

# Alon Hafri

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## RESEARCH AREAS

Language and Thought, Psycholinguistics, Visual Perception, Cognitive Neuroscience

## ACADEMIC APPOINTMENTS

- August 2022    Assistant Professor, Department of Linguistics & Cognitive Science  
University of Delaware
- 2021–2022    NSF Social, Behavioral, and Economic Sciences (SBE) Postdoctoral Research Fellow  
Johns Hopkins University
- 2019–2022    Postdoctoral Research Fellow, Department of Psychological & Brain Sciences,  
Department of Cognitive Science  
*Mentors:* Chaz Firestone, Michael F. Bonner, and Barbara Landau  
Johns Hopkins University

## EDUCATION

- 2019            Ph.D., Psychology, University of Pennsylvania  
*Mentors:* John Trueswell, Russell Epstein  
*Additional Committee Members:* Nicole Rust (chair), Konrad Kording  
*Dissertation:* Event structure in vision and language  
*Certificates:*
- IGERT Traineeship in Complex Scene Perception (PIs: David Brainard, Kostas Daniilidis)
  - Teaching Certificate (Center for Teaching and Learning)
- 2015            M.A., Psychology, University of Pennsylvania
- 2007            B.A., Music, Wesleyan University

## OTHER RESEARCH POSITIONS

- 2012–2013     Research Assistant, Department of Psychology  
Russell Epstein’s Lab  
University of Pennsylvania
- 2009–2012     Lab Manager, Department of Psychology  
John Trueswell’s Language Processing & Development Lab  
University of Pennsylvania
- 2007–2008     Research Assistant (Volunteer), Department of Psychology  
Kathy Hirsh-Pasek’s Infant & Child Lab  
Temple University

## GRANTS & FELLOWSHIPS

- 2021–2023     NSF Social, Behavioral, and Economic Sciences (SBE) Postdoctoral     \$138,000  
Research Fellowship  
*Title:* [Neural mechanisms of relational perception](#)  
*Co-PIs:* Michael F. Bonner, Chaz Firestone, and Barbara Landau
- 2016–2019     NSF Graduate Research Fellowship
- 2015–2016     NIH T32 Institutional Predoctoral Research Training Grant in Vision Research  
*PI:* Diego Contreras
- 2015            National Defense Science & Engineering Graduate Fellowship [declined the award]

## AWARDS

- 2019            NEI Postdoctoral Travel Award for Vision Sciences Society Meeting
- 2015            Graduate Student Travel Award for Vision Sciences Society Meeting

## PUBLICATIONS

### *Preprints*

1. **Hafri, A.**, Landau, B., Bonner, M.F., & Firestone, C. (under review). [A phone in a basket looks like a knife in a cup: The perception of abstract relations](#). *PsyArXiv*.
2. De Freitas, J.\*, **Hafri, A.\***, Alvarez, G.A. (under review). [Moral thin-slicing](#). \* co-first authors

*Journal Articles*

3. **Hafri, A.**, Gleitman, L.R., Landau, B., & Trueswell, J.C. (in press). When word and world meet: Language and vision share an abstract representation of symmetry. *Journal of Experimental Psychology: General*.
4. Lin, F., **Hafri, A.**, & Bonner, M.F. (in press). Scene memories are biased toward high-probability views. *Journal of Experimental Psychology: Human Perception & Performance*.
5. **Hafri, A.**, Wadhwa, S., Bonner, M.F. (in press). Perceived distance alters memory for scene boundaries. *Psychological Science*.
6. **Hafri, A.\***, Boger, T.\*, & Firestone, C. (in press). Melting ice with your mind: Representational momentum for physical states. *Psychological Science*. \* co-first authors
7. **Hafri, A.**, & Firestone, C. (2021). The perception of relations. *Trends in Cognitive Sciences*, 25(6), 475–492.  
\* This paper was featured on the cover for the corresponding issue.
8. Caplan, S., **Hafri, A.**, Trueswell, J.C. (2021). Now you hear me, later you don't: The immediacy of linguistic computation and the representation of speech. *Psychological Science*, 32(3), 410–423.
9. **Hafri, A.**, Trueswell, J.C., & Strickland, B. (2018). Encoding of event roles from visual scenes is rapid, spontaneous, and interacts with higher-level visual processing. *Cognition*, 175, 336–352.
10. **Hafri, A.**, Trueswell, J.C., & Epstein, R.A. (2017). Neural representations of observed actions generalize across static and dynamic visual input. *The Journal of Neuroscience*, 37(11), 3056–3071.
11. **Hafri, A.**, Papafragou, A., & Trueswell, J.C. (2013). Getting the gist of events: Recognition of two-participant actions from brief displays. *Journal of Experimental Psychology: General*, 142(3), 880–905.
12. Trueswell, J.C., Medina, T.N., **Hafri, A.**, & Gleitman, L.R. (2013). Propose but verify: Fast mapping meets cross-situational word learning. *Cognitive Psychology*, 66(1), 126–156.

*Refereed Conference Proceedings*

13. **Hafri, A.**, Gleitman, L.R., Landau, B., & Trueswell, J.C. (2021). When word and world meet: Intuitive correspondence between visual and linguistic symmetry. In *Proceedings of the 43rd Annual Conference of the Cognitive Science Society*. Vienna, Austria.
14. Caplan, S., **Hafri, A.**, Trueswell, J.C. (2019). Speech processing does not involve acoustic maintenance. In *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. Montreal, Canada.

15. Wehry, J., **Hafri, A.**, Trueswell, J.C. (2019). The end's in plain sight: Implicit association of visual and conceptual boundedness. In *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. Montreal, Canada.
16. **Hafri, A.**, Trueswell, J. C., & Strickland, B. (2016). Extraction of event roles from visual scenes is rapid, automatic, and interacts with higher-level visual processing. In *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. Philadelphia, PA.
17. Trueswell, J.C., Kaufman, D., **Hafri, A.**, & Lidz, J. (2012). [Development of parsing abilities interacts with grammar learning: Evidence from Tagalog and Kannada](#). In *Proceedings of the 36th Annual Boston University Conference on Language Development*. Somerville, MA: Cascadilla Press.

## WORKS IN PROGRESS

1. Guan, C.\*, Schwitzgebel, D.\*, Firestone, C., & **Hafri, A.** Visual number estimation is sensitive to the combinability of object-parts. \* co-first authors
2. **Hafri, A.**, Bonner, M.F., Trueswell, J.C., & Epstein, R.A. A model of semantic structure predicts cortical responses to verbs in naturalistic language.

## INVITED COLLOQUIA AND WORKSHOPS

2022 September	University of Pennsylvania	<i>Integrated Language Science &amp; Technology (ILST) Seminar</i>
2022 September	Kanazawa, Japan	<i>Joint Conference on Language Evolution: Event role biases in language and cognition</i>
2022 April	University of Nevada, Reno	<i>Early Career Colloquium</i>
2021 August	Tel Aviv University	<i>Mudrik Lab (PI: Liad Mudrik)</i>
2021 May	University of Maryland	<i>Linguistics Department</i>
2021 April	UCSD	<i>Language Comprehension Lab (PI: Eva Wittenberg)</i>
2021 March	Harvard University	<i>Cognitive Neuropsychology Lab (PI: Alfonso Caramazza)</i>
2021 March	Sorbonne University	<i>LaPsyDÉ</i>
2021 February	University of Florida	<i>PAC/SCANN Labs (PIs: Brian Odegaard, Steven Weisberg)</i>
2018 February	Johns Hopkins University	<i>Vision Science Seminar</i>

## INVITED CONFERENCE TALKS, WORKSHOPS, & SYMPOSIA

- 2022 September    Event role biases in language and cognition, Workshop, *Joint Conference on Language Evolution*, Kanazawa, Japan & Online.

- 2022 May Beyond objects and features: High-level relations in visual perception, Symposium, 22<sup>nd</sup> Annual Meeting of the *Vision Sciences Society*.  
**\* Organized and chaired symposium (with C. Firestone)**
- 2021 June Real versus imagined in visual memory (with C. Firestone), Symposium, 24<sup>th</sup> Meeting of the *Association for the Scientific Study of Consciousness (ASSC)*.
- 2017 July Extraction of morally relevant information from visual scenes, *Morality, Language, and Thought Workshop*, Institut Jean Nicod, Paris, France (organizers: Laura Niemi and Brent Strickland).

## CONTRIBUTED CONFERENCE PRESENTATIONS

- 2022 May Sequential construction of visual relations (with C. Firestone). Poster presentation, 22<sup>nd</sup> Annual Meeting of the *Vision Sciences Society (VSS)*.
- 2021 November Where word and world meet: Intuitive correspondence between visual and linguistic symmetry (with L.R. Gleitman, B. Landau, & J.C. Trueswell). Poster presentation, 62<sup>nd</sup> Annual Meeting of the *Psychonomic Society*.
- 2021 July When word and world meet: Intuitive correspondence between visual and linguistic symmetry (with L.R. Gleitman, B. Landau, & J.C. Trueswell). Oral presentation, 43<sup>rd</sup> Annual Conference of the *Cognitive Science Society*.
- 2021 May Melting ice with your mind: Representational momentum in state-space (with T. Boger [co-presenter] & C. Firestone). Oral presentation, 21<sup>st</sup> Annual Meeting of the *Vision Sciences Society*.
- 2021 May “Honey, I shrunk the scene”: Changing perceived distance alters memory for scene boundaries (with S. Wadhwa [co-presenter] & M.F. Bonner). Oral presentation, 21<sup>st</sup> Annual Meeting of the *Vision Sciences Society*.
- 2021 May When word and world meet: Intuitive correspondence between visual and linguistic symmetry (with L.R. Gleitman, B. Landau, & J.C. Trueswell). Oral presentation, 12<sup>th</sup> Annual *Dubrovnik Conference on Cognitive Science*.
- 2020 November Melting ice with your mind: Representational momentum in state-space (with T. Boger [co-presenter] & C. Firestone). Oral presentation, 28<sup>th</sup> Annual *Object Perception, visual Attention, and visual Memory (OPAM) Conference*.
- 2020 November “Honey, I shrunk the scene”: Perceived spatial scale alters memory for scene boundaries (with S. Wadhwa [presenter] & M.F. Bonner). Poster presentation, 28<sup>th</sup> Annual *Object Perception, visual Attention, and visual Memory (OPAM) Conference*.
- 2020 May Visual predictions from physical relations (with M.F. Bonner & C. Firestone). Poster presentation, 20<sup>th</sup> Annual Meeting of the *Vision Sciences Society*.

- 2020 May Possible objects count: Perceived numerosity is altered by representations of possibility (with C. Guan [presenter], D. Schwitzgebel, & C. Firestone). Poster presentation, 20<sup>th</sup> Annual Meeting of the *Vision Sciences Society*.
- 2019 July Speech processing does not involve acoustic maintenance (with S. Caplan [presenter] & J.C. Trueswell). Oral presentation, 41<sup>st</sup> Annual Conference of the *Cognitive Science Society*, Montreal, Canada.
- 2019 July The end's in plain sight: Implicit association of visual and conceptual boundedness (with J. Wehry [presenter] & J.C. Trueswell). Oral presentation, 41<sup>st</sup> Annual Conference of the *Cognitive Science Society*, Montreal, Canada.
- 2019 May When a phone in a basket looks like a knife in a cup: Perception and abstraction of visual-spatial relations between objects (with B. Landau, M.F. Bonner, & C. Firestone). Poster presentation, 19<sup>th</sup> Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, Florida.
- 2018 November Brains on books: Event-structure semantics predict cortical responses to naturalistic language (with M.F. Bonner, J.C. Trueswell, & R.A. Epstein). Poster presentation, Annual Meeting of the *Society for Neuroscience (SfN)*, San Diego, California.
- 2018 May From pixels to moral judgment: Extracting morally relevant information in minds and machines (with J. De Freitas [co-presenter], D.L.K. Yamins, & G.A. Alvarez). Poster presentation, 18<sup>th</sup> Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, Florida.
- 2017 November Rapid and spontaneous encoding of event structure from visual scenes: Implications for language acquisition (with J.C. Trueswell [presenter], B. Strickland, & A. Papafragou). Oral presentation, 42<sup>nd</sup> Annual *Boston University Conference on Language Development (BUCLD)*, Boston, Massachusetts.
- 2017 May Extraction of event roles from visual scenes is rapid, automatic, and interacts with higher-level visual processing (with J.C. Trueswell & B. Strickland). Oral presentation, 17<sup>th</sup> Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, Florida.
- 2017 May Neural representations of observed actions generalize across static and dynamic visual input (with J.C. Trueswell & R.A. Epstein). Poster presentation, *Rovereto Workshop on Concepts, Actions, Objects (CAOs)*, Rovereto, Italy.
- 2016 July Extraction of event roles from visual scenes is rapid, automatic, and interacts with higher-level visual processing (with J.C. Trueswell & B. Strickland). Oral presentation, 38<sup>th</sup> Annual Conference of the *Cognitive Science Society*, Philadelphia, Pennsylvania.
- 2016 May Format-independent cortical representations of interactive events (with J.C. Trueswell & R.A. Epstein). Poster presentation, 16<sup>th</sup> Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, Florida.

- 2015 May Neural representations of human interactions (with J.C. Trueswell & R.A. Epstein). Poster presentation, 15<sup>th</sup> Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, Florida.
- 2014 November Neural representations of human interactions (with J.C. Trueswell & R.A. Epstein). Poster presentation, Annual Meeting of the *Society for Neuroscience (SfN)*, Washington, D.C.
- 2012 November Propose but verify: Fast mapping meets cross-situational word learning (with J.C. Trueswell [presenter], T.N. Medina, & L.R. Gleitman). Oral presentation, *Psychonomic Society Annual Meeting*, Minneapolis, Minnesota.
- 2012 November Getting the gist of events: Recognition of two-participant actions from brief displays (with J.C. Trueswell & A. Papafragou). Poster presentation, *Psychonomic Society Annual Meeting*, Minneapolis, Minnesota.
- 2011 November Development of parsing abilities interacts with grammar learning: Evidence from Tagalog and Kannada (with J.C. Trueswell [presenter], D. Kaufman, & J. Lidz). Oral presentation, 36<sup>th</sup> Annual *Boston University Conference on Language Development (BUCLD)*, Boston, Massachusetts.
- 2011 March The gist of events: Implications for language production and scene description (with J.C. Trueswell & A. Papafragou). Poster presentation, 24<sup>th</sup> Annual *CUNY Conference on Human Sentence Processing*, Stanford, CA.
- 2010 November Propose but verify: Fast mapping meets cross-situational word learning. Poster presentation (with T.N. Medina [co-presenter], J.C. Trueswell, & L.R. Gleitman). 35<sup>th</sup> Annual *Boston University Conference on Language Development (BUCLD)*, Boston, Massachusetts.
- 2009 April How do preschoolers express cause in gesture and speech? (with T. Göksun [presenter], K. Hirsh-Pasek, R.M. Golinkoff, W.L. Shallcross, & Y. Misyris). Poster presentation, *Society for Research on Child Development (SRCD)*, Denver, Colorado.

## MENTORING

- 2021–present Christiana Liu (undergraduate, Johns Hopkins)  
Independent research, Cognitive Science (co-mentored with B. Landau)
- 2020–2021 Tal Boger (undergraduate, Johns Hopkins [visiting from Yale University])  
Independent research, Psychology (co-mentored with C. Firestone)  
Resulted in a [high-impact co-first-authored publication in \*Psychological Science\*](#)  
Co-delivered conference talks (OPAM 2020, VSS 2021)

- 2019–2022 Shreya Wadhwa (undergraduate, Johns Hopkins)  
 Independent research, Cognitive Science (co-mentored with M.F. Bonner)  
 Resulted in co-authorship on a [manuscript invited for revision in \*Psychological Science\*](#)  
 Co-delivered conference talk (VSS 2021)
- 2019–2020 David Schwitzgebel (undergraduate, Johns Hopkins [visiting from Vassar College])  
 Vision Sciences summer internship (co-mentored with C. Guan & C. Firestone)  
 Resulted in a poster presentation (VSS 2020)  
 Started a PhD program (2021) at the Institut Jean Nicod (PI: Brent Strickland)
- 2017–2018 Jon Wehry (undergraduate, University of Pennsylvania)  
 Psychology honors thesis (co-mentored with J.C. Trueswell)  
 Resulted in a refereed conference submission and conference talk (CogSci 2019)

## TEACHING

### *University of Delaware (Instructor)*

- 2022 Fall Studies in Linguistics: The Vision-Language Interface (advanced graduate seminar)

### *Johns Hopkins University (Instructor)*

- 2022 January The Richness of Perception (enrollment: 19 [virtual])  
**\* Including full curriculum development**

### *University of Pennsylvania (Instructor)*

- 2016 Fall Introduction to Matlab  
 2016 Spring Introduction to Matlab  
 2015 Fall Introduction to Matlab

### *University of Pennsylvania (Teaching Assistant)*

- 2015 Spring Introduction to Perception (Johannes Burge)  
 2014 Fall Introduction to Cognitive Science (David Brainard and Lyle Ungar)  
 2012 Fall Introduction to Psychology (Caroline Connolly)



## SERVICE TO THE PROFESSION

### *Justice, Equity, Diversity, & Inclusion*

- 2020–2022 Postdoctoral Representative, *Diversity & Representation Committee (DRC)*, Department of Cognitive Science, Johns Hopkins University
- 2020–2022 Co-organizer of Early Career Colloquium Series, Department of Cognitive Science, Johns Hopkins University
- 2020–2022 Member of the Department Climate Committee, Department of Cognitive Science, Johns Hopkins University
- 2020–2022 Mentor to first-generation and international Ph.D. applicants to the Cognitive Science graduate program

### *Ad Hoc Reviewer*

Psychology: *Cognition; Cognitive Research: Principles and Implications; Cognitive Science; Journal of Experimental Psychology: Human Perception and Performance; Journal of Experimental Psychology: General; Open Mind; Psychological Science; Visual Cognition*

Neuroscience: *Brain and Cognition; Cerebral Cortex; eLife; Journal of Neuroscience; Language, Cognition, and Neuroscience*

Conferences: *Cognitive Sciences Society*

### *Public Engagement*

- 2014 August Experiment Leader, *Community Science Carnival*, Philadelphia, Pennsylvania
- 2014 July Journal Club Leader, *Penn Neuroscience Boot Camp*, University of Pennsylvania
- 2014 July Activity Leader, *Science After Hours*, Franklin Institute, Philadelphia, Pennsylvania

## PROFESSIONAL MEMBERSHIPS

Vision Sciences Society (VSS)

Cognitive Sciences Society (CSS)

Psychonomic Society

## PROFESSIONAL DEVELOPMENT

- 2018 Summer Trainee, Genetics & Neurobiology of Language Course, Cold Spring Harbor Laboratory

## **LANGUAGES & SOFTWARE**

English (native speaker), Hebrew (proficient), Italian (proficient), Spanish (basic)

Python, R, HTML/CSS/JavaScript, MATLAB, Blender