

Psychologi*Cal*

LETTER *from the chair*

Hello, Alumni and Friends!

The fall semester has been a busy and productive one. Our Department underwent an “Academic Program Review” – a process that all departments on campus undertake every 8-10 years. Six distinguished faculty from other universities visited us for two days in October to learn about the exciting work we do here. They were very positive about Berkeley Psychology, but also noted the challenges we face, particularly with respect to providing our graduate students with enough funding.



Building News

Construction on the new building has been progressing smoothly, and we are scheduled to move in less than a year — a massive undertaking! In the process of preparing to move, we are making sure to appreciate all the great work and time spent in Tolman Hall. Next Fall we will host an event celebrating the history of our Department. Also, several emeriti faculty (Al Riley, Dan Slobin, Steve Glickman) are working on a project to catalog our historic books and the place they and their owners have in the history of the field and our Department.

Staff News

We have added three new staff members to the Department: Marianne Callahan, who helps with hiring and human resource issues; Kristophe Green, who is our academic scheduler; and Elodie Steffen, who is the program administrator for the Psychology Clinic and Clinical Science.

We are also sad to lose our long-time Director of Administration, Frances Katsuura, who will be retiring in January. Frances has been with the Department for over 10 years and has been a major force in organizing and leading the Department in an outstanding manner. We will miss her greatly.

BIG GIVE 2016

We participated in the 3rd annual Berkeley BIG GIVE. The theme this year was “Give to Berkeley and Change the World”, and nowhere on campus do people work harder to change the world than in the Psychology Department. Our faculty undertake ambitious research pursuits, such as developing interventions for insomnia, ADHD, and dementia patient caregivers; examining how children develop language skills; studying how the brain organizes language in ways that could give voice to those who

cannot speak (e.g., victims of stroke); investigating techniques for making better decisions, and showing how learning new things can rewire the brain's reward system to buffer it against addiction.

As part of BIG GIVE, undergraduate students organized a day of events in Tolman Hall to celebrate what we do in Psychology and to raise money to ensure continued excellence not only in producing cutting-edge research, but also in providing high-quality undergraduate and graduate education. Together with the help of alumni and friends, we raised over \$10,000 during the 24-hour campaign. Thanks to all of you who helped us make this a BIG day for Psychology!

If you did not have a chance to participate in the BIG GIVE (or even if you did!) and want to contribute to our work in Psychology, we welcome your gift, which can be made online at www.give.berkeley.edu.

As always, our website features alumni stories, and we welcome you to share your life updates at www.psychology.berkeley.edu/stay-connected. Also, keep in touch with us via Facebook and Twitter!

Best wishes for a wonderful holiday season,

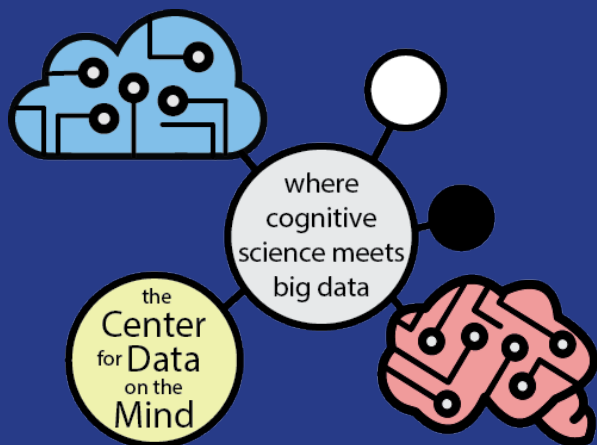
Ann Kring

Professor and Chair

DATA ON THE MIND

By: Yuan Meng

A team of researchers from UC Berkeley, UC Merced, and NYU created the Center for Data on the Mind, an online repository of tutorials and datasets to foster advanced cognitive science research.



The use of “big data” has become increasingly prevalent in computer science and statistics. To help psychologists take advantage of these methods, the Center for Data on the Mind provides online resources for mining large datasets to extract clues about human cognition and behavior.

A new cognitive revolution is brewing at Data on the Mind, a community-focused research center recently founded by our very own Tom Griffiths, Alison Gopnik, Dacher Keltner, Alexandra Paxton, together with colleagues at UC Merced and NYU. The Center aims to help cognitive scientists leverage the power of big data to study the human mind.

What is revolutionary about this endeavor,

and why is it much needed now? In a 2015 manifesto, Griffiths wrote that ever since Wilhelm Wundt built the first psychology laboratory in 1879, psychological research has largely remained the same—psychologists examine hypotheses about how the mind works by bringing a small number of participants into the lab to perform well-designed tasks, back then using physical equipment, but in modern days using a computer. However, technology has drastically altered the world outside the lab; computers and smartphones are now inseparable features of daily life, and even more importantly, may provide windows into the mind. For instance, how do computer algorithms use crowdsourced tagging of prior photos in order to automatically recognize people's faces in photos that are posted online? Millions of images tagged by human users provide insight into human categorization of real-life stimuli, as opposed to impoverished, artificial stimuli used in the lab for decades. Another example: what types of advertisements most effectively lure people to click on them? Pinpointing the specific features that make

for effective ads provides insight into our preferences, semantic representations, and categorization. In short, the huge amount of “data in the wild” (or “big data”) that has suddenly become available now enables cognitive scientists to gain a deeper understanding of the mind.

Although this revolution in big data certainly sounds promising, various factors might prevent psychologists from embracing these new methods. In a recent talk, Paxton pointed

out that many shy away from using big data in the face of “four gaps”—the lack of resources (“Where to find big data?”), imagination (“How do I talk about big data?”), skills (“What tools can I use with big data?”), and culture (“Who else in cognitive science is using big data?”). The mission of the Center for Data on the Mind is to help researchers overcome these perceived obstacles. The website (www.dataonthemind.org), aggregates datasets from more than 130 research areas in psychology and cognitive science. Alongside the datasets are various tools and tutorials for data analysis, visualization, and sharing. Moreover, you can find a growing number of “featured projects” to learn about the kinds of hypotheses researchers are currently exploring with the use of big data, how they discovered or created the datasets, the types of skills they used and how to acquire them, and descriptions of any obstacles they might have overcome in the research process. Apart from helping others, the one-year-old Data on the Mind team also welcomes data resources, tools, and other suggestions from fellow

scientists (e-mail: admin@dataonthemind.org).

Now is only the beginning. Griffiths envisions that in the decades that follow, cognitive science will be very different from how it is today. Just as astrophysicists combine well-controlled laboratory experiments with

noisy astronomical observations to make sense of galaxies far, far away, psychologists and cognitive scientists will also benefit from formulating and evaluating theories of cognition using both

traditional small-scale laboratory studies and these newer methods involving rich, large-scale sources of naturally occurring behavior.

“Now is only the beginning. Dr. Griffiths envisions that in the decades that follow, cognitive science will be very different from how it is today”



Professor Tom Griffiths is one member of an interdisciplinary team of researchers who helped found the Center for Data on the Mind. (Photo credit: Henry Young)



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For graduate students: <http://link.in/J90JUz>



Subscribe to our YouTube channel to watch videos of special events and lectures from the Department.

Department News

By: Amanda Wang

- In collaboration with **Professors Oz Ayduk** (pictured left) and **Rudy Mendoza-Denton** at Berkeley and Eric Hehman at Ryerson University, postdoctoral student **Jordan Leitner** (pictured below) explored whether racial bias is linked to health disparities in the US. Drawing from data from the Centers for Disease Control and Project Implicit, the researchers found that Blacks living in areas with more *implicit* racial bias are relatively more likely to die from cardiovascular health complications. For Whites, living in areas with more *explicit* racial bias was linked to higher death rates. The study was recently published in the journal *Psychological Science*; an interactive map can be found on Leitner's website at www.jordanbleitner.com/psychscience.



- **Professors Silvia Bunge** and **Jack Gallant** were elected as Fellows of the Society of Experimental Psychologists (SEP). Founded in 1904, the SEP is currently composed of approximately 230 members and recognizes individuals who have made significant contributions to the study of psychology. Bunge was recognized for her pioneering work on the development of reasoning and Gallant for his pioneering use of functional neuroimaging to create novel maps of the cerebral cortex.

- **Professor Claude Steele** received the Scientific Impact Award from the Society of Experimental Social Psychology (SESP) along with Joshua Aronson of NYU/Steinhardt. The award recognizes Steele and Aronson for their 1995 article, "Stereotype threat and the intellectual test performance of African Americans", which has been a particularly influential contribution to psychological science within the last 25 years. The article was published in the *Journal of Personality and Social Psychology* and has been cited more than 4729 times.

- **Professor Lance Kriegsfeld** recently co-authored the fifth edition of *An Introduction to Behavioral Endocrinology*, a textbook

that explores the hormonal processes that help both human and nonhuman animals survive and reproduce. The book was published by Sinauer Associates, Inc.

- Postdoctoral student **Craig Anderson** studies the emotion of awe — specifically, how awe manifests itself physiologically and promotes curiosity and social connection. His research on how nature inspires awe has been featured in various popular news channels, including *The Atlantic* in September 2016. In a TED-style talk over the summer, Anderson also presented his research at a Greater Good Science conference called "The Art and Science of Awe".

- Many Berkeley psychologists have recently been taking to audio media to spread their science. **Professor Dacher Keltner** was a guest on NPR's Hidden Brain podcast in a September 2016 episode called "The Perils of Power". In May 2016, former grad student **Alice Moon** also joined Hidden Brain to talk about psychology's replication crisis. The podcast Rationally Speaking invited **Professor Tom Griffiths** for an episode in June 2016 about his newest book, *Algorithms to Live By*. Flip to page 5 in this issue to learn more about **Professor Jack Gallant's** recent appearance on the podcast Freakonomics.

- This year, **Professor Sheldon Zedeck** (pictured below, right) delivered the Distinguished Faculty Lecture about his career-long efforts to improve testing procedures that help promote diversity in both workplaces and academia. Later, in November, **Professor Rudy Mendoza-Denton** (pictured below) joined the Faculty Lecture series with his talk



about rejection sensitivity and how experiences of rejection can threaten academic achievement and personal well-being, especially for members of underrepresented groups.

Your Brain on Podcasts

By: Amanda Wang

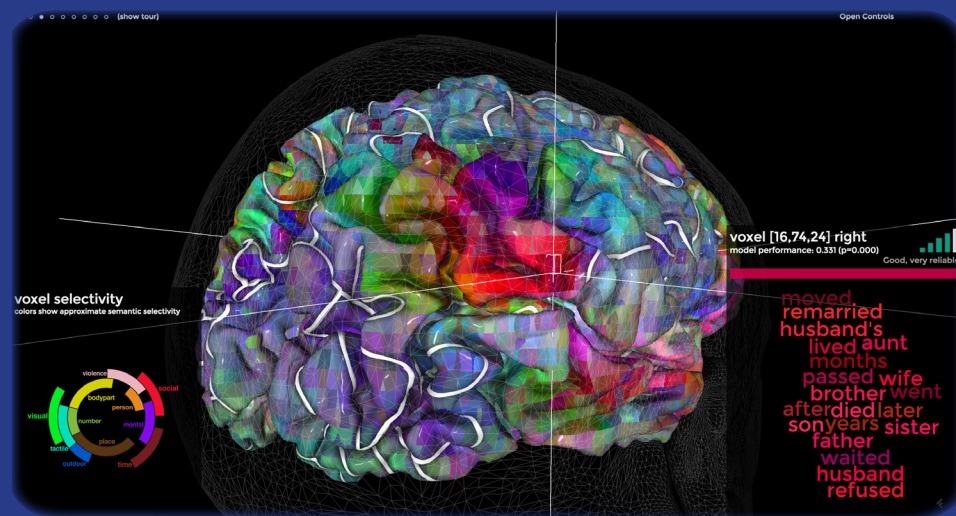
Freakonomics podcast provides a fitting forum for Professor Jack Gallant to discuss his research exploring how the brain processes spoken language in podcasts

Freakonomics is a podcast produced by journalist Stephen Dubner and economist Steven Levitt, in which they explore “the hidden side of everything”. In an episode aired on October 12, 2016, *Freakonomics* interviewed Professor Jack Gallant to uncover the hidden side of the brain on podcasts. A recent study from Gallant’s lab explored what happens in the brain when people process spoken language. The article, recently published in the journal *Nature*, was a collaboration between postdoctoral student Alexander Huth, graduate student Wendy de Heer, and faculty members Tom Griffiths, Frederic Theunissen, and Jack Gallant.

To create a ‘semantic atlas’ of the human brain, the researchers needed compelling audio tracks to keep participants engaged while they lay in the fMRI scanners, so podcasts were the perfect solution. By having participants listen to hours of *The Moth* — an NPR podcast of short stories — Gallant and colleagues were able to create a “brain map” showing how the cerebral cortex processes the meanings of words. Specific regions across the

brain’s semantic system responded to different categories, such as social words, words related to numeracy, and emotion words. Especially intriguing was how much of the brain was encompassed within this semantic map. Although much neuroscience research suggests that language is localized in the left hemisphere, this may only be true for the production of language; in contrast, Gallant’s study found that broad swaths of the brain are involved in processing semantic information. In Gallant’s words, “the brain areas involved in comprehension, comprehending the meaning of language, are very, very broadly distributed. I think more broadly than anyone had expected”.

An interactive version of the semantic atlas can be found on Gallant’s lab website at gallantlab.org/huth2016. You can listen to the podcast episode, “*This Is Your Brain on Podcasts*”, on the *Freakonomics* website (freakonomics.com) or through your favorite podcast subscription service.



This snapshot of the semantic atlas, featured on Professor Jack Gallant’s lab website, highlights a voxel on the right angular gyrus. The bright red and orange voxels in this region respond most strongly to social words, such as those that describe people or dramatic events. The darker red and brown voxels are predicted to respond to words related to time and location.

HONORS STUDENT SPOTLIGHT

Arda Partamanian is an undergraduate Honors student currently working on her senior thesis with Professor Serena Chen and graduate student Arianna Benedetti. We asked Arda a few questions to learn more about her interest in psychology and her current research project.

What inspired your interest in psychology?

“The people I have surrounded myself with have essentially fostered my interest in psychology. When I was in community college, I had a professor who really got me interested in the field. She was an admirable professor with a passion that drew me into psychology. I was lost before she taught me the way, and I am so happy she did because it has gotten me so far in my education. Even when I began studying and researching at Cal, my interests grew even more and I hope to be a doctoral student some day.”



What are the main research questions of your Honors project?

“I am interested in social psychology; more specifically, I am interested in looking at the self and the effects of socioeconomic status. For my thesis, I am researching the relationship between socioeconomic status and the impostor phenomenon. The impostor phenomenon describes an experience that’s common in high-achievers, in which they have trouble accepting and identifying with their own successes because they’re perpetually afraid of being exposed as frauds. Some questions I have are: Are there mediators or moderators that influence that relationship? Are feelings of belongingness similar to or separate from the feelings involved in the impostor phenomenon? Are these feelings strictly linked to only those who hold higher expectations for themselves?”

Now for a more whimsical question: if you had the chance to have lunch/coffee/dinner with any psychologist, living or dead, famous or not-so-famous, who would you want to talk with?

“I would love to talk to Solomon Asch. His research is so important in social psychology and relevant in today’s society; I would enjoy talking to him about conformity and some of his other ideas.”

GRADUATE STUDENT RESEARCH SPOTLIGHT

By: Amanda Wang

Jordan Tharp is a first-year PhD student in the Social-Personality Area. In a recent article published in the journal *Emotion*, Jordan and collaborators studied how positive urgency is related to behavioral impulsivity—in particular, with problems inhibiting responses. The research team also included Professor Sheri Johnson, graduate students Andrew Peckham and Amy Sanchez, and Professor Charles Carver from the University of Miami.

What is positive urgency?

Positive urgency describes a phenomenon where positive emotions can drive some people to react impulsively; in other words, it's the tendency to overreact to positive emotion. People with high levels of positive urgency lose control over their behavior when they feel happy; for example, being in a good mood might make them overindulge, make rash choices, or put themselves into other dangerous or troublesome situations. Typically, this propensity is assessed using the Positive Urgency Measure (PUM), which also has a negative-emotion analogue called the Negative Urgency Measure (NUM). Both of these are strongly linked to psychopathologies and are considered to be specific types of impulsivity.

How is positive urgency related to behavioral impulsivity?

Impulsivity can take many different forms, all somewhat distinct from one another. These include sensation-seeking (pursuing and craving risky activities), lack of planning, lack of perseverance (inability to stay focused on long or difficult tasks), and problems with response inhibition (the ability to stop oneself from doing things that are inappropriate in a given context). Although past research shows that negative urgency is related to problems with this last component, inhibiting responses, less is known about whether this specificity also applies to positive urgency. This study takes an important step in filling that gap.



Jordan Tharp is a PhD student in Social/Personality Psychology advised by Professors Oz Ayduk and Serena Chen. Before entering grad school, Jordan worked in the Department as Professor Sheri Johnson's lab manager studying social dominance and impulsivity.

How did the researchers study this?

To examine how positive moods influence people's impulsive behaviors, Jordan and colleagues first assessed participants' positive urgency using the PUM. Then, participants came to the lab and completed a series of tasks that measured different types of impulsive behavior and cognitive control. These included measures of response inhibition, immediate memory, risk-taking, ability to plan

ahead, willingness to wait for rewards, distortions in time perception, and perceptions of risk. All of these are components of impulsivity that are known to be conceptually distinct from one another.

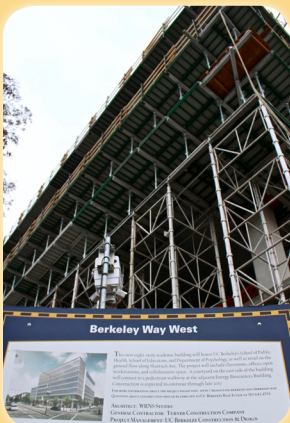
Throughout the lab session, the researchers also induced positive mood by having participants do tasks that were subtly designed to put them in a good mood. For example, one of these was a card-based gambling task that was “rigged” so that participants won a good sum of money in the end. Another was a purported intelligence task on which all participants performed well, thus providing positive feedback about their intelligence.

What did they find?

As predicted, the results showed that positive urgency was specifically related to the type of behavioral impulsivity involving problems inhibiting automatic responses, but not to the other types of impulsivity that were measured in the study. Importantly, however, this relationship between positive urgency and deficits in response inhibition only held among participants with especially high scores of positive urgency, a finding that will be important to consider for any future research that attempts to create therapeutic interventions for people high on urgency.

Construction of New Building Progresses Smoothly

The corner of Shattuck Avenue and Berkeley Way is abuzz with the sounds of construction; meanwhile, Tolman Hall is abuzz with the excitement of preparing for the upcoming move to the new building. The new, state-of-the-art facility, which will house the Psychology Department, the School of Public Health, and the Graduate School of Education, is designed to support Cal's mission to promote wellbeing, community connectedness, and interdisciplinary research.



Campus-Wide Events Reaffirm Cal's Commitment to Equity, Diversity, and Inclusion

By: Megan Norr



On November 16th, the Psychology Department and Graduate School of Education hosted an open forum to discuss diversity, decency, and inclusiveness in the wake of the 2016 presidential election. Pictured above, Department Chair Ann Kring kicked off the open-mic discussion by reiterating the campus's commitment to diversity and inclusion.

During a time when the country seems more divided than ever, the UC Berkeley community, including the Psychology Department, is taking an active approach to affirming a longstanding commitment to inclusiveness and equity for all students, faculty, and staff. Through campus-wide communications and events, both formal and informal, UC leaders and students have encouraged discourse and reconciliation in the weeks following the election.

The Department and the Graduate School of Education hosted a gathering outside Tolman Hall on November 16 to share thoughts, hopes, and reminders of our values of inclusiveness. Faculty, students, and staff participated in an open-mic discussion, and afterward, everybody was invited to write their thoughts on Post-Its and add them to an affirmation wall demonstrating our commitment to decency and diversity. This wall of reflective posts served as a reminder that we are stronger together.

After all, as the departmental diversity statement reminds us, “Our differences—of age, race, gender, religion, ethnicity, ability status, national origin, gender identity, sexual orientation, socioeconomic status, skills, ideas, experience and more—enhance our ability to achieve the university’s core missions of public service, teaching, and research.” Departments throughout the campus have also organized smaller gatherings to discuss the state of the community and to provide additional opportunities for students, faculty, and staff to share with and support one another.

In the broader campus community, many leaders, including Chancellor Nicholas Dirks, did not shy away from recognizing and speaking out against the “pervasive rhetoric of intolerance” that has troubled the country in the past months. In email communications, University of California Chancellors and President Janet Napolitano highlighted the University’s central mission to foster

diversity, citing the UC's Principles Against Intolerance. These Principles focus on the mission to "educate a civil populace and the next generation of leaders" in an environment in which all are included and given an equal chance to learn, an environment in which similarities and differences alike are welcomed, explored, and celebrated. Na'ilah Suad Nasir, Vice Chancellor for Equity and Inclusion, reached out to the UC Berkeley community with a message of support, condemning "bigotry and hatred in all forms," and sharing resources for students, such as an extensive list of community and healing spaces where students can go for support.

Campus groups such as the Centers for Educational Justice and Community Engagement, including the Multicultural Community Center, Chicane Latinx Student Development, and Gender and Equity Resource Center, the Queer and Transgender Advocacy Project, UCB Hillel, acted quickly to create safe spaces

for undocumented students, people of color, women, LGBTQ+ students, and other groups, as well as for students seeking general support and discourse around tolerance and diversity issues. A rally on Sproul Plaza organized by the Department Faculty Equity Advisors, including Psychology's Rudy Mendoza-Denton, affirmed support and advocacy for a diverse, inclusive campus. It began as a small event with a handful of students and faculty but soon grew to fill Sproul Plaza with a cheering, emotional crowd of people from across the campus community. Faculty shared their personal stories, words of hope, calls for action, and messages of solidarity.

Meanwhile, Psychology Department students, faculty, and staff have been courageous and open-minded participants in discourse: sharing their stories, thoughts, and concerns, organizing and turning out to events in large numbers. Many graduate students have also united in efforts to promote positive local and national change,

for example through political activism, donating to important causes, and volunteering with local organizations. Check out page 11 in this issue for ideas that graduate students in the Department have collected.

We have risen to the challenge of reaffirming our commitment to inclusive and accessible learning for all, we have risen to collectively and individually embody tolerance, and we must strive to continue to do so. In the words of Maya Angelou:

*Just like moons and like suns
With the certainty of tides
Just like hopes springing high,
Still I'll rise...*

*You may shoot me with your words,
You may cut me with your eyes,
You may kill me with your hatefulness,
But still, like air, I'll rise.*



Professor Mendoza-Denton (pictured above) was one of many faculty members who attended the informal faculty rally on November 10th. Speaking to a packed Sproul Plaza, he reminded the cheering crowd that "our responsibility is not just to go to the voting booth...our responsibility is at the micro-level of the interactions that each of us has with another individual".

What Next? Ways To Get Involved

By: Belen Guerra-Carrillo

The recent presidential election in the United States inspired lively discussion about many topics near and dear to many, including leadership, civility, the future, and what upcoming changes in the government might mean for our country in the years to come. Regardless of political ideologies, the results of the election also reignited many people's commitment to issues that were at the forefront of both candidates' campaigns. In particular, graduate students throughout the Psychology Department have been inspired to make positive changes by seeking outlets for increased activism; some have even initiated on-campus activism efforts themselves. In that spirit, we have compiled a list of suggestions for how to support the issues that may be close to your heart. We would love to hear more ways to take positive actions, so feel free to contribute additional suggestions on the Psychology Department's Facebook page, or by emailing your ideas to PsychologiCAL (calpsychnews@gmail.com).

Take action through science

- Donate or participate in organizations committed to finding evidence-based solutions to problems that often lack federal funding. The Union of Concerned Scientists, for example, works to create solutions to the planet's most pressing scientific problems through research, advocacy, and policy. (www.ucsusa.org)
- Support organizations, such as the Climate Science Legal Defense Fund (climatesciencedefensefund.org), that protect scientists against what appear to be politically and ideologically motivated legal attacks.
- Pursue academic work that could have direct social impact. For example, our very own Professor Irving Zucker has collaborated with Annaliese Beery in research that helps reduce sex biases in neuroscience and biomedical research. Thanks in part to their efforts, the NIH not only requires the inclusion of women in clinical trials, but also expects research grant proposals to include female participants and to properly outline how sex would be considered as an important biological variable. In practice, these changes have already been critical for the health outcomes of many women. Realistically, not all basic science has life-changing translational potential, but consider ways to apply your skills or expertise to tackle societal issues.
- safe location; 2) seek immediate medical attention if needed; and 3) preserve evidence (e.g., photographs) and report the incident even if charges are not pressed against the assailant.
- If you want to take action in supporting women's reproductive rights, volunteer with or donate to organizations that aim to protect and provide access to reproductive health, such as the Center for Reproductive Rights (www.reproductiverights.org) and Planned Parenthood (www.plannedparenthood.org).
- If you are concerned about undocumented students, support organizations that work to empower undocumented youths to achieve educational and career goals, such as Educators for Fair Consideration. (www.e4fc.org).

Keep yourself informed, and educate others

- Become a tutor. You can directly improve someone's life by tutoring students who are preparing for the GED, or by teaching basic literacy, numeracy, and computer skills.
- Check out Deeds Not Words, an online community that provides tools to help people act promptly and take tangible steps to bring changes in their communities. (deedsnotwords.com).
- Sign up for IssueVoter.org. This website provides easy ways to learn who to lobby for, as well as resources for keeping up with legislation pertaining to issues that matter to you. After all, the decisions our representatives make can affect our daily lives tremendously.

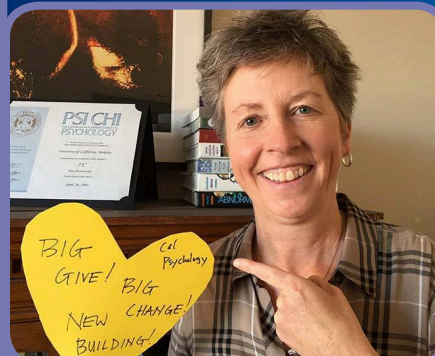
Stand up for yourself and others

- Learn what to do if you witness, or are the target of, a hate crime. The University's Division of Equity and Inclusion offers specific advice and resources that can be found on their website. In short: 1) get to a

PsychologiCAL
3210 Tolman Hall
Department of Psychology
University of California
Berkeley, CA 94720-1650

Give to Berkeley and Change The World

Thanks to your support, the Psychology Department recently raised over \$10,000 during the 24-hour BIG GIVE campaign. Thanks to all alumni, friends, and students who pitched in to help the Department continue pursuing excellence in research and education!



Editor-In-Chief
Amanda Wang

Faculty Editor
Silvia Bunge

Contributors
Amanda Wang
Megan Norr
Belen Guerra-Carrillo
Yuan Meng

Email submissions and
subscription requests to
calpsychnews@gmail.com
or mail
them to:

PsychologiCAL
3210 Tolman Hall