Curriculum Vitae
Idan Asher Blank

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Franz Hall (502 Portola Plaza), room 7530
Los Angeles, CA 90095

Education and Employment

Assistant Professor, Department of Psychology — July 2019
Assistant Professor, Department of Linguistics — July 2020
Member, Brain Research Institute — Nov 2020
Member, Inter-departmental PhD Program in Neuroscience — Jan 2021
University of California, Los Angeles (UCLA), CA

Post-doctoral associate, McGovern Institute for Brain Research — 2016-2019
Massachusetts Institute of Technology (MIT), Cambridge, MA

PhD, Cognitive Science — 2011-2016
MIT, Cambridge, MA

MA, Psychology, *Summa Cum Laude* — 2007-2011
Tel Aviv University (TAU), Tel-Aviv, Israel

Lautman Interdisciplinary Program for Outstanding Students (accelerated MA) — 2005-2009
TAU, Tel-Aviv, Israel

Publications

* denotes co-authorship; in such cases, my overall policy is to place my more junior colleagues before me

[1]   Grand, G.*, **Blank, I.A.***, Pereira, F., & Fedorenko, E. (*in press*). "Semantic projection" recovers rich human knowledge of multiple object features from word embeddings. *Nature Human Behaviour.* arXiv:1802.01241v2

[2]   Schrimpf, M., **Blank, I.A.***, Tuckute, G.*, Kauf, C.*, Hosseini, E., Kanwisher, N., Tenenbaum, J., & Fedorenko, E. (*in press*). Artificial Neural Networks Accurately Predict Language Processing in the Brain. *Proceedings of the National Academy of Sciences.* https://www.biorxiv.org/content/10.1101/2020.06.26.174482v3

[3]   Wehbe, L., **Blank, I.A.**, Shain, C., Futrell, R., Levy, R., von der Malsburg, T., Smith, N., Gibson, E., & Fedorenko, E. (2021). Incremental language comprehension difficulty predicts activity in the language network but not the multiple demand network. *Cerebral Cortex*, bhab065.

[4]   Jouravlev, O., Mineroff, Z., **Blank, I.A.**, & Fedorenko, E. (2021)*.* The small and efficient language network of polyglots and hyper-polyglots. *Cerebral Cortex*, 31(1), 62-76.

[5]   **Blank, I.A.**, & Fedorenko, E. (2020) No evidence for functional distinctions across fronto-temporal language regions in their temporal receptive windows. *NeuroImage*, *219*, 116925. DOI: j.neuroimage.2020.116925

[6]   Fedorenko, E., & **Blank, I.A.** (2020)*.* Broca's area is not a natural kind. *Trends in Cognitive Sciences*, *24*(4), 270-284. DOI: 10.1016/j.tics.2020.01.001

[7]   Shain, C.*, **Blank, I.A.***, van Schijndel, M., Schuler, W., & Fedorenko, E. (2020). fMRI reveals language-specific predictive coding during naturalistic sentence comprehension. *Neuropsychologia*, *138*, 107307. DOI: 10.1016/j.neuropsychologia.2019.107307

[8]   Futrell, R., Gibson, E., Tily, H., **Blank, I.A.**, Vishnevetsky, A., Piantadosi, S. & Fedorenko, E. (2020). The Natural Stories Corpus: A reading-time corpus of English texts containing rare syntactic constructions. *Language Resources & Evaluation*, 1-15.

[9]   Diachek, E.*, **Blank, I.A.***, Siegelman, M.*, & Fedorenko, E. (2020). The domain-general multiple demand (MD) network does not support core aspects of language comprehension: a large-scale fMRI investigation. *Journal of Neuroscience*, *40*(23), 4536-4550. DOI: 10.1523/JNEUROSCI.2036-19.2020

[10]   Assem, M., **Blank, I.A.**, Mineroff, Z., Ademoglu, A., & Fedorenko, E. (2020). Neural Activity in the Fronto-Parietal Multiple Demand Network Robustly Predicts Individual Differences In Working Memory And Fluid Intelligence. *Cortex*, *131*, 1-16. DOI: 10.1016/j.cortex.2020.06.013

[11]   Fedorenko, E., **Blank I.A.**, Mineroff, Z., & Siegelman, M. (2020). Lack of selectivity for syntactic processing relative to the processing of word meanings within the language network. *Cognition*, *203*, 104348. DOI: 10.1016/j.cognition.2020.104348

[12]   Siegelman, M., Mineroff, Z., **Blank, I.A.,** & Fedorenko, E. (2019). An attempt to conceptually replicate a dissociation between syntax and semantics during sentence comprehension. *Neuroscience*, *413*, 219-229. DOI: 10.1016/j.neuroscience.2019.06.003

[13]   Paunov, A., **Blank, I.A.** & Fedorenko, E. (2019). Functionally distinct language and Theory of Mind networks are synchronized at rest and during language comprehension. *Journal of Neurophysiology*, *121*(4), 1244-1265. DOI: 10.1152/jn.00619.2018

[14]   Mineroff, Z.*, **Blank, I.A.***, Mahowald, K., & Fedorenko, E. (2018*)* A robust dissociation among the language, multiple demand, and default mode networks: evidence from inter-region correlations in effect size. *Neuropsychologia*, *119*, 501-511. DOI: 10.1016/j.neuropsychologia.2018.09.011

[15]   Bernstein, M., Erez, Y., **Blank, I.A.**, & Yovel, G. (2018) An Integrated Neural Framework for Dynamic and Static Face Processing. Scientific Reports, 8(1), 7036. DOI: 10.1038/s41598-018-25405-9

[16]   **Blank, I.A.**, Kiran, S., & Fedorenko, E. (2017). Can neuroimaging help aphasia researchers? Addressing generalizability, variability, and interpretability. *Cognitive Neuropsychology*, *34*(6), 377-393. DOI: 10.1080/02643294.2017.1402756

[17]   **Blank, I.A.** & Fedorenko, E. (2017) Domain-general brain regions do not track linguistic input as closely as language-selective regions. *Journal of Neuroscience*, *37*(41), 9999–10011. DOI: 10.1523/JNEUROSCI.3642-16.2017

[18]   Chai, L.R., Mattar, M.G., **Blank, I.A.**, Fedorenko, E. & Bassett, D.S. (2016) Functional network dynamics of the language system. *Cerebral Cortex*, *26*(11), 4148-4159. DOI: 10.1093/cercor/bhw238

[19]   **Blank, I.A.**, Balewski, Z., Mahowald, K. & Fedorenko, E. (2016). Syntactic processing is distributed across the language system. *Neuroimage*, *127*, 307-323. DOI: 10.1016/j.neuroimage.2015.11.069

[20]   **Blank, I.A.**, Kanwisher, N. & Fedorenko, E. (2014). A functional dissociation between language and multiple demand regions revealed in patterns of BOLD fluctuations. *Journal of Neurophysiology*, *112(5)*: 1105-1118. DOI: 10.1152/jn.00884.2013

[21]   **Blank, I.A.** & Yovel, G. (2011). The structure of face-space is tolerant to lighting and viewpoint transformations. *Journal of Vision*, *11(8)*, 207-219. DOI: 10.1167/11.8.15

Publications in progress

* denotes co-authorship; in such cases, my overall policy is to place my more junior colleagues before me

[22]   Shain, C., **Blank, I.A.**, Fedorenko, E., Gibson, E., & Schuler, W. (*under review*). Robust effects of working memory demand during naturalistic language comprehension in language-selective cortex. https://www.biorxiv.org/content/10.1101/2021.09.18.460917v1

[23] Zhang, Y; Guo, X; **Blank, I.A.***, Stigler, J.W.* (*under review*). Watching Videos of a Drawing Hand Improves Students' Understanding of the Normal Probability Distribution.

[24] Snefjella, B., & **Blank, I.A.** (*submitted*). Semantic norm extrapolation is a missing data problem. https:// psyarxiv.com/y2gav

[25] Paunov, A., **Blank, I.A.**, Jouravlev, O., Mineroff, Z., Gallee, J., & Fedorenko, E. (*submitted).* Differential tracking of linguistic vs. social content in naturalistic stimuli by language and ToM brain networks. https://www.biorxiv.org/content/10.1101/2021.04.28.441724v1.full.pdf

[26] Tuckute, G., Paunov, A., Kean, H., Small, H., Mineroff, Z., **Blank, I.A.**, & Feodrenko, E. (*submitted*). Frontal language areas do not emerge in the absence of temporal language areas: A case study of an individual born without a left temporal lobe. https://www.biorxiv.org/content/10.1101/2021.05.28.446230v1.abstract

Conference Presentations

Talks
[1] Yen, M., **Blank, I.A.***, & Mahowald, K.* Competing Effects of Syntax and Animacy in Priming of Relative Clause Attachment. *4th California Area Meetup on Psycholinguistics* . Irvine, CA, May 2021 (online).

[2] Snefjella, B., & **Blank, I.A.** Meaning, Megastudies, and Missing Data. *Words in the World Conference*. October 2020.

[3] Schrimpf, M., **Blank, I.A.***, Tuckute, G.*, Kauf, C.*, Hosseini, E., Kanwisher, N., Tenenbaum, J., & Fedorenko, E. Artificial Neural Networks Accurately Predict Language Processing in the Brain. *Society for the Neurobiology of Language*. October 2020.

[4] Blank, A., **Blank, I.A.**, & Fedorenko, E. An alternative to "random effects" with higher validity, reliability, and power. *#OBHMX Twitter Conference*. March 2020.

[5] Shain, C., **Blank, I.A.**, van Schijndel, M., Fedorenko, E., & Schuler, W. Prediction in the language network is sensitive to syntactic structure. 33rd *CUNY Conference on Human Sentence Processing*. Amherst, MA, March 2020.

[6] Diachek, E., Siegelman, M., Blank, **I.A.**, & Fedorenko, E. Syntactic dependencies correspond to word pairs with high mutual information. The domain-general multiple demand (MD) network does not support core aspects of language comprehension: a large-scale fMRI investigation. *Architectures and Mechanisms of Language Processing (AMLaP)*. Moscow, Russia, September 2019.

[7] Futrell, R., Qian, P., Gibson, E., Fedorenko, E., & **Blank, I.A**. Syntactic dependencies correspond to word pairs with high mutual information. *SyntaxFest*. Paris, France, August 2019.

[8] Grand, G.*, **Blank, I.A.***, Pereira, F. & Fedorenko, E. Semantic projection: Recovering human knowledge of multiple, distinct object properties from natural word collocations. 32th *CUNY Conference on Human Sentence Processing*. Boulder, CO, March 2019.

[9] Futrell, R., Gibson, E., Tily, H., **Blank, I.**, Vishnevetsky, A., Piantadosi, S. & Fedorenko, E. The Natural Stories Corpus. *Proceedings of 11th Conference on Language Resources and Evaluation (LREC)*. Miyazaki, Japan, May 2018.

[10] Fedorenko, E., Mineroff, Z., Siegelman, M. & **Blank, I**. The distinction between lexico-semantic and syntactic processing is not an organizing dimension of the human language system. 30th *CUNY Conference on Human Sentence Processing*. Cambridge, MA, March 2017.

[11] **Blank, I.**, Rohter, S., Kiran, S. & Fedorenko, E. Functional reorganization of the large-scale brain networks that support high-level cognition following brain damage in aphasia. *Society for the Neurobiology of Language 8th meeting.* London, UK, Aug 2016.

[12] **Blank, I.**, Rohter, S., Kiran, S. & Fedorenko, E. Functional reorganization of the large-scale brain networks that support high-level cognition following brain damage in aphasia. *Academy of Aphasia 53rd Annual Conference.* Tuscon, AZ, Oct 2015.

[13] Rohter, S., **Blank, I.**, Fedorenko, E. & Kiran, S. Neural correlates of recovery and rehabilitation. *Academy of Aphasia 53rd Annual Conference.* Tuscon, AZ, Oct 2015.

[14] **Blank, I.** & Fedorenko, E. Inter-subject correlations of cortical activity during natural language processing. 28th *CUNY Conference on Human Sentence Processing*. Los Angeles, CA, March 2015.

[15] **Blank, I.** & Yovel, G. The configuration of face-space is invariant under identity-preserving transformations. 19th annual *Israel Society for Neuroscience Meeting*. Eilat, Israel, Dec 2010.

Posters

[16] Guo, X., Snefjella, B., & **Blank, I.A.** Do Artificial Language Models Learn Syntax-Semantics Mappings? *4th California Area Meetup on Psycholinguistics* . Irvine, CA, May 2021 (online).

[17] Snefjella, B., & **Blank, I.A.** Computational Estimation of Lexical Semantic Norms: A New Framework. *4th California Area Meetup on Psycholinguistics* . Irvine, CA, May 2021 (online).

[18] Zhang, Y. Son, J.Y., **Blank, I.A.***, & Stigler, J.* Utilizing Dynamic and Embodied Visualization to Facilitate Understanding of Normal Probability Distributions. *Cognitive Science Society*. Vienna, Austria, July 2021 (online).

[19] Guo, X., Snefjella, B., & **Blank, I.A.** Do Artificial Language Models Learn Syntax-Semantics Mappings? 34th *CUNY Conference on Human Sentence Processing*. Philadelphia, PA, March 2021 (online).

[20] Snefjella, B., & **Blank, I.A.** Computational Estimation of Lexical Semantic Norms: A New Framework. 34th *CUNY Conference on Human Sentence Processing*. Philadelphia, PA, March 2021 (online).

[21] Yen, M., **Blank, I.A.***, & Mahowald, K.* Competing Effects of Syntax and Animacy in Priming of Relative Clause Attachment. 34th *CUNY Conference on Human Sentence Processing*. Philadelphia, PA, March 2021 (online).

[22] Hauptman, M., **Blank, I.A.,** & Fedorenko, E. Non-literal language processing is jointly supported by the language and Theory of Mind networks. *Cognitive Neuroscience Society*, March 2021.

[23] Diachek, E., **Blank, I.A.**, & Fedorenko, E. Co-lateralization of linguistic and arithmetic processing to the left hemisphere. *Society for the Neurobiology of Language*. October 2020.

[24] Tuckute, G., Shain, C., **Blank, I.A.**, Wang, Mingye., & Fedorenko, E. Linguistic and conceptual processing are dissociated during sentence comprehension. *Society for the Neurobiology of Language*. October 2020.

[25] Tuckute, G., Mineroff, Z., **Blank, I.A.**, Kean, H. & Fedorenko, E. Temporal language areas appear necessary to wire up frontal cortex for language. *Society for the Neurobiology of Language 11th meeting.* Helsinki, Finland, Aug 2019.

[26] Shain, C.*, **Blank, I.A.***, van Schijndel, M., Schuler, W. & Fedorenko, E. fMRI reveals language-specific predictive coding during naturalistic sentence comprehension. 32th CUNY Conference on Human Sentence Processing. Boulder, CO, March 2019.

[27] **Blank, I.**, Duff, M., Brown-Schmidt, S. & Fedorenko, E. Hippocampal engagement in online, high-level linguistic processing. *Society for the Neurobiology of Language 8th meeting.* London, UK, Aug 2016.

[28] **Blank, I.** & Fedorenko, E. Different high-level language regions integrate information over the same time-window. *Society for the Neurobiology of Language 8th meeting.* London, UK, Aug 2016.

[29] Chai, L.R., Mattar, M.G., **Blank, I.**, Fedorenko, E & Bassett, D.S. Functional network dynamics of the language system. *Biomedical Engineering Society annual meeting*. Tampa, FL, Oct 2015.

[30] Chai, L.R., Mattar, M.G., **Blank, I.**, Fedorenko, E. & Bassett, D.S. Functional network dynamics of the language system. *Society for Neuroscience Conference*. Chicago, IL, Oct 2015.

[31] Wehbe, L., **Blank, I.**, Mahowald, K., Futrell, R., Piantadosi, S., Tily, H., Gallee, J., Vishnevetsky, A., Gibson, E., Kanwisher, N. & Fedorenko, E. Neural activity in the fronto-temporal language system predicts online language comprehension difficulty. *Annual Society for the Neurobiology of Language Conference.* Chicago, IL, Oct 2015.

[32] Paunov, A., **Blank, I.** & Fedorenko, E. The language network and the Theory of Mind network show synchronized activity during naturalistic language comprehension. *Annual Society for the Neurobiology of Language Conference.* Chicago, IL, Oct 2015.

[33] **Blank, I.** & Fedorenko, E. The functional dissociation between the language and cognitive control systems persists in subcortical and cerebellar regions. *Biennial Conference on Resting State and Brain Connectivity.* Cambridge, MA, Sept 2014.

[34] **Blank I.** & Fedorenko E. Inter-subject correlations of cortical activity during natural language processing in language-selective regions but not multiple-demand regions. *Annual Society for the Neurobiology of Language Conference.* Amsterdam, Netherlands, Aug 2014.

[35] Bainbridge, W.A., Isola, P., **Blank, I.** & Oliva, A. Establishing a Database for Studying Human Face Photograph Memory. *Proceedings of the 34th annual meeting of the Cognitive Science Society Meeting*, 1302-1307. Sapporo, Japan, Aug 2012.

[36] **Blank, I.**, Wolf, L. & Yovel, G. Tolerance is tolerance of similarities: behavioral and computational evidence for a view-tolerant identity representation in face-space. *Annual Vision Sciences Society Meeting.* Naples, FA, May 2012.

[37] **Blank, I.** & Yovel, G. Is face-space a solution to the invariance problem? *Annual Vision Sciences Society Meeting.* Naples, FA, May 2010

Invited Talks (2015 onward only)

What roles do executive functions play in naturalistic language processing?
Abralin ao Vivo: Linguists Online	2021 June
UC Merced, Cognitive and Information Sciences Department Colloquium	2021 May
UCLA, Department of Linguistics, Psycholinguistics Seminar	2020 Nov
California State University Northridge, Psychology Department Colloquium	2020 Nov

fMRI evidence against syntactic selectivity in the core language network
UCLA, Department of Linguistics, Psycholinguistics Seminar	2021 Apr

Keynote: Understanding NLP's blackbox with the brain's blackbox and vice versa
BlackboxNLP	2020 Nov

Complex world knowledge from simple linguistic input
"Learning from Language" workshop	2020 Aug

When we "know the meaning" of a word, what kind of knowledge do we have?
University of Pisa, Department of Philology, Literature and Linguistics, seminar	2019 May
MIT, Language and Computation seminar series	2018 April
Harvard University, Language and Cognition seminar series	2018 March
Harvard University, Gershman Group meeting	2018 Feb
UCLA, Psychology Department	2017 Dec

Understanding how humans understand
UCLA, Psychology Department	2017 Dec

The functional architecture of language comprehension mechanisms: fundamentals
Bar-Ilan University, Linguistics Department Colloquium	2017 Jan

Tel Aviv University, School of Psychology Colloquium
Hebrew University of Jerusalem, Psychology Department Colloquium

Brain networks that support language processing   2015 Oct
     Harvard University, Society for Brain, Mind and Behavior

The functional architecture of language comprehension mechanisms   2015 May
     Harvard University, Language and Cognition seminar series

Funding

Hellman Fellow, UCLA	$20,000	2021-2022
NIDCD/NIH 1R01DC016950-01A1		2019-2024

Role: Co-I (Co-PIs: Swathi Kiran, Evelina Fedorenko)
Functional reorganization of the language and domain-general multiple demand systems in aphasia

Awards and Fellowships

Honorable Mention, Society for the Neurobiology of Language	2020
Travel Award, Society for the Neurobiology of Language	2016
Walle Nauta Award for continuing dedication to teaching, MIT, BCS	2016
Jerrold J. Katz Young Scholar Award, CUNY conference on human sentence processing	2015
Walle Nauta Award for continuing dedication to teaching, MIT, BCS	2015
Mark Gronenberg Fellowship, MIT, BCS	2015
Angus MacDonald Award for excellence in undergraduate teaching, MIT, BCS	2014
John S. W. Kellet award (LGBT service), award convocation, MIT	2013
Henry E. Singleton Fellowship, MIT, BCS	2012

Teaching Experience and Related Employment (2015 onward only)

PSYCH 263: Psycholinguistics   2021
     UCLA graduate course

PSYCH 124A: Language as a Cognitive Science   2019-2021
     UCLA undergraduate course

PSYCH 85: Introduction to Cognitive Science   2019-2021
     UCLA undergraduate course

General Linear Model for fMRI Data Analysis   2015-16, 2018-21
     One-day workshop at MIT's outreach undergraduate program

Guest Lecturer
     The Neural Basis of Language

UCSB, "Psychology of Language" (Undergraduate, LING 127)	2021
UCLA, "Language and Cognitive Development" (Graduate, PSYCH 240A)	2020
Hunter College, "Brains, Minds, and Machines" (Undergraduate, SCI 111)	2018
MIT, "Cognitive Science" (Graduate, 9.012)	2017-20

MIT, "Systems Neuroscience" (Graduate, 9.011)		2017-18
Harvard, "Language, Structure, Cognition" (Undergraduate; Ling 83)		2016
MIT, "Behavioral Neuroscience" (Undergraduate, 9.10)		2015-17

From fMRI data to activation maps   2016
    MIT, "Functional MRI of the Human Brain" (Undergraduate, 9.71)

Mentoring (since joining UCLA only)

Post-doctoral scientists

Melodie Yen		2019-present
Bryor Snefjella		2019-2021

Undergraduate research assistants

Nila Elumalai	volunteer	2021- | 1 quarter
Audrey Lai	volunteer	2021- | 2 quarters
Shahar Mazooz	volunteer	2021- | 2 quarters
Emin Nabiev	196B	2021- | 2 quarters
Jiani Li	volunteer	2020- | 3 quarters
Ashley Kim	volunteer	2020- | 3 quarters
Nashif Iqbal	volunteer	2020 | 2 quarters
Kelly Zhou	volunteer	2020 | 2 quarters
Hannah Guo	199A	2020-2021 | 5 quarters
Jasmine Kay	196B	2020 | 3 quarters

Graduate Committees

Brittany Drake	Dissertation	PI Stanton	2021-present
Nicholas Ichien	C-Paper	PI Lu	2021
Catherine Walsh	C-Paper	PI Rissman	2021
Michelle Luna	Dissertation	PI Sandhofer	2020-present
Gwendolyn Price	Dissertation	PI Sandhofer	2020-present
Maggie Yeh	Dissertation	PI Liu	2020-present

Other

Ebrahim Feghhi	NSIDP Rotation	2021 fall

Training and Workshops

HHMI & UCLA Inclusive Excellence Institute, UCLA	2020 February
Basic mediation skills training (32 hours), MIT	2013 January

Professional Service

Ad-hoc reviewer: Nature Communications, Brain and Behavioral Sciences, PNAS, Human Brain Mapping, NeuroImage, Cognitive Science, Cerebral Cortex, Cortex, Language Cognition and Neuroscience, Journal of the Neurobiology of Language

Reviewing Committee, Conference on Computational Linguistics (COLING)	2020
Reviewing Committee, AMLaP Conference	2020
Reviewing Committee, California Meeting on Psycholinguistics (CAMP)	2019, 2021

Reviewing Committee, CUNY Annual Meeting on Human Sentence Processing   2018-2021
Reviewing Committee, Society for the Neurobiology of Language Annual Meeting   2018-9, 2021
Organizing committee, CUNY Annual Meeting on Human Sentence Processing   2017

Other Service (since joining UCLA only)

Member, UCLA Psychology department, Teaching Points Committee   2021
Alternate member, UCLA Psychology department, Merit Review Committee   2021
Member, UCLA Psychology department, Diversity Issues Committee   2020-2021
Member, UCLA Psychology department, Cognitive Science Major Committee   2020-2021
Coordinator, UCLA Psychology department, Cognitive Area PhD interview weekend   2020