Professor Ted Coons has taught 25,000 students at NYU

Graduate Highlights
with photos
1930 – 2017

Featured Research
Brain synchrony
The shape of things
The partisan brain
Professor Edgar “Ted” Coons (music composition and PhD in physiological psychology at Yale) has always been interested in the relation between (musical) form and feeling. He joined the NYU Psychology Dept. in 1965 and conducted brain research on hedonics. As a performer, promoter, and composer, Coons was a catalyst for new music in the performing arts, blending styles to create novel genres. He merged medieval music with disco and brought soul to the Electric Circus nightclub, creating a multimedia sensory experience that premiered at Carnegie Hall, reviewed in the New York Times. [Photos and collage by Cecilia Schmidt.]

Welcome
to the first edition of the Psychology Department’s new newsletter. We hope you will enjoy hearing about what your department and our alumni have been up to. We think you will be proud of what past and current members of the department have accomplished. According to the recent QS World University Ranking system, in 2017 our department ranked 10th in the world and 7th in the United States. According to the Center for World University Rankings, our Social Psychology program in particular is the 3rd best in the world. These rankings reflect our faculty’s continued success in publishing, excellent research, obtaining national and international grant support, and attracting, teaching, and graduating outstanding undergraduate, Masters, and PhD students. When you read about some of the exciting research, historical highlights, and contributions to society that our alumni continue to make, we think you’ll agree! In October our department will be “Celebrating 120 Years of Psychology at NYU.” Please keep an eye out for details of this event.

Warmest wishes,

Bob Rehder
Professor and Chair,
Department of Psychology

March, 2019
This project tries to bring neuroscience out of the laboratory into the real world. “Brain synchrony” might sound sketchy. But it is very real, and rather simple: brain activity naturally ebbs and flows, and under certain conditions, two people’s brain activity may fall into step.

David Poeppel, a professor of psychology at NYU, and research scientist Suzanne Dikker have done synchrony research with pairs of people interacting face-to-face. But until the two recently decided to expand the scope of their research, larger scale social interactions had never been studied.

They took electroencephalography (EEG) headsets, each with an array of electrodes that detect brain activity, into a high school classroom. The researchers simultaneously gathered brain data from a dozen students every few days for the entire semester, along with detailed questionnaires that assess various social factors. Combining neuroscience, cognition, social psychology, and education, the team hopes to answer questions like are students who are more social and more in tune neurobiologically, actually better able to learn in groups?

The team found that brains synchronize when people like each other, when they are more sociable, and when they pay attention to the same thing. “This is pretty messy data, so the fact that something comes out that is actually interpretable is a happy accident,” says Poeppel.

Dikker and Poeppel see these early classroom experiments as an important “proof of concept,” a launch pad
for themselves and others to gather neurobiological data in real-life contexts. They’ve shown a path forward through some of the practical, technical, and methodological challenges of brand new research.

The experimental design could be enhanced in any number of ways, and Dikker is pursuing quite a few of them. For example, she is investigating how time of day affects these group interactions, while accounting for the early-risers and the late sleepers. And the integration of social psychology and neuroscience raises questions about how social traits might relate to individual differences in low-level perception.

In addition, the most recent study only looked at participants in a group setting, but testing each subject on their own might reveal differences in their perception, learning, or emotional reactions. We might react differently to a movie, for example, when watching it alone compared to with friends, says Dikker, “That’s intuitively different, but we don’t know why and how.”
Moira R. Dillon is trying to understand how humans create some of our world’s most impressive technological and cultural creations. To do so, she looks at the youngest minds.

Dillon directs the Lab for the Developing Mind at NYU where children and infants are participants in her studies. She asks how everyday interactions with objects, spaces, and other people shape understanding of the complex and abstract concepts that make us human. For example, she tests how instinctive notions about numbers and geometry support our formal mathematical reasoning.

“Our basic intuitions about the spatial world might be a foundation for concepts that are more abstract like understanding the general properties of triangles,” says Dillon. “Just think back to what it was like to learn all of those theorems and postulates in school! Maybe this learning process could be made more intuitive by tapping into the geometry we already use in our everyday lives.”

Children’s drawings are a natural way to look at their geometric understanding and can tell investigators what details in a scene children more easily depict.

Dillon, an assistant professor of psychology, started at NYU in July 2017. Now she is planning the construction of her physical lab space. The design includes a custom 5-meter in diameter cylindrical room, which eliminates geometric information present in a typical room. Infrared sensors will track the movement of small beacons attached to participants. “It’s a very cool experience to be able to design
Moira Dillon

Dillon asked 4-year-old children to draw exactly what they saw. They sat either in a colorful “fort” arranged in different ways (top row) or looked at a small “toy” version of the fort, arranged in exactly the same way (bottom row). Dillon thinks that while these tasks look similar, they pose different challenges to geometric thinking. In the fort, children must depict a large-scale layout. For the toy, they only have to depict small-scale object shapes. Dillon’s results, as exemplified by the sample drawings below each arrangement, show that children tend to only depict object shapes, leaving out spatial elements like walls. Capturing that information on a 2D page might be too hard a geometric challenge for young children.

In the meantime, Dillon has been traveling to the National Museum of Mathematics near Madison Square Park, where she’s arranged a collaboration for museum visitors to participate in experiments. Her research benefits from contact with educators in the community, but so do teachers and learners through playful, intuitive activities. “As someone who has access to specialized knowledge that might help children learn, I’m thrilled to have the opportunity to share it,” she says.
These are divided times. People sometimes rely solely on news sources that share their politics, and social media can create ideological echo chambers. In many cases, the result is two wildly divergent accounts of the same day’s events, each accepted in its own particular political circle.

This partisan problem isn’t just about news media or internet culture — it’s also about brains. Identifying as a Republican or a Democrat, or a member of any other political party, shapes how we understand the world around us.

“People have a brain that has evolved to help them align their perspective to fit in with their groups,” says Jay Van Bavel, an associate professor and social psychologist at NYU. “So they selectively remember certain bits of information. If they’re looking at the same scene, they pay attention to different things. They have different emotional responses to the exact same events.”

Van Bavel and colleague Andrea Pereira recently outlined the evidence for partisan bias in these types of cognitive processes in the journal *Trends in Cognitive Sciences*, drawing on research from diverse fields such as political science, economics, social psychology, and neuroscience.

Van Bavel also studies identity beyond the political realm. But political identities in particular seem to shape the way we understand the world, perhaps because we tend to affiliate with political parties based on our values.

“If people can’t agree on basic facts, it makes it hard to compromise and find something that works for the largest
number of people,” says Van Bavel. Understanding when and why people accept political spin, propaganda, or outright fake news could help organizations trying to spread genuine facts, and readers trying to account for their own biases. Van Bavel calls the search for solutions the “next phase” of partisanship research.

While there are differences between the behaviors of self-identified liberals and conservatives (for example, liberals are more likely to share stories on social media from the opposite point of view), we all have blind spots and biases regardless of party registration.

Understanding that partisanship influences us all may be a first step in mitigating its effects. “It’s a way to help people make sense of the bad behavior they see,” he says, “but also hopefully help them reflect on their blind spots and how they can be better.”

Partisan identities determine the value of different beliefs and can therefore distort beliefs at different states of cognitive processing, including executive function, attention control, memory, implicit evaluation and visual perception.
David Krech ‘30, MA ‘31 (1909 – 1977) published theory and evidence to support the localization theory of the brain.¹

Andrew Salter ‘37 (1914 – 1996) founded conditioned reflex therapy and introduced hypnotherapy and self-hypnosis to American psychotherapy.

Walter Mischel ‘51, MA ‘53 (1930 – 2018) created the “The Marshmallow Test” for children, Professor at Columbia University.²

Sam Glucksberg PhD ‘60, Dean of Faculty at Princeton University, worked on figurative language: metaphors, irony, sarcasm, and idioms.³

Leslie Ungerleider PhD ‘70, Chief of the Laboratory of Brain and Cognition NIMH, introduced the dorsal and ventral streams as two separate, specialized brain pathways.⁴

Ron Dubren PhD ‘75 is a co-creator of the Tickle Me Elmo toy.⁵

Kamil Grajski ‘82 is a Managing Director of Data Science at TROVE, and uses Big Data to find biomarkers for neurodegenerative diseases like Alzheimer’s Disease. He holds 10 patents.

Steven Fisch ‘84, MA ‘86, PhD ‘92 created educational content for Sesame Street.

Jill Salberg ’74, PhD ’79 and Sue Grand Postdoctoral certificate in psychotherapy & psychoanalysis ‘88 both teach in the Postdoctoral Psychotherapy & Psychoanalysis Program, and they co-edited two books: The Wounds of History and Transgenerational Trauma and the Other, which both received the 2018 Gradiva Award for Best Edited Book.

Sarah F. Leibowitz ’64, PhD ’68 is a Research Assoc. Professor at Rockefeller University studying the neurobiology of addiction, discovered a hormone for satiety.
Liliana Lovell '90 founded the Coyote Ugly Saloon, one of the original cowboy bars in the East Village, as told in the 2000 film, “Coyote Ugly.”

Guy Winch PhD '91 published three science-based popular psychology books and gave two TED Talks about psychological health.

Amit Shelat '97, a board-certified neurologist, currently serves as the Vice-Chairman of the New York State Medical Board.

Pascale Victor '98, shown conducting home visits, published Fieldwork with an Open Heart, a book chronicling the importance of social workers.

Dina Litovsky '02 is a contemporary photographer, featured in The New York Times, National Geographic, and The New Yorker.

Justin Connors '03, with a search and rescue team, shown assisting in the initial recovery of Mexico Beach following Hurricane Michael.

Sarena Horowitz '03 was recently promoted to Deputy Commissioner of Investigation and Trials at the New York City Department of Correction.

Jennifer Thomas '03 PhD studied orthographic and phonemic processing in reading by normal and dyslexic readers.

Edwin Azarkian '05, through NYU's bar-none education, received his MD and specializes in the field of his dreams.

Patricia Astorga '05 is an assistant United States Attorney, prosecuting violations of federal narcotics and firearms laws, organized crime and sex trafficking.
Lillian Chang ’05 is a veterinarian.

Carol Pak-Teng ’06, shown in front of ER, completed her Emergency Medicine Residency Training with Mount Sinai and received the Outstanding Achievement as a Resident award from the Academy for Women in Academic Emergency Medicine of the American College of Emergency Medicine.

Suhaly Bautista-Carolina ’08 founded Moon Mother Apothecary, natural products created with the wisdom of her Dominican ancestors.

Elizabeth Kazan ’08 created a reusable menstrual pad program in Uganda during her service in the Peace Corps.

Ilana Glazer ’09 co-creator and co-star of the television series, Broad City, produced by Comedy Central.

Kristine Kelly ’13 founded YouHue, a technology used in K-12 classrooms to help students communicate while developing social-emotional skills.

Brenda Echeverry ’16, shown with a mural she painted at a public school, completed a year of community service with City Year, shifting her view of education in NYC and inspiring her to continue her work with students.

Ailin Tomio MA ’16, with support of the community, presenting to the Buenos Aires City Mayor recommendations of public policies to make the rental market more accessible.

Larry Ramos ’17 serves as a coordinator for the International Young Leader Assembly at the United Nations.
Where are they now?
Graduates 1949—2018

Based on 1,392 responses to an email survey of 6,707 NYU Psychology graduates.

- Healthcare and Public Health: 28%
- Education and Academia: 27%
- Finance and Business: 14%
- Nonprofit: 14%
- Law: 5%
- Government: 5%
- Arts: 3%
- Technology: 1%
- Marketing and Media: 1%

Where they live
In Brief

Ted Coons

“I was teaching physiopsych on March 25. It would have been the late 1970s, because my lab was still up in the 10th floor of the Brown Building, and I was holding some of my classes there. So I was saying to the class, ‘You know, this lab is in the building where the famous 1911 Triangle Shirtwaist Fire, which is being commemorated today, happened on the floor below.’ A girl in the class said, ‘Oh yes, my grandmother should have died in that fire. That day she was supposed to go to work, but she was fascinated with this new thing called a ‘moving picture’, so she played hooky and went to the movies instead. When she got home that night her family was already mourning her, and thought she was a ghost.’”

Shabeba Islam

Dealing with Islamophobia has been an unfortunate part of Muslim-American life, described Islam, a third-year Psychology major from Jackson Heights, Queens. As part of her research endeavors in Dr. Emily Balcetis’ Social Perception, Action and Motivation Lab, Islam began studying local organizations that work to protect fellow community members from harm and educate others about Muslim-American traditions with satire and humor. Islam, who would like to pursue a Ph.D. in clinical psychology, is now looking into how stereotypes impact the judgments made about people in other underrepresented social groups.

Marjorie Rhodes

By the time they begin school, students have developed stereotypes about scientists, which can discourage some students from participating in science. That’s why Rhodes, who directs the Conceptual Development and Social Cognition Lab, is now investigating the real world effects of language choice, with a study that will ask 3,000 pre-K students across all five boroughs of New York City to “do science” rather than “be a scientist.” Her work suggests this subtle change in language, framing the statement as a verb rather than a noun, can instill persistence and resilience following setbacks even in these very early years of exploration.

Isabella Tochterman

Aesthetics is a major topic in philosophy, but within that discipline, the scientific method is not often applied to understand perception of beauty. Tochterman, a member of the Pelli Lab, is enthusiastic about applying quantitative methods in her new research project, which examines the relationship between beauty and economic value. She is a senior double major in Psychology and Computer Science from Sacramento, CA.
A History of Psychology at NYU

New York University was founded in 1831, but until 1896 was called the University of the City of New York. It focused exclusively on undergraduate education until the founding of the Graduate School of Arts and Science in 1886 and the School of Pedagogy in 1890. The main campus was always at Washington Square, but from 1894 to 1973 NYU had a second undergraduate campus at University Heights in the Bronx. NYU’s Washington Square College admitted women and recent immigrants since its founding in 1913. Psychology first appeared, in 1836, as a course in Philosophy, and became a Department in 1922. NYU had one of the first experimental psychology laboratories in America, created by Dr. C. B. Bliss in 1894. The Psychology Department granted its first PhD in 1935, its 300th in about 1965, its 1300th in 2002, and its 1536th in 2018. Psychology’s 39 tenure-track faculty and 7 full-time, non-tenure-track (“clinical”) professors hold 60 extramural grants and published 189 peer-reviewed papers in 2018. There are 536 NYU undergraduates majoring in Psychology, 224 MA students, and 80 PhD students. The Psychology Dept. enjoys a close association with the Center for Neural Science, which is in the same building; 24 faculty have joint or primary/secondary appointments in both.

Supporting Research in Psychology

Would you like to support students and research in the Psychology Department? You could assist in the training of our Masters and PhD students, the next generation of researchers. Students benefit greatly from attending scientific conferences where they meet colleagues and potential collaborators from around the world and attend workshops to learn new research techniques. The cost of attending these events often exceeds $1000. Contributions of any size to our Graduate Student Travel Fund are welcome, and will be distributed directly to our students. In addition, if you’d like to support any of our department’s research projects—including those highlighted in this newsletter by Professors Dillon, Poeppel, and Van Bavel—please contact psych.researchsupport@nyu.edu. Thank you!