

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). Placekeeping Ability as a Component of Fluid Intelligence.
- Burgoyne, A. P.**, Hambrick, D. Z., Altmann, E. M. (under review). Is Working Memory a Causal Factor in Fluid Intelligence?
- Burgoyne, A. P.**, Hambrick, D. Z., Altmann, E. M. (under review). What Accounts for Individual Differences in Placekeeping Ability? A Test of the Strategy Use Hypothesis.

JOURNAL ARTICLES

Burgoyne, A. P., Nye, C. D., Macnamara, B. N., Charness, N., & Hambrick, D. Z. (in press). The Impact of Domain-Specific Experience on Chess Skill: Re-Analysis of a Key Study. *American Journal of Psychology*.

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.

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.

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.

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.**, & Oswald, F. L. (in press) "Domain-General Models of Expertise: The Role of Cognitive Ability." *Oxford Handbook of Expertise: Research and Application*. Eds. Ward, P., Schraagen, J. M., Gore, J., & Roth, E. Oxford: Oxford UP.

Hambrick, D. Z., **Burgoyne, A. P.**, & Oswald, F. L. (in press) "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.**, & Altmann, E. M. (in preparation) "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.**, 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

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

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.

ACADEMIC SERVICE

- 2017 – Present Reviewer for the following journals: *Journal of Behavioral Decision Making, Clinical Psychological Science, Military Psychology, Music Perception, Journal of Expertise, Journal of Experimental Psychology: General*

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