Aliyar Ozercan

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Research Profile

My research is in philosophy of language, philosophy of mind, and cognitive science, with an emphasis on how linguistic evidence structures social cognition and the computational organization of intelligent agency; I integrate philosophical analysis with developmental and neurocognitive evidence to build formal, mechanistic accounts of how agents fix reference, attribute mental states, and process information. My primary project develops a modular alternative to monolithic Theory of Mind, "sub-ToM," which decomposes social cognition into domain-specific systems for motion, emotion, intention, knowledge, and belief, analyzes their implementation, and links developmental timelines to the maturation of neural circuits. A complementary program in language develops a speech-act account of Turkish *-mIş* that modulates assertoric force while keeping truth-conditional content fixed, alongside a decision-theoretic model of audience-side reference that specifies how listeners integrate evidence, manage cognitive costs, resolve ambiguity, and track sources for epistemic justification. Uniting these efforts is a theory of how intelligent systems, biological or artificial, represent their object of curiosity (i.e., unknown targets) and revise representations as evidence accrues; I use conceptual analysis to sharpen empirical questions and data from cognitive science to refine formal theories of representation, inference, and social cognition. I received UConn's Provost's Teaching Excellence Award, published a *Symbolic Logic Manual*, and taught 16 sections as instructor of record, with 16 additional as a TA.

Areas of Specialization and Competence

AOS: Philosophy of Mind, Philosophy of Language, Philosophy of Cognitive Science.
AOC: Philosophy of Neuroscience; Epistemology; Logic; Developmental Cognitive Neuropsychology.

Education

University of Connecticut (UConn) 2018 – 2025
Ph.D. in Philosophy *Storrs, CT*
- Dissertation: "The Sub-Theories of Mind"
- Chair: William G. Lycan; Committee: Jonathan Phillips, Mitchell Green, Richard Moore

University of Connecticut (UConn) 2019 – 2025
Graduate Certificates (Ph.D. Minors) *Storrs, CT*
- Neurobiology of Language
- Cognitive Science
- Logic

University of Connecticut (UConn) 2018 – 2020
M.A. in Philosophy *Storrs, CT*

Middle East Technical University (METU) 2013 – 2016
M.A. in Philosophy *Ankara, Turkey*
- Thesis: "The Maxims of Relevance Theory for Determining the Referent of a Proper Name"
- Chair: Teo Grünberg; Committee: David Grünberg, Sandy Berkovski

Middle East Technical University (METU) 2009 – 2013
B.A. in Philosophy *Ankara, Turkey*

Publications

Book: *Symbolic Logic Manual.* Aliyar Ozercan. METU Press, Ankara, 2014. 196 pp.

Edited Volume: *Language, Logic, and Empirical Knowledge: Collected Papers of Teo Grünberg (1965–2005).* Editors: D. Grünberg and Aliyar Ozercan. METU Press, Ankara, 2017. 196 pp.

Papers under review

1. Emotion-First Mindreading in Infancy: A Theory of Emotion (Under review)

Philosophy of Mind, Developmental Psychology, Cognitive Science

- Argues a "Theory of Emotion" is the earliest domain-specific mindreading capacity, outlining a developmental ladder from resonance to practical metarepresentation and testing it against evidence from comforting, social referencing, and humor.

2. Proto-Social Cognition: A Relational Framework for Infant Sociality (Under review)

Philosophy of Mind, Cognitive Science, Developmental Psychology

- Argues that infants' earliest social system manages live interaction (not state inference) via a "who-does-what-to-what" controller; this relational framework explains existing findings on contingency and integration while making new, falsifiable predictions about anticipatory looking and partner-scaled re-engagement bids.

3. Beyond Belief: A Criterion Reading of Dennett's Standard for Mindreading (Under review)

Philosophy of Mind, Epistemology, Cognitive Science

- Proposes a "criterion reading" of Dennett's (1978) standard, grounded in textual analysis, which argues the "belief-benchmark" is a sufficient, not necessary, condition; outlines an empirical program to test early emotion-reading against this standard via formal model-comparison.

4. Representation of the Unknown: A Theory of Indefinite Targeting (Under review)

Epistemology, Philosophy of Mind, Philosophy of Science

- Addresses how the object of curiosity can be an unknown by proposing "indefinite targeting": a formal, indefinite representation that allows inquiry to begin and adapt, thereby explaining how investigation can succeed even from faulty starts (e.g., Vulcan).

5. Audience's Reference: A Decision-Theoretic Model of Reference (Under review)

Philosophy of Language, Pragmatics, Cognitive Science

- Proposes a decision-theoretic (POMDP) model of audience-side reference, formalizing how listeners choose between actions like *Wait*, *Ground*, *Guess*, or *Let Go* by weighing expected information gain against cognitive/social costs; outlines a behavioral program based on the model's predictions.

6. Scaling the Force of Assertion: Turkish *-mIş* (Under review)

Philosophy of Language, Semantics, Pragmatics

- Presents a speech-act account of Turkish *-mIş* as a device that weakens assertoric force while keeping truth-conditional content fixed, supporting the analysis with a range of discourse diagnostics (e.g., challenge profile, retraction style).

7. Effects of Reward in Alzheimer's (Under review)

Cognitive Neuropsychology, Neuroimaging (Collaborative project)

- Task-based fMRI study probing reward sensitivity in Alzheimer's disease; final cohort data analysis.
- Contribution: Led end-to-end fMRI data analysis from raw to group level: BIDS curation; preprocessing; quality control and motion handling; slice-timing, coregistration, normalization, and smoothing; first-level modeling with ROI and whole-brain analyses in FSL and AFNI; mixed-effects group statistics and reporting.

Books in preparation

1. An fMRI Methods Guide for Cognitive Science (in prep.; 4/15; Draft chapters available on request)

Neuroimaging, Cognitive Neuroscience, Philosophy of CogSci

- End-to-end workflows for theory testing with fMRI: task design, BIDS curation, preprocessing (fMRIPrep, MRIQC, XCP Engine), first-level GLMs, group analysis, and connectivity, with reproducibility and reporting checklists.

Papers in preparation

1. Experimental Designs for Testing Mindreading in Great Apes (In preparation)

Great Ape Cognition, Experimental Design, Comparative Psychology

- Proposes a set of novel, falsifiable experimental setups to test whether great ape behaviors (e.g., consolation, social evaluation, gestural communication) constitute genuine mindreading. The designs are built to test for specific competence signatures (like target-specificity and counterfactual sensitivity) and to rigorously rule out deflationary 'submentalizing' or purely teleological explanations.

2. Experimental Designs for Profiling Social Cognition in Atypical Development (In preparation)

Atypical Development, Experimental Design, Cognitive Science

- Proposes a novel experimental battery to move beyond the pass/fail false-belief metric in atypical development. The designs test for specific competence signatures across domains (e.g., affective vs. epistemic), allowing for a fine-grained 'social-cognitive profile' by rigorously testing behavior against deflationary versus state-attribution models.

3. The Neurobiology and Ontogeny of Mindreading: Evidence for a Sub-Theoretical Architecture (In preparation)

Cognitive Neuroscience, Developmental Psychology, Philosophy of Mind

- Argues that the Sub-ToM sequence (motion, emotion, intention, belief) tracks maturation and coupling of neural systems (occipito-temporal motion pathways, amygdala-salience circuits, medial prefrontal goal inference, pSTS/TPJ belief attribution).

Affiliations and Visiting Positions

Institute for the Brain and Cognitive Sciences (IBACS) 2021 – present
Fellow and Affiliated Researcher *Storrs, CT*

Expression, Communication, and Origins of Meaning (ECOM) Research Group 2018 – 2024
Manager and Affiliated Researcher *Storrs, CT*

Boğaziçi University 2016 – 2018
Ph.D. Coursework in Philosophy (transferred to UConn) *Istanbul, Turkey*

University of California, Davis 2015 – 2016
Visiting Scholar in Philosophy *Davis, CA*

Harvard University 2011
Graduate Coursework and Research *Cambridge, MA*

Research Experience

Research Group Manager 2018 – 2024
University of Connecticut, Expression, Communication, and Origins of Meaning (ECOM) *Storrs, CT*

- Co-organized 10 international, interdisciplinary conferences. Keynotes included:
  - *Expression, Language, Music 2* (2024) – Ani Patel; Paul Boghossian; Philippe Schlenker
  - *Kinds of Consciousness* (2024) – Jonathan Birch; Elizabeth Schechter
  - *Millikanfest* (2023) – François Recanati; David Papineau; Robyn Carston; Josh Armstrong; Dan Dennett
  - *Kinds of Action* (2023) – Lucy O'Brien; John Schwenkler
  - *Expression, Language, Music* (2022) – Tecumseh Fitch; Kathleen Higgins; Ray Jackendoff; Jerrold Levinson; Isabelle Peretz
  - *Kinds of Expression* (2022) – Henrike Moll; Eli Alshanetsky
  - *Expression, Language, Music* (scheduled 2021 – postponed to 2022)
  - *Kinds of Mindreading* (2021) – Jonathan Phillips; Helen Tager-Flusberg
  - *Kinds of Knowledge* (2020) – Alex Byrne; Kristin Andrews
  - *Communication, Context, Conversation* (2019) – Robyn Carston; Danielle Matthews; Mandy Simons
- Hosted and facilitated 55 invited talks across philosophy, linguistics, psychology, and neuroscience; coordinated speakers, publicity, and post-talk research networking.

- William Snyder; Letty Naigles; Robyn Carston; Disa Sauter; Ani Patel; Peter Gärdenfors; Richard Moore; Jonathan Prather; Crispin Wright; Emily Myers; Peter Langland-Hassan; Cameron Buckner; Jill de Villiers; and others
- Secured internal and external funding through grant writing and resource coordination.

IBACS Fellowship on NIH and NSF Grants 2022

IBACS (Institute for the Brain and Cognitive Sciences) *Storrs, CT*

- Awarded a $5,000 competitive fellowship for graduate research in Brain and Cognitive Sciences.
- Completed an intensive multi-week grant-writing workshop focused on NIH F31 and F32 proposals; drafted Specific Aims and core research sections with faculty feedback.
- Served on a mock NIH review panel to score and discuss proposals; gained practical insight into NSF GRFP and NRSA processes.

Research Assistant in Neuroimaging 2019 – 2021

IBACS (Institute for the Brain and Cognitive Sciences) and BIRC (Brain Imaging Research Center) *Storrs, CT*

- Managed and preprocessed multimodal neuroimaging data, including fMRI and EEG, using BIDS app and preprocessing pipelines (fMRIPrep, XCP Engine).
- Performed quality control and motion correction; slice timing correction; coregistration; normalization; spatial smoothing.
- Analyzed task-based and resting-state fMRI data using FSL (FEAT) and AFNI; conducted ROI and whole-brain analyses; integrated FreeSurfer-based anatomy.
- Computed connectivity metrics (seed-based correlation, ICA, ALFF) and network-level interactions across subjects.
- Programmed cognitive tasks for fMRI and EEG using PsychoPy and Python.
- Developed reusable documentation and Python scripts for automated analysis pipelines and lab-wide task deployment.
- Trained in MRI and EEG hardware operation, safety protocols, and participant preparation; supported scanner bookings, stimulus setup, and troubleshooting.

Research Assistant 2014 – 2016

METU, Laboratory for Computational Ontology *Ankara, Turkey*

- Contributed to the project "In Pursuit of the Missing Premise," investigating foundational gaps in theoretical models.
- Substantiated philosophical accounts of agency and decision-making by building computable representations: specified an ontology for actions, goals, evidence constraints, and norms; defined class hierarchies, relations, and constraint schemas; created worked examples and test queries to probe entailments, defeaters, and exception handling.
- Bridged theory to implementation through proof-of-concept pipelines; implemented rule- and evidence-update procedures; wrote internal specs and documentation that informed prototype agent design and integration.

Invited Talks

"Prepositional Minds," Department of Philosophy Colloquium, University of Connecticut, Storrs, CT, February 2024

"Sub-Theories of Mind," Cognitive Science Research Club, Middle East Technical University, Ankara, Turkey, December 2023

"Sub-Theories of Mind," Department of Psychology Seminar, Bilkent University, Ankara, Turkey, December 2023

"How to Beat Dr. Frankenstein?," Institute for the Brain and Cognitive Sciences (IBACS), University of Connecticut, Storrs, CT, October 2020

"Evidentiality and Its Challenge to Propositional Theories," Boğaziçi Linguistics Circle, Boğaziçi University, Istanbul, Turkey, December 2019

"Indexicality of Proper Names," Altmann Lab Talk, University of Connecticut, Storrs, CT, September 2019

Presentations

"Representations, Descriptions, and Prepositional Attitudes in Animals" at International Society for the Philosophy of the Sciences of the Mind (ISPSM), December 2023

"XII Edition Workshop of Philosophy of Biology & Cognitive Sciences," November 2023, University of Málaga, Spain

"Sub-Theories of Mind," November 2023, University of Connecticut, Storrs, CT

"Representations, Descriptions, and Prepositional Attitudes in Animals" at 14th Annual Northwestern/Notre Dame Graduate Epistemology Conference, May 2023, Northwestern University, Illinois

"Third-Person to First-Person: Understanding Others' Mental States" at First-Person Science of Consciousness Conference, May 2023, Witten/Herdecke University, Germany

"Descriptions, Representations, and Prepositional Attitudes in Animals," 73rd New Mexico-Texas Philosophical Society Meeting, University of Texas at El Paso, El Paso, Texas, April 2023

"Why would you say that?" October 2022, University of Connecticut, Storrs, CT

"How to satisfy your curiosity?" May 2022, IHPST Graduate Conference, University of Toronto, Toronto, Canada

"How to satisfy your curiosity?" April 2022, University of Connecticut, Storrs, CT

"Evidentiality and Its Challenge to Propositional Theories," December 2020, University of Connecticut, Storrs, CT

"Animal Curiosity," October 2019, Bleen Conference, University of Connecticut, Storrs, CT

"Bir Hatanın Peşinde" (In Pursuit of a Mistake) December 2017, 2nd METU Philosophy Graduate Students Conference, METU, Ankara, Turkey

"Dinleyici İçin Kurallar" (The Maxims of the Audience) May 2016, 1st METU Philosophy Graduate Students Conference, METU, Ankara, Turkey

"In Pursuit of the Missing Premise," co-authored with O. Akçelik, September 2015, British Logic Colloquium, Cambridge University, Cambridge, UK

Awards, Fellowships, and Grants

UConn Doctoral Fellowships (3 awards; total $4,750)	2019, 2023
ELM Fellowships (3 awards; total $4,600)	2020, 2022, 2023
ECOM Research Fellowships (4 awards; total $4,500)	2019 – 2023
UConn Conference Award ($2,000)	2023
UConn Doctoral Dissertation Fellowship ($2,500)	2022
IBACS and BIRC Fellowships (3 awards; total $15,000)	2020 – 2022
Provost's Teaching Excellence Award	2019
Visiting Research Grant, UC Davis ($5,000)	2015
Laboratory for Computational Ontology Research Grant ($1,000)	2015
Akbank Research Project Contest Winner ($100,000)	2012

Teaching Experience

Principal Instructor (16 sections)

Neuropsychology | *4 sections* — Summer 2022, 2023, 2024
Phillips Academy Andover

Social Psychology | *2 sections* — Summer 2022 and 2024
Phillips Academy Andover

Philosophy and Logic | *1 section* — Spring 2024
UConn Stamford

Philosophy and Social Ethics | *5 sections* — 2020 – 2023
UConn Storrs; UConn Hartford; UConn Waterbury

- Sections taught: Waterbury (Fall 2023), Hartford (Spring 2023), Storrs (Summer 2021, Summer 2020).

Problems of Philosophy | *4 sections* — 2021 – 2022
UConn Storrs; UConn Hartford; UConn Waterbury

- Sections taught: Waterbury (Fall 2022, Fall 2021), Storrs (Summer 2022), Hartford (Spring 2022).

History of Science | *1 section* 2017
Bartin University (Turkey)

Teaching Assistant (16 sections)

Philosophy and Logic | *2 sections* Spring 2019
UConn Storrs

Problems of Philosophy | *4 sections* Fall 2018
UConn Storrs

Introduction to Logic | *2 sections* Fall 2017
Bartin University (Turkey)

Logic I | *2 sections* Fall 2017
Bartin University (Turkey)

Logic II | *2 sections* Spring 2018
Bartin University (Turkey)

Modern Logic II | *2 sections* Fall 2014 and 2015
METU (Turkey)

Modern Logic I | *2 sections* Spring 2013 and 2014
METU (Turkey)

Introduction to Logic | *2 sections* Fall 2012 and 2013
METU (Turkey)

Graduate Courses

Cognitive Neuroscience and Research Methods

- Foundations in Neuropsychology – John Salamone and Deborah Fein (UConn)
- Foundations in Neurobiology of Language – Jim Magnuson (UConn)
- Structure, Acquisition, and Processing of Language – William Snyder (UConn)
- Cognitive Neuroscience of Language – Emily Myers and Nicole Landi (UConn)
- Neurobiology of Typical and Atypical Cognitive and Lang. Development – Letty Naigles and Inge-Marie Eigsti (UConn)
- Research Methods and Statistics for Cognitive Science – Murat Perit Cakir (audit) (METU)
- Neuroimaging Methods – Roeland Hancock (UConn)

Semantics and Philosophy of Language

- Semantics I – Magdalena Kaufmann (UConn)
- Semantics II – Magdalena Kaufmann (UConn)
- Advanced Semantics (Perspective) – Magdalena Kaufmann (UConn)
- Propositional Theories of Meaning in Philosophy of Language – Teo Grünberg (METU)
- Force and Content – Lionel Shapiro (UConn)
- Heretic Approaches to Natural Language Semantics – Hanti Lin (audit) (UC Davis)
- Vagueness – Adam Sennet (audit) (UC Davis)
- Non-Ideal Philosophy of Language – Lynne Tirrell (UConn)
- Events and Their Names – Sun Demirli (Boğaziçi University)

Logic

- Modal Logic – Keith Simmons (UConn)
- Philosophy of Logic and Mathematics – Ahmet Çevik (METU)

Philosophy of Mind

- Mind and Consciousness – William Lycan (UConn)
- Philosophy of Curiosity – İlhan İnan (Boğaziçi University)
- Expressing and Saying – Dorit Bar-On (UConn)
- From Concepts to Event Representation – Gerry Altmann (UConn)

Technical Skills

Programming: Python

Developer Tools: Git; Docker; Google Cloud (GCP); Visual Studio Code

Neuroimaging: PsychoPy; BIDS Apps (fMRIPrep, MRIQC); FSL; FreeSurfer; XCP Engine

Statistics: JASP

Grant Writing: NIH/NSF proposals; internal funding applications; LaTeX

Learning Management Systems (LMS): Canvas; Blackboard

References

Prof. William (Bill) Lycan
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Prof. Dr. Mitch Green
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