

Sami R. Yousif

CURRICULUM VITAE

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EDUCATION

2016-Present	Ph.D. Student in Cognitive Psychology Advisor: Frank Keil, Ph.D. Cognition and Development Lab	Yale University
2012-2016	B.A., Psychology, <i>summa cum laude</i> Thesis: Spatial-numerical associations across reference frames Advisor: Stella Lourenco, Ph.D.	Emory University

ACADEMIC AWARDS AND HONORS

2020	Elsevier/Vision Research Travel Award
2020	William Kessen Teaching Award
2019	Yale Conference Travel Fellowship
2018	Cognitive Science Society Travel Award
2018	NSF Graduate Research Fellowship
2016	Charles Elias Shepard Scholarship
2016	Emory University Tutor of the Year
2016	Phi Beta Kappa Honor Society
2015	SIRE Independent Travel Grant (Child Development Society)
2015	SIRE Independent Research Grant (2D shape representations)
2015	SIRE Independent Travel Grant (Vision Sciences Society)
2014	SIRE Independent Research Grant (Geometry and navigation)

PUBLICATIONS AND REFEREED CONFERENCE PROCEEDINGS

- Yousif, S. R. and Keil, F. C. (In press). The shape of space: Evidence for spontaneous but flexible use of polar coordinates in visuospatial representations. *Psychological Science*.
- Yousif, S. R., Aslin, R. N., and Keil, F. C. (2020). Judgments of spatial extent are fundamentally illusory: ‘Additive-area’ provides the best explanation. *Cognition*.
- Yousif, S. R. and Keil, F. C. (2020). Area, not number, dominates estimates of visual quantities. *Scientific Reports*, 10, 1-13.
- Yousif, S. R. and Keil, F. C. (2020). Illusory causal connections and their effect on subjective probability. In S. Denison., M. Mack, Y. Xu, & B.C. Armstrong (Eds.), Proceedings of the 42nd Annual Conference of the Cognitive Science Society (pp. 404-410). Cognitive Science Society.
- Joo, S., Yousif, S. R., and Keil, F. C. (2020). Implicit questions shape information preferences. In S. Denison., M. Mack, Y. Xu, & B.C. Armstrong (Eds.), Proceedings of the 42nd Annual Conference of the Cognitive Science Society (pp. 1265-1271). Cognitive Science Society.
- Liefgreen, A., Yousif, S. R., Keil, F. C., and Lagnado, D. (2020). I don’t know if you did it, but I know why: A ‘motive’ preference at multiple stages of the legal-investigative process. In S. Denison., M. Mack, Y. Xu, & B.C. Armstrong (Eds.), Proceedings of the 42nd Annual Conference of the Cognitive Science Society (pp. 1123-1129). Cognitive Science Society.
- Yousif, S. R., Chen, Y. C., and Scholl, B. J. (2020). Systematic angular biases in the representation of visual space. *Attention, Perception, & Psychophysics*, 82, 3124-3143.
- Yousif, S. R., Aboody, R., and Keil, F. C. (2019). The illusion of consensus: A failure to distinguish between ‘true’ and ‘false’ consensus. *Psychological Science*, 30, 1195-1204.

- Ayzenberg, V., Chen, Y., Yousif, S. R., and Lourenco, S. F. (2019). Skeletal representations of shape in human vision: Evidence for a pruned medial axis model. *Journal of Vision*, 19, 1-21.
- Yousif, S. R. and Keil, F. C. (2019). The ‘Additive-Area Heuristic’: An efficient but illusory means of visual area approximation. *Psychological Science*, 30, 495–503.
- Yousif, S. R. and Scholl, B. J. (2019). The one-is-more illusion: Sets of discrete objects appear less extended than equivalent continuous entities in both space and time. *Cognition*, 185, 121-130.
- Yousif S. R. and Keil, F. C. (2018). When in doubt: Using confidence and consensus as ‘summary statistics’ of collective knowledge. In T.T. Rogers, M. Rau, X. Zhu, & C. W. Kalish (Eds.), *Proceedings of the 40th Annual Conference of the Cognitive Science Society* (pp. 2741-2746). Austin, TX: Cognitive Science Society.
- Aulet, L. S., Yousif, S. R., and Lourenco, S. F. (2017). Numbers uniquely bias spatial attention: a novel paradigm for assessing Spatial-Numerical Associations. In G. Gunzelmann, A. Howes, T. Tenbrink, & E. J. Davelaar (Eds.), *Proceedings of the 39th Annual Conference of the Cognitive Science Society* (pp. 75-80). Austin, TX: Cognitive Science Society.
- Yousif, S. R. and Lourenco, S. F. (2017). Are all geometric cues created equal? Children’s use of distance and length for reorientation. *Cognitive Development*, 43, 159-169.
- Cheung, C.N., Ayzenberg, V., Diamond, R.F.L., Yousif, S. R., and Lourenco, S.F. (2015). Probing the mental number line: A between-task analysis of spatial-numerical associations. In D.C. Noelle, R. Dale, A.S. Warlaumont, J. Yoshimi, T. Matlock, C.D. Jennings, & P.P. Maglio (Eds.), *Proceedings of the 37th Annual Meeting of the Cognitive Science Society* (pp. 357-362). Austin, TX: Cognitive Science Society.

MANUSCRIPTS

- Yousif, S. R., Alexandrov, E., Bennette, E., Aslin, R. N., and Keil, F. C. (Under revision). Children estimate area using an ‘Additive-Area Heuristic’.
- Joo, S., Yousif, S. R., and Keil, F. C. (Under revision). Understanding ‘Why’: How implicit questions shape information preferences.
- Yousif, S. R., Rosenberg, M. D., and Keil, F. C. (Under review). Using space to remember: Short-term spatial structure spontaneously improves working memory.
- Yousif, S. R. and Keil, F. C. (Under review). Illusory causal connections and their effect on subjective probability.
- Lin, Q., Yousif, S. R., Scholl, B. J., and Chun, M. M. (Under revision). Visual memorability in the absence of semantic content.
- Aulet, L., Yousif, S. R., and Lourenco, S. F. (Under revision). Spatial-numerical associations from a novel paradigm support the Mental Number Line account.
- Bennette, E., Keil F. C., & Yousif S. R. (Under review). A ubiquitous illusion of volume: Are impressions of 3D volume captured by an ‘Additive Heuristic’?
- Joo, S., Yousif, S. R., and Knobe, J. (Under review). Teleology beyond explanation: What factors influence teleology judgments?
- Liefgreen, A., Yousif, S. R., Keil, F. C., and Lagnado, D. (Under review). The motive for motive: Explanatory preferences at multiple stages of the legal-investigative process.
- Yousif, S. R. and Keil, F. C. (In prep). How we see area — and why it matters.
- Aboody, R., Yousif, S. R., Sheskin, M., and Keil, F. C. (In prep). Says who? Children evaluate informants’ sources when deciding whom to believe.
- Yousif, S. R. and Keil, F. C. (In prep). The cognitive map: From place cells to labeled graphs.
- Yousif, S. R. (In prep). Decoding spatial representation: Evidence for a ‘cognitive graph’.
- Joo, S., Yousif, S. R., and Keil, F. C. (In prep). Understanding ‘How’: Two kinds of mechanistic explanations underlie known explanation preferences.

POPULAR PRESS

- Yousif, S. R., Aboody, R., and Keil, F. C. (2020, February 3). The illusion of consensus. *Social Change Lab*. Retrieved from <http://www.socialchangelab.net/blog/>*
- Yousif, S. R., Aboody, R., and Keil, F. C. (2019, September 26). The illusion of consensus. *Character and Context*. Retrieved from <http://www.spsp.org/news-center/blog/>*

* This work was also featured on an episode of the Data Skeptic podcast

CONFERENCE PRESENTATIONS

- Yousif, S. R., Aslin, R. N., and Keil, F. C. (2020, November). *'Additive area' better explains area judgments than both veridical and scaling models*. Talk to be presented at the Object Perception, Attention, and Memory meeting.
- Yousif, S. R. and Keil, F. C. (2020, July). *Illusory causal connections and their effect on subjective probability*. Talk presented at the 42nd Annual Conference of the Cognitive Science Society.
- Joo, S., Yousif, S. R., and Keil, F. C. (2020, July). *Implicit questions shape information preferences*. Poster presented at the 42nd Annual Conference of the Cognitive Science Society.
- Liefgreen, A., Yousif, S. R., Keil, F. C., and Lagnado, D. (2020, July). *I don't know if you did it, but I know why: A 'motive' preference at multiple stages of the legal-investigative process*. Poster presented at the 42nd Annual Conference of the Cognitive Science Society.
- Joo, S., Yousif, S. R., and Keil, F. C. (2020, June). *Why questions are ambiguous: How implicit questions shape information preferences*. Talk accepted at the annual meeting of the Society for Philosophy and Psychology (SPP), Princeton, NJ. [Postponed due to COVID-19]
- Yousif, S. R., Liefgreen, A., Lagnado, D., and Keil, F. C. (2020, June). *Whodunnit? A 'motive' preference at multiple stages of the legal-investigative process*. Poster accepted at the annual meeting of the Society for Philosophy and Psychology (SPP), Princeton, NJ. [Postponed due to COVID-19]
- Yousif, S. R. and Keil, F. C. (2020, May). *Interactions between the 'visuospatial sketchpad' and the 'phonological loop': task-irrelevant spatial structure benefits working memory, in spite of explicit rehearsal*. Poster presented at the annual meeting of the Vision Sciences Society (VSS).
- Bennette, E., Yousif, S. R., and Keil, F. C. (2020, May). *An illusion of volume: Perceived volume is best approximated by the sum of objects' dimensions*. Poster accepted at the annual meeting of the Vision Sciences Society (VSS). [Retracted due to COVID-19]
- Yousif, S. R. and Keil, F. C. (2019, November). *Evidence for size-invariant polar representations of visual space*. Poster presented at the Object Perception, Attention, and Memory meeting, Montreal, QC.
- Yousif, S. R., Alexandrov, E., Bennette, E., Aslin, R. N., and Keil, F. C. (2019, October). *Children approximate area using an 'Additive-Area Heuristic'*. Poster presented at the Biennial Meeting of the Cognitive Development Society, Louisville, KY.
- Aboody, R., Yousif, S. R., Sheskin, M., and Keil, F. C. (2019, October). *Says who? Children consider informants' sources when deciding whom to believe*. Poster presented at the Biennial Meeting of the Cognitive Development Society, Louisville, KY.
- Yousif, S. R., Alexandrov, E., Bennette, E., and Keil, F. C. (2019, July). *Perceived area plays a dominant role in visual quantity estimation*. Talk presented at the 41st Annual Conference of the Cognitive Science Society, Montreal, QC.
- Lin, Q., Yousif, S. R., Scholl, B. J., and Chun, M. M. (2019, May). *Image memorability is driven by visual and conceptual distinctiveness*. Talk presented at the Manhattan Area Memory Meeting (MAMM), Princeton, NJ.
- Yousif, S. R., Chen, Y-C., and Scholl, B. J. (2019, May). *Systematic biases in the representation of visual space*. Poster presented at the annual meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL.
- Lin, Q., Yousif, S. R., Scholl, B. J., and Chun, M. M. (2019, May). *Image memorability is driven by visual and conceptual distinctiveness*. Talk presented at the annual meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL.
- Yousif, S. R., Aboody, R., and Keil, F. C. (2018, July). *Any consensus will do: The failure to distinguish between 'true' and 'false' consensus*. Talk presented at the 40th Annual Conference of the Cognitive Science Society, Madison, WI.
- Yousif, S. R. and Keil, F. C. (2018, July). *When in doubt: Using confidence and consensus as 'summary statistics' of collective knowledge*. Poster presented at the 40th Annual Conference of the Cognitive Science Society, Madison, WI.
- Lin, Q., Yousif, S. R., Scholl, B. J., and Chun, M. M. (2018, May). *Visual memorability in the absence of semantic content*. Talk presented at the Manhattan Area Memory Meeting (MAMM), New York City, NY.
- Yousif, S. R., Chen, Y-C., and Scholl, B. J. (2018, May). *The origin of spatial biases: Memory, perception, or action?* Poster presented at the annual meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL.
- Lin, Q., Yousif, S. R., Scholl, B. J., and Chun, M. M. (2018, May). *Visual memorability in the absence of semantic content*. Poster presented at the annual meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL.

- Yousif, S. R.** and Lourenco, S. F. (2017, October). *Modularity of geometric processing? Children's reorientation behavior as a case study*. In N. S. Newcombe (Chair), *The development of spatial reorientation: An old puzzle, a new formulation*. Symposium conducted at the Biennial Meeting of the Cognitive Development Society, Portland, OR.
- Aulet, L. S., **Yousif, S. R.**, and Lourenco, S. F. (2017, July). *Numbers uniquely bias spatial attention: a novel paradigm for assessing Spatial-Numerical Associations*. Talk presented at the 39th Annual Conference of the Cognitive Science Society, London, UK.
- Yousif, S. R.** and Scholl, B. J. (2017, May). *The one-is-more illusion: Sets of discrete objects appear less extended than equivalent continuous entities in both space and time*. Poster presented at the annual meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL.
- Yousif, S. R.**, Norman, E. M., and Lourenco, S. F. (2017, April). *Spatial development in a sample of Samoan children*. Poster presented at the annual meeting of the Society for Research on Child Development (SRCD), Austin, TX.
- Yousif, S. R.**, Ayzenberg, V., and Lourenco, S. F. (2016, May). *Spatial memory demands modulate shape representations*. Poster presented at the annual meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL.
- Ayzenberg, V., **Yousif, S. R.**, and Lourenco, S. F. (2016, May). *The medial axis as a robust model of object representation*. Poster presented at the annual meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL.
- Nag, S., Ayzenberg, V., **Yousif, S. R.**, and Lourenco, S. F. (2016, May). *Target detection within a two-dimensional shape: A test of the medial axis model of object recognition*. Poster presented at the annual meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL.
- Yousif, S. R.** and Lourenco, S. F. (2015, December). *Tapping into two-dimensional shape representation*. Talk presented at the SIRE Fall Research Symposium, Atlanta, GA.
- Yousif, S. R.** and Lourenco, S. F. (2015, October). *Flexibility of geometric processing: Evidence from reorientation*. Poster presented at the Biennial Meeting of the Cognitive Development Society, Columbus, OH.
- Cheung, C., Ayzenberg, V., Diamond, R.F.L., **Yousif, S. R.**, and Lourenco, S. F. (2015, July). *Probing the mental number line: a between-task analysis of spatial-numerical associations*. Proceedings of the 37th Annual Conference of the Cognitive Science Society, Pasadena, CA.
- Yousif, S. R.**, Ayzenberg, V., and Lourenco, S. F. (2015, May). *Reorientation in three-dimensional space: is distance the key?* Poster presented at the annual meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL.
- Yousif, S. R.** and Lourenco, S. F. (2015, April). *Global geometry in reorientation: children rely on more than discrete cues to navigate*. Talk presented at the SIRE Research Symposium, Atlanta, GA.
- Yousif, S. R.** and Lourenco, S. F. (2015, April). *Geometry in navigation: How children use the features of the space to reorient*. Poster presented at the SIRE Research Symposium, Atlanta, GA.

TEACHING EXPERIENCE

Spring 2019	<i>Introduction to Psychology (Chun)</i> , Teaching Fellow
Fall 2018	<i>Introduction to Cognitive Science (Scholl)</i> , Teaching Fellow
Spring 2018	<i>Developmental Psychology (Keil)</i> , Teaching Fellow
Fall 2017	<i>Introduction to Cognitive Science (Scholl)</i> , Teaching Fellow
2014-2016	<i>Quantitative Theory and Methods</i> (Introductory Stats), Peer Tutor (Emory)
2013-2016	<i>Quantitative Theory and Methods</i> (Introductory Stats), Peer Mentor (Emory)

LECTURES & TALKS

- Spatial Cognition Lab Meeting (Emory University, Lourenco), June 2020 (Format of spatial representation)
- UM6P School of Collective Intelligence — May 2020 (False consensus)
- University College London, Causal Cognition Lab — March 2020 (Explanation)
- Current Work in Cognition (Yale Psych. Dept.), April 2019 ('Additive-Area Heuristic')
- University of British Columbia – Developmental Brown Bag, March 2019 (Case studies in spatial cognition)
- Psychology Interview Day Talk, January 2019 (Case studies in spatial cognition)
- Spatial Cognition Lab Meeting (Emory University, Lourenco), March 2017 (One-is-more illusion)

PROFESSIONAL ACTIVITIES & AFFILIATIONS

2014-2016	Lab Manager, Spatial Cognition Lab Advisor: Stella Lourenco, Ph.D.	Emory University
2015-2016	EPASS (Tutoring/Mentoring) Program Coordinator Supervisor: Julie Loppacher	Emory University

Memberships

Cognitive Science Society, Vision Sciences Society, Cognitive Development Society, Association for Psychological Science

Ad Hoc Reviewing

Psychological Science, Cognition, Journal of Experimental Psychology: Learning, Memory, and Cognition, Acta Psychologica, Cognitive Research: Principles and Implications

STUDENTS ADVISED

Sehrang Joo (Yale, '20) — Sarah studies the nature of explanation: “Why do we like the kinds of explanations that we do?”. She wrote an award-winning undergraduate thesis titled: “Understanding ‘why’: how implicit questions shape information preferences.” This work has yielded one paper currently under review, several others in preparation, and numerous conference presentations.

Emma Alexandrov (Vassar, '21) & **Elizabeth Bennette** (UCSD, '20) — They have worked jointly on various studies related to area perception; this work has yielded a paper currently under review + another currently in preparation + three conferences submissions; both received awards for their work, including a VSS Travel award to Liz.

Caroline Reiner (Yale, '23) — Caroline is a prospective computer science / cognitive science major broadly interested in how the mind works. Currently, she is working on projects related to subjective probability in perception and cognition.