ability, Music Aptitude, and Mindset in Acquiring Musical Skill*. Presentation at the annual convention of the Association for Psychological Science, San Francisco, CA.

Burgoyne, A. P., Burt, S. A., Moser, J., Yeager, D., Plaisance, K., & Hambrick, D. Z. (2018, April). *Altering Mindsets with a Brief Online Intervention*. Presentation at the annual conference of the Midwestern Psychological Association, Chicago, IL.

Burgoyne, A. P., Altmann, E. M., & Hambrick, D. Z. (2017, May). *Cognitive Determinants of Multitasking Ability*. Poster presented at the annual convention of the Association for Psychological Science, Boston, MA.

Burgoyne, A. P., Nye, C. D., Macnamara, B. N., Charness, N., Hambrick, D. Z. (2017, April). *The Impact of Domain-Specific Experience on Chess Skill: Re-Analysis of a Key Study*. Presentation at the annual conference of the Midwestern Psychological Association, Chicago, IL.

Burgoyne, A. P., Harris, L. J., & Hambrick, D. Z. (2016, May). *Acquiring Skill in Music*. Poster presented at the annual conference of the Midwestern Psychological Association, Chicago, IL.

Burgoyne, A. P., Sala, G., Gobet, F., Macnamara, B. N., Campitelli, G., Hambrick, D. Z. (2016, May). *The Relationship Between Intelligence and Expertise in Chess: A Meta-Analysis*. Presentation at the annual conference of the Midwestern Psychological Association, Chicago, IL.

HONORS AND AWARDS

Research Scholars Award: \$3,500

The Nature and Nurture of Skilled Performance: Understanding the Role of Basic Abilities and Training on Complex Task Performance.

PI: Alexander P. Burgoyne (2018)

Thompson Endowment Fellowship Award: \$1,000

The Nature and Nurture of Skilled Performance: Understanding the Role of Basic Abilities and Training on Complex Task Performance.

PI: Alexander P. Burgoyne (2018)

Future Academic Scholars in Teaching Fellowship: \$2,000

Cognitive Processes Underlying Undergraduate Writing and Proofreading.

Awarded to Alexander P. Burgoyne (2018)

Research Enhancement Award: \$1,000

Circumvention of Limits in Chess.

PI: Alexander P. Burgoyne (2018)

Travel Award: \$1,100

Funding for APS and MPA annual conventions.

Awarded to Alexander P. Burgoyne (2018)

Summer Fellowship Award: \$600

Awarded to Alexander P. Burgoyne (2017)

Rasmussen Fellowship Award: \$5,000

Awarded to Alexander P. Burgoyne (2015)

COGNITIVE ABILITY TESTING SOFTWARE

2017 Visual Arrays Task (E-Prime v2)
 2017 Choose-A-Move Chess Test (E-Prime v2)
 2017 Chess Knowledge Test (E-Prime v2)
 2017 Typing Speed Test (E-Prime v2)
 2016 Reading Comprehension Test (E-Prime v1 and v2)
 2016 Pattern Comparison Test (E-Prime v1 and v2)
 All programs are free to download at www.scienceofexpertise.com/alex

WEB DESIGN AND MANAGEMENT

www.scienceofexpertise.com – Website for the Expertise Laboratory
www.journalofexpertise.org – Official website for the Journal of Expertise

ACADEMIC POSITIONS

2015 – Present Graduate Research Assistant/Laboratory Manager
 Expertise Laboratory
 Michigan State University, Department of Psychology
 Supervisor: D. Zach Hambrick, Ph.D.

2016 Teaching Assistant
 Psychology 402(W): Sensation and Perception
 Michigan State University, Department of Psychology
 Professor: Mark Becker, Ph.D.

- 2015 Teaching Assistant
Psychology 244: Developmental Psychology: Infancy through
Childhood
Michigan State University, Department of Psychology
Professor: Lauren J. Harris, Ph.D.
- 2014 – 2015 Professional Aide
Michigan Twins Project, Michigan State University
Principal Investigators: Kelly Klump, Ph.D., Alex Burt, Ph.D.
- 2013 Teaching Assistant
Psychology 200: Introduction to Cognitive Psychology
Michigan State University, Department of Psychology
Professor: Mark Becker, Ph.D.
- 2012 – 2013 Research Assistant
Michigan Twins Project, Michigan State University
Principal Investigators: Kelly Klump, Ph.D., Alex Burt, Ph.D.

PROFESSIONAL SERVICE

- 2017 – Present Reviewer for the following journals: *Journal of Experimental Psychology: General, Journal of Experimental Psychology: Learning, Memory, and Cognition, Journal of Behavioral Decision Making, Clinical Psychological Science, Military Psychology, Music Perception, Journal of Expertise, Advances in Cognitive Psychology, Organizational Behavior and Human Decision Processes, Learning and Individual Differences*
- 2016 Reviewer for the Association for Psychological Science Student Grant Competition
- 2016 Student Representative, *Quantitative Genetics Faculty Search Committee*, Psychology Department, Michigan State University East Lansing, MI

TECHNICAL SKILLS

Structural equation modeling (*Amos, MPlus*)
 Meta-analysis (*R, Comprehensive Meta-Analysis*)
 Multi-level modeling, power analysis, etc. (*SPSS, G*Power*)
 Experiment program development (*E-Basic*)
 Web design (*HTML, CSS*)
 Website management and graphic design (*Adobe Dreamweaver, Photoshop, Illustrator*)

PROFESSIONAL DEVELOPMENT

Fall	2018	Future Academic Scholars in Teaching Fellow
Spring	2017	Leadership Academy at Michigan State University
Summer	2016	Certification in College Teaching Institute
Summer	2016	Introductory & Intermediate Structural Equation Modeling Workshop
Summer	2015	Teaching Assistant Institute at Michigan State University

PROFESSIONAL MEMBERSHIPS

2018 – Present	Psychonomic Society Member
2015 – Present	Midwest Psychological Association Member
2015 – Present	American Psychological Association Member

MEDIA COVERAGE

Research featured in the following outlets:

- Vox
- Wired
- The Conversation (x2)
- The Times
- Psychology Today
- American Council on Science and Health (x2)
- Australian Financial Review
- MSU Today (x2)
- Genetic Literacy Project (x2)
- Technology
- Futurity
- EurekAlert
- MedicalXpress
- Mad in America
- Science Newsline
- CWRU's The Daily
- Association for Psychological Science
- The Hechinger Report
- Huffington Post
- Education Week (x2)
- Reddit (x3)
- Chess.com
- Saint Louis Chess Club
- Chess and Strategy
- Bright Person
- Real Clear Science
- Peak Fitness
- ValueWalk
- New Delhi Television
- Charles Jennings & Associates
- Actualité Houssenia Writing
- Newswise
- Marginal Revolution
- Health Medicine Network
- Newser
- Science Daily
- From Experience to Meaning
- Mensa Côte d'Azur