

# ALEXA TOMPARY

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## ACADEMIC HISTORY

- 2023 – present    **Drexel University**  
Assistant Professor  
Department of Psychological and Brain Sciences
- 2017 – 2023      **University of Pennsylvania**  
Post-Doctoral Fellow  
Advisor: Sharon Thompson-Schill
- 2012 – 2017      **New York University**  
Ph.D., Psychology  
Advisor: Lila Davachi
- 2010 – 2012      **Princeton University**  
Research Specialist/Lab Manager  
Advisor: Nicholas Turk-Browne
- 2006 – 2010      **University of Chicago**  
B.A., Psychology  
Thesis advisor: Jean Decety

## FUNDED RESEARCH GRANTS

- 2023 – 2026      NIH R00 MH126427 BRAIN Initiative Advanced Postdoctoral Career Transition Award to Promote Diversity, *Disentangling hippocampal and cortical contributions to episodic memory*  
Total: \$733,905  
Role: PI
- 2021 – 2023      NIH K99 MH126427, BRAIN Initiative Advanced Postdoctoral Career Transition Award to Promote Diversity, *Disentangling hippocampal and cortical contributions to episodic memory*  
Total: \$105,815  
Role: PI  
Co-Sponsors: Sharon Thompson-Schill, Anna Schapiro
- 2019 – 2020      NIH F32 NS108511, National Research Service Award, *Semantic contributions to episodic memory*  
Total: \$72,234  
Role: PI  
Co-Sponsors: Sharon Thompson-Schill, H. Branch Coslett

2015 – 2016 Pilot Research Grant, NYU Center for Brain Imaging, *Stress and associative memory throughout the memory cycle*  
Total: \$15,000  
Role: Co-PI (with Elizabeth Goldfarb)  
Co-Sponsors: Lila Davachi, Elizabeth Phelps

## MANUSCRIPTS IN PREPARATION

**Tompary A** & Davachi L (in revision) Consolidation-dependent behavioral integration of sequences related to mPFC neural overlap and hippocampal-cortical connectivity. *eLife*.

Murty V & **Tompary A** (in preparation) “3.17 Systems Consolidation.” In Learning and Memory: A Comprehensive Reference, 3rd Edition, to be published by Elsevier.

Cao W, Raccach O, Chen P, Poeppel D, Tompary A (in preparation) Thematic relations outperform taxonomic relations in episodic memory retrieval.

## PEER-REVIEWED PUBLICATIONS

**Tompary A**, deBettencourt MT, & Rouhani N (2024) Remembering Sarah DuBrow across All Contexts. *Journal of Cognitive Neuroscience*, 1–3.

**Tompary A**, Xia A, Thompson-Schill SL (2023) Disruption of anterior temporal lobe reduces distortions in memory from category knowledge. *Journal of Cognitive Neuroscience* 35, 189-1918.

Houser TM, **Tompary A**, Murty VP (2022) Agency enhances temporal order memory in an interactive exploration game. *Psychon Bull Rev*.

Zeng T, **Tompary A**, Schapiro AC, Thompson-Schill SL (2021) Tracking the relation between gist and item memory over the course of long-term memory consolidation. *eLife* 10, e65588.

Callaghan B, Gasser C, Silvers J, Vantieghem M, Choy T, O'Sullivan K, **Tompary A**, Davachi L, Tottenham N (2021) Age-related increases in posterior hippocampal granularity are associated with remote detailed episodic memory in development. *J Neurosci* 41, 1738-1754.

**Tompary A** & Thompson-Schill SL (2021) Semantic influences on memory distortions. *Journal of Experimental Psychology: General* 150, 1800-1824.

**Tompary A**, Zhou W, Davachi L (2020) Schematic memories develop quickly, but are not expressed unless necessary. *Scientific Reports* 10, 16968.

Goldfarb EV, **Tompary A**, Davachi L, Phelps EA (2018) Acute stress throughout the memory cycle: Diverging effects on associative and item memory. *Journal of Experimental Psychology: General* 148, 13-19.

**Tompary A**, Al-Aidroos N, Turk-Browne NB (2018) Attending to what and where: Background connectivity integrates category-based and spatial attention. *Journal of Cognitive Neuroscience* 14, 1281-97.

Bein O, Reggev N, **Tompary A** (2018) Working with schemas, predicting with schemas. *Journal of Neuroscience* 38, 1608-10.

FeldmanHall O, Dunsmoor J, **Tompary A**, Hunter LE, Lackovic SF, Todorov A, Phelps EA (2018) Stimulus generalization as a mechanism for learning to trust. *PNAS* 7, E1690-E1697.

**Tompary A** & Davachi L (2017) Consolidation promotes the emergence of representational overlap in the hippocampus and medial prefrontal cortex. *Neuron* 96, 228-241.e5.

Murty VP, **Tompary A**, Adcock RA, Davachi L (2017) Selectivity in post-encoding connectivity with high-level visual cortex is associated with reward-motivated memory. *Journal of Neuroscience* 37, 537-45.

Danker J, **Tompary A**, Davachi L (2017) Trial-by-trial hippocampal encoding activation predicts the fidelity of cortical reinstatement during subsequent retrieval. *Cerebral Cortex* 7, 3515-3524.

Córdova NI, **Tompary A**, Turk-Browne NB (2016) Attentional modulation of background connectivity between ventral visual cortex and the medial temporal lobe. *Neurobiology of Learning & Memory* 134 Pt A, 155-22.

**Tompary A**, Duncan K, Davachi L (2016) High-resolution investigation of memory-specific reinstatement in the hippocampus and perirhinal cortex. *Hippocampus* 26, 995-1007.

**Tompary A\***, Duncan K\*, Davachi L (2015) Consolidation of associative and item memory is related to post-encoding functional connectivity between the ventral tegmental area and different medial temporal lobe subregions during an unrelated task. *Journal of Neuroscience* 35, 7326-31.

Yushkevich PA, Amaral RSC, ... **Tompary A** ... for the Hippocampal Subfields Group (2015) Quantitative comparison of 21 protocols for labeling hippocampal subfields and parahippocampal cortical subregions in *In Vivo* MRI: Towards developing a harmonized segmentation protocol. *NeuroImage* 111, 526-41.

Duncan K\*, **Tompary A\***, Davachi L (2014) Associative encoding and retrieval are predicted by functional connectivity in distinct hippocampal area CA1 pathways. *Journal of Neuroscience* 34, 11188-98.

\* **Denotes equal contribution**

## PEER-REVIEWED CONFERENCE PROCEEDINGS

Zeng T, **Tompary A**, Schapiro AC, Thompson-Schill SL (2020) The relation between gist and item memory over a month. *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

**Tompary A** & Thompson-Schill SL (2019) Semantic influences on episodic memory distortions. *Proceedings of the 41st Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

## HONORS AND AWARDS

2021	<i>Cermak-Corkin Award</i> , Memory Disorders Research Society
2016	<i>Fellowship</i> , Kavli Summer Institute in Cognitive Neuroscience
2012	<i>Graduate Research Fellowship</i> , National Science Foundation
2008	<i>Metcalf Fellowship</i> , University of Chicago

## MENTORING EXPERIENCE AT DREXEL

### PhD Students

Sep 2023 – present	Devayani Joshi
Aug 2023 – present	Kate Cliver

### Post-doctoral fellows

Aug 2023 – present	Ryan O'Donnell
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### Full-time research specialists

Aug 2023 – present	Weijia Cao
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### Volunteer research assistants

Mar 2023 – present	Riya Raina	Briarcliff High School student
Jan 2024 – present	Makayla Hamilton	Drexel University undergrad
May 2024 – present	Madeline Etheridge	Haverford University undergrad
Jun 2024 – present	Antonia Ackel	Drexel University undergrad

## PRIOR MENTORING EXPERIENCE

Sep 2022 – May 2023	Chloe Katz	UPenn undergraduate RA
Sep 2020 – Jun 2023	Vanessa Ewing	UPenn undergraduate RA
Jan 2020 – Sep 2020	Margaret Cheng	UPenn undergraduate RA
Jan 2019 – May 2019	Hye In Kim	UPenn Masters student
Jun 2018 – Aug 2019	Zoe Schwingel-Sauer	NYU undergraduate RA
Dec 2015 – Sep 2017	WenXi Zhou	NYU Masters student
Jun 2015 – Sep 2015	Max Bluestone	NYU undergraduate RA
Jan 2014 – Dec 2014	Yuri Jiao	NYU undergraduate RA
Jun 2014 – Aug 2014	Kevin Dowling	NYU undergraduate RA

## DISSERTATION COMMITTEE MEMBERSHIP

Aug 2024	Alexandra Kelly	ACBS, Drexel University
May 2024	Elizabeth Horwath	Temple University (outside reader)

## TEACHING EXPERIENCE AT DREXEL

\* Course evaluations are on a 1-5 scale, with 1 = least satisfied and 5 = most satisfied

Course	Term/Year	# Enrolled	Course Evaluation	Instructor Evaluation
PSY463: Memory	Spring 2023	17	4.18	4.91
PSY512: Cognitive Psychology	Fall 2023	28	4.41	4.77
PSY463: Memory	Spring 2024	15	5.00	5.00

## PRIOR TEACHING EXPERIENCE

- 2020 *Guest Lecturer*, Neuromodulation of Learning and Memory, Temple University
- 2018 *Guest Lecturer*, Psychology Brownbag, Rutgers-Camden
- 2013 *Teaching Assistant*, Cognitive Neuroscience, NYU

## INVITED TALKS

- Department of Psychology Colloquium*, Rutgers-Newark, February 2023
- Neuroscience Seminar Series*, Temple University, November 2022
- Language and Brain Talk Series*, University of Florida, October 2021 (virtual)
- Center for Lifespan Psychology*, Max Planck Institute for Human Development, April 2021 (virtual)
- Cognitive Psychology Forum*, UCLA, March 2021 (virtual)
- Ebbinghaus Empire Meeting*, University of Toronto, September 2019
- Psychology Department*, New York University, December 2019

## SERVICE

- Panel speaker*, Princeton Workshop: How to write a teaching statement, 2023
- Panel speaker*, BPP/ BPC CET Virtual Event: Roadmap for a successful K99, 2022
- Mentor*, mindCORE Step-Ahead Mentorship Program, 2020 – 2022
- Co-organizer*, Manhattan Area Memory Meeting, 2016
- Exhibitor*, Science & Engineering Expo, The School at Columbia University, 2016
- Judge*, Master of Arts Research Poster Conference, NYU, 2014 – 2016
- Judge*, New York City Science and Engineering Fair, 2014
- Ad hoc reviewer*, Cognition, Psychonomic Bulletin & Review, Psychological Reports, Journal of Neuroscience, Cerebral Cortex, Cortex, Behavioral Neuroscience
- NSF Panelist*, 2024

## CONFERENCE PRESENTATIONS AT DREXEL

Cliver KG, **Tompary A** (June 2024) Behavioral manipulation of the consolidation of specific and general memory traces. Poster presented at *10th Annual BRAIN Initiative Conference*, virtual.

O'Donnell RE, **Tompary A** (June 2024) Do perceptual or conceptual organizations more strongly bias the formation of new episodic memories? Poster presented at *10th Annual BRAIN Initiative Conference*, virtual.

Cao W, Raccach O, Chen P, **Tompary A**, Poeppel D (April 2024) Thematic relations outperform taxonomic relations in episodic memory. Poster presented at Drexel University's *College of Arts and Sciences Research Day*, Philadelphia, PA.

Cliver KG, **Tompary A** (April 2024) Behavioral manipulation of the consolidation of specific and general memory traces. Poster presented at Drexel University's *College of Arts and Sciences Research Day*, Philadelphia, PA.

Joshi D, Kucyi A, **Tompary A** (April 2024) Mind-Wandering and Memory Consolidation. Poster presented at Drexel University's *College of Arts and Sciences Research Day*, Philadelphia, PA.

Cao W, Raccach O, Chen P, **Tompary A**, Poeppel D (April 2024) Thematic relations outperform taxonomic relations in memory retrieval. Poster presented at *Cognitive Neuroscience Society*, Toronto, Canada.

Cliver K & **Tompary A** (April 2024) Behavioral manipulation of the consolidation of specific and general memory traces. Poster presented at *Cognitive Neuroscience Society*, Toronto, Canada.

O'Donnell R & **Tompary A** (April 2024) Do perceptual or conceptual organizations more strongly bias the formation of new episodic memories? Poster presented at *Cognitive Neuroscience Society*, Toronto, Canada.

**Tompary A**, Clements A, Thompson-Schill SL (November 2023) A neural basis of distortions in episodic memories due to semantic knowledge. Talk given at *Society for Neuroscience*, Washington, DC.

**Tompary A** (July 2023) How does the mind discover useful abstractions? Talk given at the Abstractions Workshop at the *44th Annual Meeting of the Cognitive Science Society*, virtual.

**Tompary A**, Clements A, Thompson-Schill SL (May 2023) A neural basis of distortions in episodic memories due to semantic knowledge. Poster presented at the *9th Annual BRAIN Initiative Meeting*, Washington, DC.

**Tompary A**, Clements A, Thompson-Schill SL (April 2023) A neural basis of distortions in episodic memories due to semantic knowledge. Poster presented at the *2023 International Conference on Learning and Memory*, Huntington Beach, CA.

## CONFERENCE PRESENTATIONS PRIOR TO DREXEL

**Tompary A**, Xia A, Coslett HB, Thompson-Schill SL (April 2022) Disruption of anterior temporal lobe reduces distortions in memory from category knowledge. Poster presented at *Cognitive Neuroscience Society*, San Francisco, CA.

**Tompary A**, Xia A, Coslett HB, Thompson-Schill SL (March 2022) Disruption of anterior temporal lobe reduces distortions in memory from category knowledge. Talk to be given at the *37<sup>th</sup> Annual Mahoney Institute for Neurosciences Symposium*, Philadelphia, PA.

**Tompary A** & Thompson-Schill SL (Nov 2021) Recent experiences shift concept knowledge. Talk to be given at *Psychonomic Society 62nd Annual Meeting*, virtual.

**Tompary A** & Thompson-Schill SL (Oct 2021) A causal role for the anterior temporal lobe in memory distortion. Talk to be given at *Memory Disorders Research Society*, virtual.

**Tompary A**, Smith C, Thompson-Schill SL (Mar 2021) Neural sensitivity to low- and high-level context-dependent contingencies. Poster presented at *Cognitive Neuroscience Society*, virtual.

**Tompary A**, Thompson-Schill SL (Mar 2020) Semantic knowledge distorts episodic memory: Behavioral and neural investigations. Talk given at *Cognitive Neuroscience Society*, Boston, MA.

**Tompary A**, Xia A, Thompson-Schill SL (Oct 2019) Semantic knowledge distorts episodic memory: Behavioral and neural investigations. Poster presented at *Society for Neuroscience*, Chicago, IL.

Callaghan BL, Gasser C, Silvers J, VanTieghem M, Fields A, Choy T, Bloom P, Harmon C, **Tompary A**, Davachi L, Tottenham N (Oct 2019) Hippocampal multivoxel encoding signatures predict long-term memory across middle childhood and adolescence in humans. Talk given at *Flux Congress*, New York City, NY.

**Tompary A** & Thompson-Schill SL (July 2019) Semantic influences on episodic memory distortions. Talk given at the *41st Annual Meeting of the Cognitive Science Society*, Montreal, Canada.

Kennett Y, **Tompary A** & Thompson-Schill SL (July 2019) How the organization of autobiographical memories changes over time. Poster presented at the *41st Annual Meeting of the Cognitive Science Society*, Montreal, Canada.

**Tompary A** & Thompson-Schill SL (May 2019) Quantifying semantic influences on distortions in episodic memory. Poster presented at *Context and Episodic Memory Symposium*, Philadelphia, PA.

**Tompary A** & Thompson-Schill SL (Mar 2019) Semantic influences on episodic memory distortions. Poster presented at *Cognitive Neuroscience Society*, San Francisco, CA.

Gasser C, **Tompary A**, Davachi L (Mar 2019) How memory reinstatement changes over time. Poster presented at *Cognitive Neuroscience Society*, San Francisco, CA.

**Tompary A** & Thompson-Schill SL (May 2018) Semantic influences on memory distortions. Poster presented at the *15<sup>th</sup> Annual Concepts, Actions, and Objects Conference*, Rovereto, Italy.

**Tompary A** & Davachi L (May 2017) Using sequence learning to investigate the restructuring of related memories over time. Talk given at *Context and Episodic Memory Symposium*, Philadelphia, PA.

**Tompary A**, Goldfarb EV, Phelps EA, Davachi L (Apr 2017) How does the timing of acute stress modulate hippocampal connectivity following associative encoding? Poster presented at *Cognitive Neuroscience Society*, San Francisco, CA.

Goldfarb EV, **Tompary A**, Zhou W, Davachi L, Phelps EA (Apr 2017) Influence of acute stress throughout the memory cycle on associative memory. Poster presented at *Cognitive Neuroscience Society*, San Francisco, CA.

**Tompary A** & Davachi L (Nov 2016) Time-dependent restructuring of memory representations strengthens associations between overlapping memories. Poster presented at *Society for Neuroscience*, San Diego, CA.

**Tompary A** & Davachi L (May 2016) Shared representations for overlapping memories emerge with time, despite pattern separation at encoding. Talk given at *Manhattan Area Memory Meeting*, New York, NY.

**Tompary A** & Davachi L (May 2016) The emergence of structured memory representations over time. Talk given at *Context and Episodic Memory Symposium*, Philadelphia, PA.

**Tompary A** & Davachi L (Apr 2016) Associative memories benefit from distinctiveness at encoding, while feature-based integration emerges over time. Poster presented at *Cognitive Neuroscience Society*, New York, NY.

Reggev N, **Tompary A**, Yakoby A, Bein O, Davachi L, Maril A (Apr 2016) Schema-consistency modulates post-encoding neural connectivity in the hippocampus and cortical regions. Poster presented at *Cognitive Neuroscience Society*, New York, NY.

**Tompary A** & Davachi L (Oct 2015) How does consolidation influence neural and behavioral integration? Poster presented at *Society for Neuroscience*, Chicago, IL.

Murty VP, **Tompary A**, Zeng B, Wang J, Goff DC, Davachi L (Oct 2015) First-episode schizophrenia is associated with disrupted network connectivity across separable hippocampal sub-systems. Poster presented at *Society for Neuroscience*, Chicago, IL.

**Tompary A** & Davachi L (May 2015) Feature-based integration of associative memories emerges with time. Talk given at *Manhattan Area Memory Meeting*, Princeton, NJ.

**Tompary A** & Davachi L (Mar 2015) Consolidation-dependent changes in associative memory representations. Poster presented at *Cognitive Neuroscience Society*, San Francisco, CA.

**Tompary A**, Duncan K, Davachi L (Nov 2013) High-resolution investigation of trial-level and state-level similarity in hippocampal subfields and MTL cortex. Poster presented at *Society for Neuroscience*, San Diego, CA.

Córdova NI, **Tompary A**, Turk-Browne NB (Nov 2013) Attention modulates background connectivity between ventral visual cortex and the medial temporal lobe. Poster presented at *Society for Neuroscience*, San Diego, CA.

Jackson-Hanen VE, **Tompary A**, deBettencourt MT, Turk-Browne NB (Nov 2013) Training of category selectivity through real-time fMRI neurofeedback. Poster presented at *Society for Neuroscience*, San Diego, CA.

Al-Aidroos N, **Tompary A**, Turk-Browne NB (May 2013) Attending to what and where: Background connectivity integrates category-based and spatial attention. Talk given at *Vision Sciences Society*, Naples, FL.

**Tompary A**, Duncan K, Davachi L (May 2013) What counts as 'rest'? Low-frequency correlations within the medial temporal lobe during an unrelated task predict memory. Poster presented at *Cognitive Neuroscience Society*, San Francisco, CA.

**Tompary A**, Al-Aidroos N, Turk-Browne NB (Oct 2012) Modulation of background connectivity in human visual cortex by spatial attention. Poster presented at *Society for Neuroscience*, New Orleans, LA.