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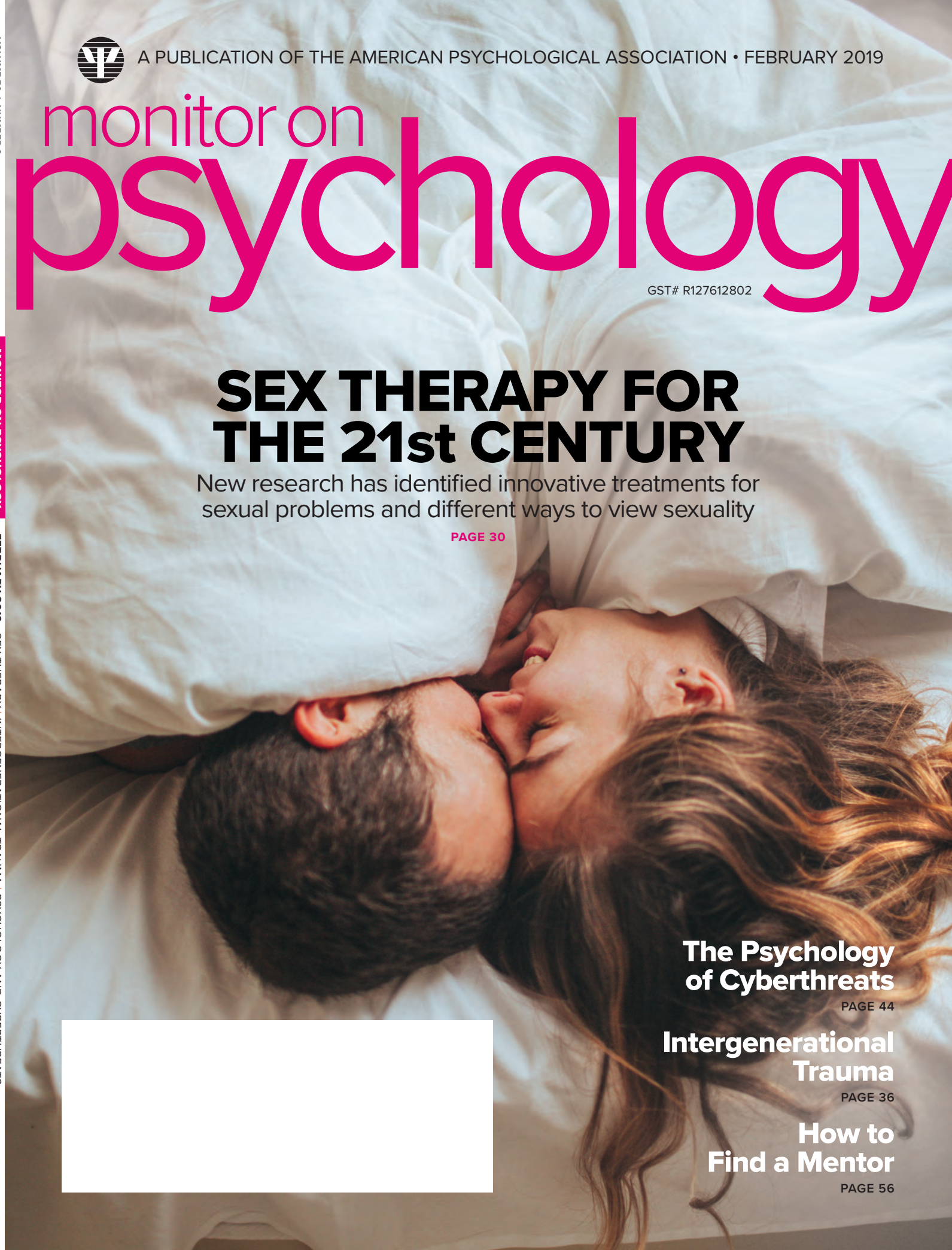
monitor on psychology

GST# R127612802

SEX THERAPY FOR THE 21st CENTURY

New research has identified innovative treatments for sexual problems and different ways to view sexuality

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The Psychology of Cyberthreats

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Intergenerational Trauma

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How to Find a Mentor

PAGE 56

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Jack A. Naglieri, Ph.D. & Sam Goldstein, Ph.D.



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BPA WORLDWIDE



THE LEGACY OF TRAUMA

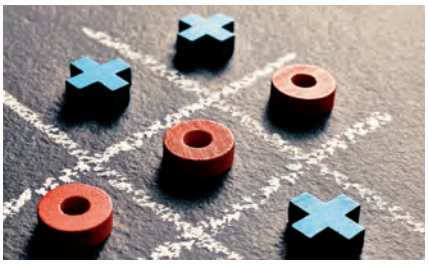
In research and practice, psychologists are exploring whether and how mass cultural and historical traumas affect future generations. Work with families whose ancestors survived the Holocaust, the cultural displacement of American Indians, the enslavement of African-Americans and other tragedies is uncovering transgenerational effects that are psychological, familial, social, cultural, neurobiological and possibly genetic. *See page 36*



THE PSYCHOLOGY OF CYBERTHREATS

With smartphones, smart homes and smart cars, the opportunities for hackers to tap into our personal information are growing. Psychologists are among the researchers exploring behavioral science solutions that can help keep people safe in a world where we interact with technology at almost every moment. *See page 44*

Departments



Gaming to study human perception and task performance. Page 52

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Meet the national autism coordinator. Page 27

COVER STORY | CE CORNER

SEX THERAPY FOR THE 21ST CENTURY: FIVE EMERGING DIRECTIONS

More than half a century has passed since famed sex researchers Masters and Johnson began their pioneering research on sex. Now, a new generation of researchers has identified novel ways to view sexuality and innovative ways to treat sexual problems, including issues with arousal, desire, pain and inability to achieve orgasm. *See page 30*

COVER: ALEKSANDAR NAKIC/GETTY IMAGES



CAREER

"Our vitality as a profession will depend on tackling mental health issues that are co-morbid with physical issues."

Kevin Arnold, PhD, Center for Cognitive & Behavioral Therapy, Columbus, Ohio. See page 60

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FOR THE BENEFIT OF ALL

We must make psychological science more accessible to the public. Here are ways to do that.

BY ROSIE PHILLIPS DAVIS, PhD, APA PRESIDENT

When I want my young nieces and nephews to understand psychological science I ask, "What makes you pick up your smartphone every few minutes?" As they look up from their screens, I tell them about variable intermittent reinforcement schedules and how the software developers who created texting, apps and social media relied on psychological knowledge to keep us well connected to our devices. That explanation gives my nieces and nephews a better understanding of psychological science in their everyday lives, and I educate "the public."

APA exists for the benefit of all, and that benefit rests on a foundation of science. I believe we must make psychological science far more accessible to the public so that people understand the connections between the brain and thoughts, and feelings and behaviors. By making psychological knowledge more visible in everyday life, the public can better appreciate the role of psychologists in health care, education, the workplace and other domains.



APA President Dr. Rosie Phillips Davis

JOHN DAVID PITTMAN

Here's another story that I like to share about the importance of psychologists' knowledge: I have suffered with back pain. My doctor wanted to give me a steroid injection even though my MRI revealed a relatively healthy spine. As a psychologist, I knew that my pain could be linked to feelings of anxiety and anger, so I declined the shots and concentrated on addressing biopsychosocial aspects of the pain through cognitive therapy and behavioral interventions. My back got better without medication.

If psychologists make information available about the interaction of the brain and the rest of the body, perhaps the medical profession will begin to rely more on psychological treatment for pain management, including to prevent and treat opioid addiction.

Sometimes an audience can understand science better from someone who seems to be more like them. The good news is that psychological scientists are as diverse as society and that diversity allows scientists to take a broader view of behavior and develop hypotheses and theories in ways that make our science more generalizable. Further, it can transform the communication of scientific outcomes in ways that are more understandable and consumable by those communities represented by those diverse scientists.

Psychological science must be shared broadly. As a part of an effort to communicate psychological science, APA has launched the PsycShorts science video festival and competition, which is one of my two presidential initiatives for 2019. Can you accurately and creatively explain a concept or finding from psychological science in less than two minutes? If so, consider sharing your knowledge in a video! Learn more at https://on.apa.org/PsycShorts. ■

ANOTHER GROWTH AREA FOR PSYCHOLOGY

We read with great interest your November article "10 Trends to Watch in Psychology." We would like to add that organizationally focused psychological practice, including industrial and organizational (I/O) psychology, consulting psychology and executive coaching, are among the fastest-growing areas of psychology.

U.S. News & World Report rated I/O psychology as the second-best science job and the 19th best STEM job. It is also the highest paid and the fastest-growing psychology subfield. Similar growth (more than 7 percent) can be seen with executive coaching, a postgraduate specialization within I/O and consulting psychology. In fact, coaching is one of the top three learning approaches that HR leaders use to develop the next generation of leaders. Coaching opportunities can be found within firms, internal learning organizations and talent development organizations. Finally, the 2018 *American Psychologist* special issue on teams highlights another example of a growing opportunity for consulting and I/O psychology practitioners—team consulting and coaching. This area is important because its practitioners translate psychological science into practice for the benefit of individuals, teams and organizations.

Bill Berman, PhD, *President, Div. 13 (Society of Consulting Psychology)*
Randy White, PhD,
Past President, Div. 13, Council of Representatives, Div. 13
Jeff McHenry, PhD,
Council of Representatives, Div. 14 (Society for Industrial and Organizational Psychology)

WHAT ABOUT A PLANT-BASED DIET?

The November *Monitor* highlights the role psychologists play in slowing climate change ("Climate Change Is Our Call to Action"). But the article fails to show psychologists promoting the one action that individuals can do every day, without changes in government policies or regulations, supportive recycling arrangements or anyone's permission: They can switch to a plant-based diet.

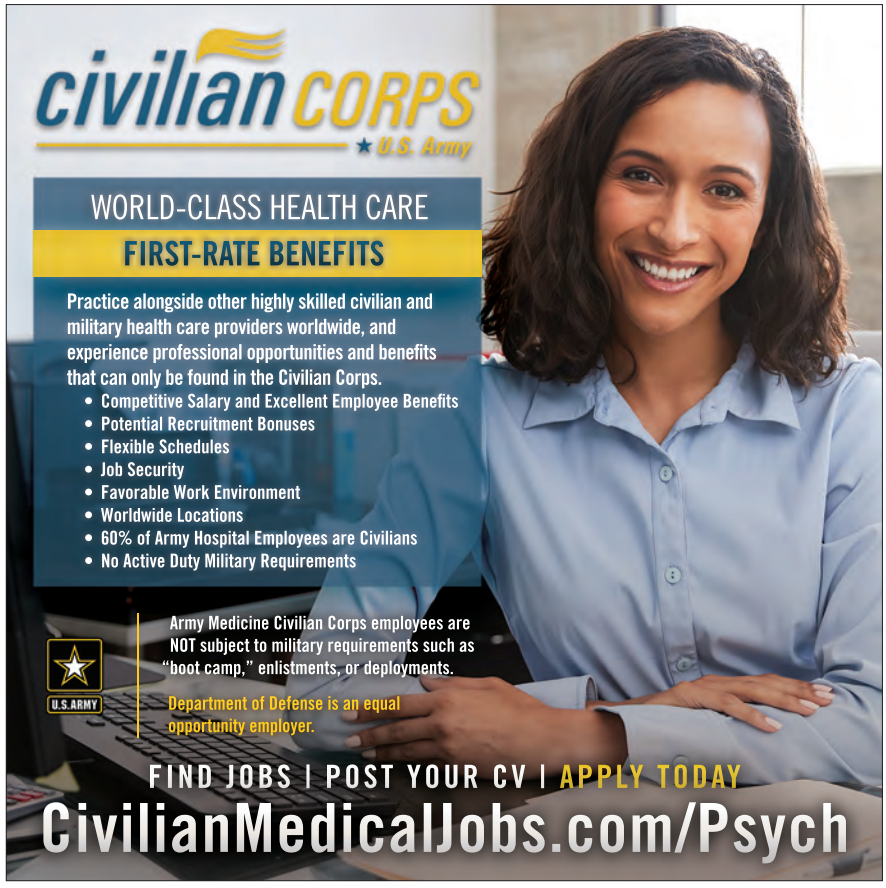
We assume this recommendation is omitted in large part because psychologists, like economists and climate scientists, are not vegan themselves. We remind them that animal agriculture contributes as much greenhouse gas in carbon equivalents as all transportation combined. Animal agriculture is a major source of water shortage, water pollution and food shortage, through the diversion of crops to feed animals.

Eating a plant-based diet has the added benefit of stopping our participation in the torture of sentient beings, which is the basis of animal agriculture. We assume the featured psychologists share that value, and we would appreciate simultaneously promoting less violence and effective environmental policy.

Amy E. Sibulkin, PhD,
Tennessee State University
J.S. Butler, PhD,
University of Kentucky

OUR FAVORITE TWEET

Re: "Lab Work: Can Making Suicide More Difficult Save Lives?" (November)
@BartAndrews The amazing @PsychBrownBag talking means safety, one of the best tools we have to do #suicideprevention at the population level. Love that @APA covering this and seeing @AASuicidology experts at work. ■



RAISING THE VISIBILITY OF PSYCHOLOGISTS' WORK

APA is committed to translating psychological science for the public and showing how our contributions touch every facet of life

BY ARTHUR C. EVANS JR., PhD

One of the challenges we face as psychologists and as an association is changing the public perception of psychology. Despite our efforts to broaden the public's understanding that psychotherapy is only one facet of the field, it has been difficult to move the dial beyond this stereotype. Psychology deserves credit for many innovations, from the design of jet cockpits to the third brake light on cars to strategies to end smoking.

Some of these misperceptions are thanks to mass media that depict us only as therapists or crime-busters. But some are of our own making. Psychologists and APA must do better at translating psychological science for the public and demonstrating how our work touches every aspect of human behavior, daily living and major societal issues. By connecting these dots, we can help ensure that the public understands the breadth of psychology—from clinical practice to behavioral economics to cognitive science—thus elevating the impact and image of our work.



APA CEO
Dr. Arthur C. Evans Jr.

SCOTT SUCHMAN

We must also address misperceptions around the rigor and transparency of our science. To do this, APA has partnered with the Center for Open Science at the University of Virginia to urge researchers to register their studies beforehand and share their data afterward. In 2018, we named our first open science and methodology chair to work with APA authors, reviewers, editors and our publications board to develop best practices for the evolving open science landscape in research. Also last year, we updated and expanded our APA Journal Article Reporting Standards, which are aimed at enhancing the quality of published research by promoting transparency and facilitating the assessment of rigor.

APA is also raising the visibility of the variety and breadth of psychologists' work through our public communications vehicles, such as our podcast "Speaking of Psychology" and other social media channels; our "Psychology: Science in Action" website; and our ongoing publicizing of interesting and relevant research published in APA's journals. But there's always room for more.

In 2019, we plan to up our game, devoting more resources to showcase psychology to the public. Stay tuned to the *Monitor*, our podcasts, our YouTube channel and our other communications vehicles as we celebrate the diverse, amazing things psychologists do for a living and to benefit society. ■

The Hot List

ONLINE LAB BRINGS SCIENCE TO LIFE

Immerse your students in psychological science by enabling them to map their visual blind spots, explore how antidepressants and other drugs affect behavior and see what happens when they stimulate different parts of the brain at APA's newly renovated **Online Psychology Laboratory.** The **free** lab offers a wealth of interactive psychology experiments and data-collection tools and is now accessible via mobile devices. Faculty can also download student-generated data from the site for use in teaching data analysis in statistics courses. Learn more about the new lab at **https://opl.apa.org.**



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COMPILED BY LEA WINERMAN

In Brief

THE LATEST PEER-REVIEWED STUDIES WITHIN PSYCHOLOGY AND RELATED FIELDS

Fiction's Real-World Benefits

People who read fiction are better at understanding social cues, finds a meta-analysis in the *Journal of Experimental Psychology: General*. Researchers analyzed 53 effect sizes from 14 published and nonpublished studies. They found that fiction readers scored somewhat higher on tests of social-cognitive ability—the ability to perceive, respond to and interpret social information—compared with people who read nonfiction and those who don't read at all. The authors note the need for further research on the effects of reading fiction on behavior in the real world. DOI: 10.1037/xge0000395



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Depression rates are climbing among the least educated Americans.

DRAGANA991/GETTY IMAGES

DEPRESSION DISPARITIES

Depression is becoming more common in the United States, while disparities in its prevalence and treatment are increasing between the most and least educated Americans, finds a study in the *American Journal of Orthopsychiatry*. Researchers analyzed data from participants in the National Health and Nutrition Examination Survey between 2005 and 2014. During that time, the prevalence of depression increased, but there were differences by gender and education level. Among the least educated participants, the likelihood of experiencing moderate to severe depressive symptoms increased during that time; for the most educated, that likelihood remained stable (women) or decreased (men). During the same time, among people who were depressed, the likelihood of receiving treatment declined (women) or remained stable (men) for the least educated group but stayed steady (women) or increased (men) for the most educated.

DOI: 10.1037/ort0000370

NOT-SO-EASY READING

Much of the mental health information available to the public online is written at too high a reading level, suggests a study in *American Psychologist*. The Centers for Disease Control and Prevention and the American Medical Association recommend that online health information be written at the sixth- to eighth-grade level so that it is broadly accessible to the public. Researchers examined the grade-level readability of mental health information on six popular websites, including PsychCentral.com, MayoClinic.org and WebMD.com. Overall, they found, the reading levels were aimed at about 12th grade or higher across the different websites.

DOI: 10.1037/amp0000324

GENEROSITY PAYS OFF

Unselfish people make more money and have more children than selfish people do, finds a study in the *Journal of Personality and Social Psychology*. Researchers analyzed data from four large panel studies with a total of more than 60,000 participants in the United States and 23 European countries. Overall, people with higher levels of prosociality—as measured by both their actions and their motivations—had higher incomes and more children than people with lower levels of prosociality. In a follow-up study with 400 online participants, the researchers tested whether people's beliefs about generosity lined up with the research findings. On average, participants correctly predicted that more generous people would have more children, but incorrectly believed that generous people would make less money.

DOI: 10.1037/pspp0000213

SMOKING'S EFFECTS, DOWN THE GENERATIONS

Fathers who smoke may raise their children's and perhaps even grandchildren's risk for attention-deficit hyperactivity

disorder, suggests a study with mice published in *PLOS Biology*. Researchers exposed male mice to nicotine in their drinking water, then bred them with female mice that had not been exposed to nicotine. The offspring of the nicotine-exposed mice were more likely to show signs of hyperactivity and cognitive deficits compared with offspring of mice not exposed to nicotine. Among the grandchildren of the original nicotine-exposed mice, the effects were more subtle: The researchers found significant cognitive deficits in this group, but only among male offspring of the original mice's female children. The researchers also found changes in DNA methylation (an epigenetic mechanism) in the nicotine-exposed mice that could explain the link.



Epigenetic changes to the DNA of men who smoke may harm the health of their progeny.

DOI: 10.1371/journal.pbio.2006497

GENDER DISPARITIES

In more prosperous, egalitarian countries, women and men show greater differences in their traits and preferences, finds a study in *Science*. Researchers analyzed data on about 80,000 women and men from 76 countries who participated in the Global Preferences Survey, in which participants answered questions about scenarios that measured characteristics such as their patience, altruism, trust and willingness to take risks. Then, the researchers compared those data with country-level information on GDP and gender equality. Overall, women and men responded to the survey most differently in countries that had higher levels of economic development and gender equality. The researchers suggest that more advanced economic



In countries with more equality between the sexes, men and women differ more in their traits and preferences.

TOP: TOMCH/GETTY IMAGES; BOTTOM: PEOPLE IMAGES/GETTY IMAGES

and social conditions facilitate the formation and expression of gender-specific characteristics.
DOI: 10.1126/science.aas9899

SES AND HEALTH

People of lower socioeconomic status (SES) have more markers of systemic inflammation in their bodies, finds a study in *Molecular Psychiatry*. Researchers conducted a meta-analysis of 43 papers with a total of 111,156 participants, all of which looked at the relationship between SES and one or both of two common markers of systemic inflammation: C-reactive protein and interleukin-6. Overall, people with lower SES had higher levels of these inflammatory markers, a finding that held true whether the studies characterized SES in terms of income or education. The results support the idea that inflammation is a possible biological mechanism linking low SES to poorer health, the researchers conclude.
DOI: 10.1038/s41380-018-0259-2

GOOD MEMORIES, GOOD HEALTH

People who can look back fondly on their childhoods have better health later in life, suggests a study in *Health Psychology*. Researchers examined data from two nationally representative longitudinal studies in the United States, with more than 22,000 total participants. One study followed adults in their mid-40s for 18 years, and the second followed adults over age 50 for six years. Both surveys included questions about how participants remembered their childhood relationships with their parents, as well as questions about their health, chronic conditions and depressive symptoms. Overall, participants who remembered higher levels of affection from their mothers in early childhood experienced better physical health and fewer depressive symptoms as adults. Those who remembered more support from their fathers also experienced fewer depressive symptoms.
DOI: 10.1037/hea0000694

People who have good memories of their childhoods also have better physical and mental health later in life.



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BARGAINING WHILE BLACK

African-American job seekers end up with less money after salary negotiations because of hiring managers' racial prejudice, suggests a study in the *Journal of Applied Psychology*. In the study, 218 participants (of different races and ethnicities) were randomly assigned to be "job candidates" or "hiring evaluators" and each pair was asked to negotiate a salary ranging from $82,000 to $90,000. Although white and African-American candidates did the same amount of negotiating, on average, racially biased hiring evaluators believed that the African-American candidates had negotiated more. Also, African-American candidates ended up with $300 less in their final salary offers, on average, for each time they were perceived to make an offer or counteroffer.

DOI: 10.1037/apl0000363

WALK THE WALK

Actions can speak louder than words in convincing people to have solar panels installed on their homes, finds a study published in *Nature*. Researchers analyzed data on a residential solar panel program in 58 Connecticut towns. The program recruited volunteer community "ambassadors," many of them local political leaders and activists, to encourage homeowners to install solar panels. The researchers found that setting an example mattered—ambassadors who had solar panels installed on their own homes recruited 62.8 percent more people to take part in the program compared with ambassadors who did not. That held true whether the ambassadors said they installed solar panels for environmental or economic reasons.

DOI: 10.1038/s41586-018-0647-4



African-American job seekers may get less money in salary negotiations than their white peers because of hiring managers' racial prejudice.

DRUGS OR FRIENDS?

When rats are given a choice between using an addictive drug and socializing with other rats, they generally choose to socialize, finds a study in *Nature Neuroscience*. Researchers trained the rats to press one lever to spend time with another rat or a different lever to receive a dose of heroin or methamphetamine. Across multiple conditions (including different drugs and dosages, sex of the rats and the rats' previous level of addictive responses to the drugs), the rats consistently chose social time over the drugs; they only turned to the drugs when the researchers punished them for choosing the social time (with electric shocks) or delayed their access to the other rats. The researchers say the results suggest a role for promoting social interactions in efforts to prevent and treat substance use disorders in humans.

DOI: 10.1038/s41593-018-0246-6



Rats would rather spend time with other rats than get access to addictive drugs.

COLORFUL LANGUAGE

In both Greek and Russian, "light blue" and "dark blue" are separate colors: There are words for "light blue" and "dark blue" but no word for simply "blue." German, on the other hand,

TOP: CECILIE_ARCURS/GETTY IMAGES; BOTTOM: WILDCAT78/GETTY IMAGES



Contrary to some previous research, screen time doesn't appear to interfere with children's sleep.

like English, has one word for the category blue. Now, a study in *Psychological Science* suggests that this difference among the languages can affect speakers' visual perception. In a study with 103 native Greek, Russian and German speakers, researchers found that Greek and Russian speakers were more likely to notice a light blue triangle imposed on a darker blue background, compared with a light green triangle on a darker green background. Native German speakers, however, were no more likely to see the blue triangle than the green one.

DOI: 10.1177%2F0956797618782181

SCREEN TIME AND SLEEP

Screen time with digital devices doesn't appear to interfere with children's sleep all that much, finds a preregistered cohort study in *The Journal of Pediatrics*. Researchers analyzed data on more than 50,000 children in the United States who took part in the 2016 National Survey of Children's Health. They found that while more screen time was associated with slightly less sleep, the impact was modest: Each extra hour of screen time was associated with eight minutes less sleep per night for children under age 5 and three minutes less sleep per night for children older than 5. This effect is much smaller than other contextual factors shown to affect sleep, such as early school starting times, the researchers say.

DOI: 10.1016/j.jpeds.2018.09.054



Military veterans with PTSD had better outcomes when they were allowed to choose the treatment they preferred—therapy or medication.

PATIENT CHOICE

Patients with post-traumatic stress disorder (PTSD) do best when they can choose their treatment—therapy or medication—finds a study in *The American Journal of Psychiatry*. Researchers asked 200 PTSD patients (all military veterans or sexual assault survivors in the United States) to choose whether they preferred prolonged exposure therapy or medication (sertraline). Half were given their preferred choice, while the other half were randomly assigned to one or the other treatment. Two years later, 70 percent of those given therapy were PTSD-free, as were 55 percent of those who received medication. But choice made a difference: Among patients who wanted and received therapy, 74 percent were free of PTSD, compared with only 37 percent of those who wanted therapy but received medication. And 75 percent of patients who were given their preferred treatment completed the full treatment program, compared with under half of those who got the treatment that they didn't want.

DOI: 10.1176/appi.ajp.2018.17090995

CETACEAN PERSONALITY

Killer whales share a similar personality structure with humans and chimpanzees, finds a study in the *Journal of Comparative Psychology*. Researchers asked trainers and other staff to rate the personality characteristics of 24 killer whales at SeaWorld Orlando, SeaWorld San Diego and a zoo in Spain. The trainers rated the whales

TOP: VINNSTOCK/GETTY IMAGES; BOTTOM: MTMCOINS/GETTY IMAGES

on 38 characteristics, including playfulness, independence, stubbornness, bravery, sensitivity and protectiveness. They found that the evaluations had good inter-rater reliability—the trainers and staff tended to agree with one another about the whales' characteristics. Further, when the researchers analyzed the whales' characteristics according to the five-factor personality model commonly used to describe humans (extraversion, openness to experience, agreeableness, conscientiousness and neuroticism), they found that they were organized similarly to the personality characteristics of both humans and chimpanzees. They suggest this may be because whales, like humans and chimps, live in complex social groups.
DOI: 10.1037/com0000146

RACE AND THE EPPP

Racial and ethnic-minority applicants for psychology licensure pass the Examination for Professional Practice in Psychology (EPPP) at lower rates than white exam-takers do, finds a study in *The Journal of Psychology: Interdisciplinary and Applied*. Researchers used a Freedom of Information Act request to the New York State Board for Psychology to obtain demographic information and exam pass rates for 25 years of licensure applicants in the state. They found significant differences in EPPP failure rates for first-time test-takers among different groups: a 38.5 percent failure rate for African-American applicants, 35.6 percent for Hispanic applicants, 24 percent for Asian applicants and 14.1 percent for white applicants. The researchers argue that given these discrepancies, and the limited amount of research into the exam's validity, more psychometric investigation into the exam is warranted.
DOI: 10.1080/00223980.2018.1504739

Killer whales have personalities that can be described by the Big Five personality factor model: extraversion, openness to experience, agreeableness, conscientiousness and neuroticism.

BOYS LINKED TO POSTPARTUM DEPRESSION

Women who give birth to boys are more likely to suffer from postpartum depression, suggests a study in *Social Science & Medicine*. Researchers asked 296 women—average age 59, and primarily from the United Kingdom—to complete online surveys on their reproductive histories, including the number of children they had, those children's birth histories, the children's sex and their own



NATALIA ZELENOVA/GETTY IMAGES

histories of depression. Overall, the odds of experiencing depression following the birth of a child were 71 to 79 percent higher after giving birth to a boy compared with a girl. The researchers hypothesize this may be because women carrying male fetuses experience more systemic inflammation.

DOI: 10.1016/j.socscimed.2018.10.008

SEX ON THE BRAIN

Nearly 9 percent of people in the United States experience distress caused by having difficulty controlling their sexual urges, feelings and behaviors, finds a study in *JAMA Network Open*. Researchers analyzed responses from a nationally representative sample of 2,325 adults who took the Compulsive Sexual Behavior Inventory (CSBI-13) as part of the 2016 National Survey of Sexual Health and Behavior. In what the researchers say is the first national study to document this, they found that 10.3 percent of men and 7 percent of women reported clinically relevant levels of distress and/or impairment associated with controlling sexual feelings, urges and behaviors.

DOI: 10.1001/jamanetworkopen.2018.4468



A study found no association between whether 1-year-olds sleep through the night and their later cognitive and motor development.

PHYSICAL GRIEF

Extreme grief can increase sufferers' risk of serious physical illness, suggests a study in *Psychoneuroendocrinology*. Researchers tested blood samples from 99 people whose spouses had recently died. They found that those who suffered from "elevated grief"—an inability to accept the loss, a sense that life is meaningless and other symptoms—showed higher levels of markers for bodily inflammation than widows and widowers without elevated grief. Inflammation is a risk factor for many illnesses, including stroke and heart attack. Those who had the most severe grief showed 53.4 percent more inflammation than those who had the least severe grief.

DOI: 10.1016/j.psyneuen.2018.10.006

People who suffer extreme grief show physical markers of bodily inflammation—a risk factor for stroke.



NEW PARENT EXHAUSTION

Pediatricians and sleep experts often tell parents to expect infants to sleep through the night by around 6 months old, but many babies haven't yet hit this milestone even at 1 year, finds a study in *Pediatrics*. And while the parents may be tired, the babies don't appear to suffer any ill effects. Researchers analyzed data from a cohort study of 388 babies in Quebec and Ontario, Canada. They found that at 6 months, 38 percent of typically developing infants were not yet sleeping six consecutive hours and 57 percent weren't sleeping eight consecutive hours. At age 1, 28 percent of infants weren't yet sleeping six hours straight and 43 percent weren't sleeping eight consecutive hours. The researchers also found no association between whether the babies were sleeping through the night at age 1 and their later cognitive and motor development. ■

DOI: 10.1542/peds.2017-4330

● **For direct links** to the research cited in this section, visit our digital edition at www.apa.org/monitor/digital.

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Datapoint

NEWS ON PSYCHOLOGISTS' EDUCATION AND EMPLOYMENT FROM APA'S CENTER FOR WORKFORCE STUDIES

PSYCHOLOGY FACULTY EARN LESS THAN FACULTY IN SIMILAR DISCIPLINES

■ In 2018, the median salaries for tenured/tenure-track psychology faculty were $62,071 for assistant professors, $71,483 for associate professors and $88,894 for full professors.[1,2]

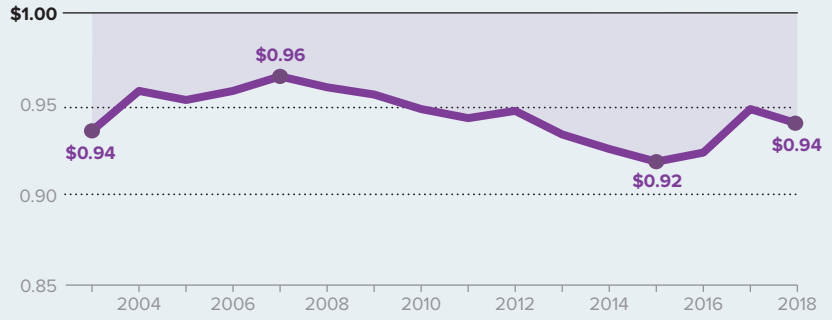
■ That's less than faculty in other fields. In fact, psychology faculty earn less on the dollar than faculty from other social sciences[3] or from other STEM disciplines such as biological sciences. Faculty in other social sciences earn approximately the same median salary as faculty across all disciplines, while faculty in biological sciences are paid well above parity.[4]

■ For years, psychology faculty have been paid below parity. Their pay ratio began to decline sharply after the 2008 recession, when budget cuts forced many institutions to decrease or freeze raises; psychology faculty sustained an especially hard hit. Although there was a rebound in 2017 with the pay ratio increasing to 95 cents to the dollar, the pay ratio remains low.

2018 Median Pay Ratios of Faculty Disciplines by Rank



Pay Ratio of Psychology Faculty to All Faculty*



*Tenured/tenure-track faculty

Source: 2018 College and University Professional Association for Human Resources (CUPA-HR) Faculty in Higher Education Survey

By Jacqueline Bichsel, PhD,[5] Peggy Christidis, PhD, Jessica Conroy, BA, and Luona Lin, MPP
For more information, contact APA's Center for Workforce Studies at cws@apa.org.

[1]Data are from the CUPA-HR Faculty in Higher Education Survey, which uses IPEDS Classification of Instructional Programs codes to collect data by faculty discipline. Data consist of institutional-level median salaries paid by discipline (for U.S. institutions only). For more information, see www.cupahr.org/surveys/results/faculty-in-higher-education.
[2]Median salaries for tenured/tenure-track psychology faculty in each academic rank are collapsed across type of institution (i.e., public, private independent and private religious).
[3]"Other social sciences" is identified as CIP code 45 in IPEDS and combines the disciplines of political science, economics, sociology, anthropology and geography. For more information on CIP codes, see https://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55.
[4]The $1.00 mark is the reference point for what all faculty earn and comes from computing a median salary for tenured/tenure-track faculty salaries combined across all disciplines. The $1.00 reference point in figure 1 is broken out further by academic rank but collapsed across all academic ranks in figure 2. Pay ratios are derived by dividing the median salary of all faculty by the median salary of faculty from the designated discipline.
[5]Director of Research, CUPA-HR.

BILL WEBSTER

STUDYING ADOLESCENTS WITHOUT PARENTS' CONSENT

A new APA resolution supports mature minors' participation in research without parental permission

BY KIRSTEN WEIR



Research suggests that adolescents as young as 14 are capable of making such decisions for themselves.

Brian Mustanski, PhD, a clinical psychologist and professor at Northwestern University, studies the health and development of LGBTQ youth. In 2007, while at the University of Illinois at Chicago, he received a two-year grant to study mental health and HIV prevention in LGBTQ teens—and spent the first 10 of those 24 months fighting for approval from his university's institutional review board (IRB).

The delay came down to a question of consent: Mustanski felt it was important that the 16- and 17-year-olds he was studying should be allowed to participate without their parents' permission, since many potential participants weren't open with their parents about their sexuality or sexual activity. The IRB wasn't so sure waiving parental permission was a good idea.

"After a lot of discussions and consultations with experts in ethics and law, I was able to get a waiver of parental permission," Mustanski says. "But it came at a huge cost—almost half of my study time was spent getting IRB approval."

In a 2016 paper, Mustanski and Celia Fisher, PhD, director of the Center for Ethics Education at Fordham University in the Bronx, argued that the IRB's policy requiring parental consent for minors to participate in the research created a research bias that put vulnerable youth at risk of contracting HIV (*American Journal of Preventive Medicine*, Vol. 51, No. 2, 2016).

Mustanski and Fisher are among the many researchers who run into this issue when studying sensitive or stigmatized subjects such as substance use, sexual activity and gender identity in youth. Although federal regulations and most state laws allow for parental permission to be waived in certain instances, many IRBs remain wary, says Sangeeta Panicker, PhD, director of research ethics at APA and staff liaison to the association's Committee on Human Research.

Now, a new APA resolution aims to encourage IRBs to be more judicious when reviewing research protocols that request a waiver of parental permission. The resolution was adopted by the APA Council of Representatives in August 2018.

"If you require parental permission for research on at-risk populations, you can end up introducing a bias into the data. There are good methodological reasons for this resolution, and important ethical reasons too," says Emil Chiauzzi, PhD, principal scientist at the health data sharing website Patients Like Me and 2018 chair of the Committee on Human Research, which drafted the resolution. "If we're going to get a good handle on what's going on with our younger populations, develop interventions and target high-risk populations, we need to know we're getting a true picture."

PROTECTING MINORS

The resolution aims to clear up confusion. Regulations in most states already allow mature minors to seek health care for sensitive or stigmatized health issues without parental involvement—but investigators and IRBs aren't always aware of that. There's no clear age at which a minor suddenly becomes "mature," but research cited in the resolution supports the idea that adolescents as young as 14 are capable of making such decisions for themselves.

In developing the resolution, Panicker says, one important consideration was that most state laws allow adolescents to access health care without parental permission, though



YURICAZAC/GETTY IMAGES

the specifics vary from state to state. Such legislation ensures that young people can freely access important services such as contraceptives and reproductive health care. The new resolution asserts that IRBs should extend that right to include participating in health research.

Waiving parental permission isn't necessary for all types of research, Panicker notes. If you're studying nonsensitive topics such as attention or memory, adolescents aren't likely to be put off by the idea of asking parents for permission. But for young participants in stigmatized groups or those engaging in high-risk behavior, involving parents could prevent minors from participating—or put adolescents at risk of parental conflict or even abuse.

BETTER STUDIES

In his research with sexual- and gender-minority youth, Mustanski found most of the participants reported they would not have joined the study if parental permission had been required, often because they were not "out" to their parents about their sexual or gender identities or did not want to reveal to parents that they were sexually active (*Archives of Sexual Behavior*, Vol. 46, No. 5, 2017). "The majority would not do the study if they had to get their parents' permission. And those who would allow us to get parental permission looked very different on many health outcomes," he says.

In other words, requiring permission may lead to biased samples, causing researchers to overestimate or underestimate the scope of health problems in at-risk populations. Failure to accurately characterize those problems could lead to inadequate funding and a lack of important services such as HIV prevention or substance use interventions.

The APA resolution supports waiving parental permission when consent could potentially harm the mature minor—and, importantly, when alternative research protections are in place. Parental permission is only one type of protection, Mustanski says. In its absence, researchers can put other protections into place, such as creating developmentally appropriate study materials and explaining the terms of consent in ways that young people can understand.

"Researchers should think about what protections participants need in order to make an informed decision, what the risks of harm are and how they will reduce those risks," Mustanski says.

He was not involved in drafting the new APA resolution, but he welcomes the development.

"We don't actually need to change the regulations [around parental permission]. We need to help investigators and IRBs understand the regulations and apply them correctly," he adds. "Resolutions such as this can help with that initiative." ■

● **To read the resolution,** go to www.apa.org/about/policy/resolution-minors-research.pdf.

NEED HELP TRACKING PATIENT OUTCOMES?

A new APA tool enables practitioners to monitor patient progress in an effort to improve care and, eventually, reimbursement

BY AMY NOVOTNEY



FIZKES/GETTY IMAGES

Pricing for the registry starts at $60 a year for APA members who are non-Merit-Based Incentive Payment System (MIPS) providers and $234 a year for APA members who plan to report MIPS data to CMS through the registry.

Evidence suggests that tracking treatment outcomes improves patients' health and quality of life because it enables a psychologist to see how a patient's treatment plan is working—and to adjust those therapies as needed. Now, to help psychologists and other behavioral health practitioners track patient outcomes, APA has developed the **Mental and Behavioral Health Registry,** an electronic database that enables practitioners to enter encrypted data to track patients' responses to treatment.

"The ability to track patient outcomes and adjust treatment is especially salient for patients at risk for prematurely dropping out of treatment due to a lack of progress or deterioration," says APA Practice Director of Research and Special Projects Vaile Wright, PhD, who helped to develop the database.

APA also expects the registry will, over time, provide a wealth of de-identified data for researchers and clinical scientists to study psychotherapy outcomes, health disparities and therapist expertise.

And the database provides another critical benefit: It enables psychologists to document the value of their services. That's become increasingly important with the new Merit-Based Incentive Payment System (MIPS) launched by the Centers for Medicare and Medicaid Services (CMS) in 2017, with psychologists being added to the program in 2019. MIPS rewards providers with larger payments when they track and show patient improvement on quality and clinical measures such as depression and anxiety screening scores. The system also penalizes providers who score the lowest in these areas by reducing payments.

So far, only a small number of psychologists must participate in MIPS: Those who treat more than 200 Medicare beneficiaries, bill Medicare for more than $90,000 in allowed charges and provide more than 200 covered professional services in a year. However, psychologists who meet at least one of these requirements can opt in to MIPS.

But that doesn't mean psychologists should ignore the new system. Value-based initiatives related to behavioral and mental health care will likely become more common, says Wright. "The federal government is often the driver of change that trickles down to third-party and commercial payers, so while this might not affect you now, we really do think that quality improvement is here to stay. It's important to be knowledgeable about these changes." ■

● **For more information** on accessing the Mental and Behavioral Health Registry, go to www.apaservices.org/practice.

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DECRIMINALIZING HOMOSEXUALITY IN INDIA

The country's Supreme Court has overturned a 19th-century ban on homosexuality. Now psychologists are combating Indian heterosexism.

BY REBECCA A. CLAY

When clinical psychologist Lata Hemchand, PhD, began her private practice in Bangalore, India, almost four decades ago, she viewed her homosexual patients the way she was taught to at one of India's top training institutions—as sexual deviants. The treatment? Conversion therapy.

Parents often pushed their gay or lesbian children into treatment, asking that they be made straight, remembers Hemchand. "The fear of losing their families and social status was so strong that clients themselves would say, 'I want to get out of this,'" she says. Hemchand would show provocative photos of nude or scantily clad men and women, then administer a small shock to the client's wrist whenever a same-sex photo appeared. After 10 or 15 sessions, she would assess whether the client had developed an aversion to figures of their own gender, and then help him or her further develop that aversion.

Now both Hemchand and India have changed. For Hemchand, it was a certificate course on sexuality and culture at the University of Amsterdam that she completed in 2000—and close personal contact with members of the LGBTQ community there—that changed her mind, transforming her into one of India's most LGBTQ-friendly therapists. For India, the change came with a Supreme Court ruling in September 2018 that decriminalized homosexuality.

The court's decision overturned part of a 19th-century law introduced by the British and known as Section 377 that made sex "against the order of nature" a crime punishable by life in prison. (The law had been overturned in 2009 but was reinstated in 2013.) While the judges focused their arguments primarily on the importance of individual autonomy, nondiscrimination and privacy, they pointed repeatedly to the American Psychiatric Association's 1973 decision to remove homosexuality from its list of mental disorders. The judges also cited several APA documents, including APA's amicus brief in the U.S. Supreme Court case that decriminalized same-sex sodomy in the United States in 2003.

While rarely enforced, Section 377 has had serious consequences for India's LGBTQ community. The law has left individuals open to harassment, beatings and blackmail. Some have been forced into loveless, sexless marriages; other couples have run away together or even died by joint suicide. "There are even horrific cases of what's called 'corrective rape,' in which lesbians are raped by men with the intention of turning them into heterosexuals," says Kanika K. Ahuja, PhD, an associate professor of psychology at Lady Shri Ram College for Women at the University of Delhi.

A member of the LGBTQ community celebrates the India Supreme Court decision to strike down a colonial-era ban on gay sex, in Mumbai on Sept. 6, 2018.

While the ruling is a good first step, it's not enough, say Indian psychologists. "Society is still not really accepting," says Hemchand. "That's the sad part. We still have a lot of work to do."

PROVIDING TREATMENT

Despite the longtime ban, in some ways acceptance of homosexual behavior is deeply rooted in Indian culture, says Ahuja, citing as examples the positive depictions of same-sex activity in the 2,000-year-old Kama Sutra and in the 1,000-year-old erotic sculptures at the Khajuraho temples. "Homosexuality began to be frowned upon when the British Raj banned homosexual relations under Section 377 in 1861," says Ahuja. But while Indian society is willing to accept homosexuality in certain groups—especially



INDRANIL MUKHERJEE/AFP/GETTY IMAGES

among creative professionals in the world of fashion or film—homosexuality overall is highly stigmatized, she says.

Today, being gay in India can mean being rejected by family, being ostracized by the community and even facing violence. In a small qualitative study, psychologists Apoorva B of Manipal University and Elizabeth Thomas, PhD, of Christ University in Bangalore found that parents often reacted to daughters' coming out by denying their sexuality or trying to use violence to change them (*Journal of Psychosocial Research*, Vol. 11, No. 2, 2016).

And when Sharanya Rao, a PhD student in clinical psychology at The George Washington University in Washington, D.C., examined the impact of the law on the mental well-being of sexual minorities in India, she found that the perceived impact of Section 377 and the stress of concealing their true selves led to increased depressive symptoms and a diminished sense of belonging (*Psychology of Sexual Orientation and Gender Diversity*, online first publication, 2018). The law, says Rao, had "a very real impact in terms of how people see themselves being accepted by their country."

Throughout the long fight against the ban, Hemchand and other practitioners have worked to raise awareness, joining demonstrations, educating colleagues and issuing proclamations of support.

Unfortunately, many psychologists and other mental health professionals still share the wider society's heterosexism. While those in larger cities tend to show more sympathy toward these clients, in smaller towns and rural areas, it's largely a different story, Hemchand says. She estimates that 10 to 20 percent of mental health professionals nationwide still attempt to convert their clients.

As a result, many LGBTQ+ Indians have been reluctant to

seek therapy for fear that therapists either wouldn't understand their issues or would be actively hostile toward them, says Sadhana Vohra, PsyD, a private practitioner in Delhi who has been a pioneer in LGBTQ-friendly therapy in India. Now a growing number of psychologists are following Vohra's lead, and LGBTQ groups are circulating lists of gay-friendly therapists like her. "Even when homosexuality is a crime, you can still be encouraging of clients who belong to that community," says Vohra. "You can still be supportive of them and help them find ways to survive."

CHANGING ATTITUDES

Changing families' attitudes is a key priority for clinical psychologist Richa Vashista, a research interventionist at the Humsafar Trust, a nonprofit organization in Mumbai and Delhi that provides counseling, health-care services and advocacy for the LGBTQ community. Vashista has co-authored "Strengthening Bridges: A Manual for Counselors to Support Parents of LGBTQ" to guide mental health professionals in supporting parents.

"When children come out, the parents often blame themselves or feel guilty," says Vashista. "The mother usually blames herself, thinking something happened during pregnancy that her child turned out this way." The manual outlines helpful responses to this and other parent questions, such as what to tell their friends or why their children can't just marry and live secret lives.

Catching the next generation before they develop anti-LGBTQ attitudes is another priority for Indian psychologists, says Ahuja, who has developed an intervention to "subvert heteronormativity" among college students.

Using a scale she developed to measure Indian attitudes toward homosexuality (*Journal of Homosexuality*, Vol. 64, No. 14, 2017), Ahuja tested a three-part intervention: an educational presentation offering facts about homosexuality and its longtime presence in Indian culture; an exercise in which participants imagine they are members of a persecuted minority; and a session based on the contact hypothesis in which students interact with a gay man and a lesbian woman. Ahuja and her colleagues found that the intervention increased empathy and improved attitudes toward homosexuality in participants (*Journal of Homosexuality*, online first publication, 2018).

"We really need more such forums to talk about homosexuality and to give the opportunity for homosexuals to share their experiences," says Ahuja, noting that Indians' attitudes are typically shaped by media depictions of homosexuals as buffoons.

Such interventions need to happen at every level, adds Vashista, who provides trainings on sexual orientation and gender identity at schools, corporations and other venues. At workplaces, for example, Indians still face enormous pressure to conform. "A client comes and tells me, 'I have to live a lie and pretend to be someone else at work,'" she says. "It takes a mental toll on them." ■

RESOURCES

Growing Up Gay in Urban India: A Critical Psychosocial Perspective
Ranade, K.
Springer, 2018

Naz Foundation (India) Trust
www.nazindia.org

Nothing to Fix: Medicalisation of Sexual Orientation and Gender Identity
Narrain, A., & Chandran, V.
SAGE, 2016

APA OUTREACH

SUPPORTING LGBTQ ACTIVISM IN OTHER COUNTRIES

LGBTQ activists around the world are hoping that India's ruling can serve as a model for change in other nations where Victorian-era British social norms still hold legal sway.

Seventy-one countries and territories still criminalize same-sex behavior, with homosexual acts punishable by death in eight of them. The hope is that the decision in the world's second-most-populous country could provide momentum for the movement globally, says Ron Schlittler, program coordinator for APA's Office on Sexual Orientation and Gender Diversity.

APA and the International Psychology Network for Lesbian, Gay, Bisexual, Transgender and Intersex Issues are happy to help provide the scientific evidence to support LGBTQ activism in other countries, adds Schlittler. "If others are considering a similar action, please touch base with us so we can work with you to help ensure that you are using the best and most current resources available." *—Rebecca A. Clay*

4 QUESTIONS FOR ANN WAGNER

As the country's national autism coordinator, Wagner is overseeing federal efforts to better study and serve people with autism spectrum disorders

BY TORI DEANGELIS

Autism spectrum disorder, or ASD, affects approximately one in 59 U.S. children, according to the most recent prevalence data from the Centers for Disease Control and Prevention. It's a set of disorders with profound effects for children and parents alike, characterized by core difficulties in communicating and interacting with others, repetitive behavior patterns and obsessive interests, with wide variations in the severity of those symptoms as well as in language and intellectual abilities.

Psychologist Ann E. Wagner, PhD, has been at the forefront of research on ASD as chief of the National Institute of Mental Health's Biomarker and Intervention Development for Childhood-Onset Mental Disorders Branch, which houses the institute's Autism Research Program. In that capacity, she oversees a wide range of studies on the characterization, pathophysiology, treatment and outcomes of people with ASD and related neurodevelopmental disorders. Last year, U.S. Department of Health and Human Services Secretary Alex Azar appointed Wagner the country's second national autism coordinator, a role mandated by Congress in 2014 that she is holding in conjunction with her branch chief job.

In the new position, Wagner helps coordinate and implement the activities of the federal departments and agencies involved in research, service and policy related to ASD. The work helps put into practice recommendations from the Interagency Autism Coordinating Committee, a key government committee whose federal and public members help to shape the nation's research and service priorities.

"While it's great for the government to get input from community stakeholders," Wagner explains, "we need an internal process for figuring out how best to address those recommendations."



SCOTT SUCHMAN

The *Monitor* asked Wagner about our current understanding of ASD, her views on promising trends in research and intervention, and her new role.

How has our understanding of autism changed in the past 15 years?

One is that we now see autism spectrum disorders on a continuum rather than as discrete disorders with different characteristics, a change that's reflected in the DSM-5 [Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition]. The intent behind this change is to think about the core symptoms of ASD, including social communication disorders and repetitive and restrictive interests, along a dimension of mild to more severe. Therefore, people with ASD—including those formerly diagnosed with autistic disorder, Asperger's syndrome and pervasive developmental disorder not otherwise specified—can have more or less pronounced versions of these same problems. In addition, specific behaviors within a category, like the category of repetitive behavior, can vary from person to person.

Our understanding of the genetic aspects of the disorder has also become more sophisticated, giving us clues about the onset and biology underlying ASD. For instance, research is starting to show that the genes involved in specific biological processes, such as the development of neuronal connections, may in some cases be expressed prenatally.

And, there is increased attention to

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the strengths of people with ASD—a recognition that they may have abilities that can be very useful to society and that are typically underutilized, such as the ability to discern patterns or pay attention to specific details.

In general, there is greater awareness about ASD. That said, even though we can diagnose ASD by age 2, the average age of diagnosis is still much later.

What are some of the most exciting developments in terms of interventions?

The best interventions we have for the core features of autism are behavioral interventions, many of them developed by psychologists. For example, Sally Rogers of the University of California, Davis, and Geraldine Dawson of Duke have developed the Early Start Denver Model, which uses naturalistic play to teach and reinforce social reciprocity. Researchers are trying to identify who responds best to which interventions so that interventions can be tailored accordingly.

Related to this, an exciting area is our increased ability to detect signs of ASD earlier in a child's life. Investigators at [psychiatrist] Joseph Piven's lab at the University of North Carolina, for instance, have shown differences in the patterns of neural activity in babies at 6 months who later developed an autism spectrum disorder. At Yale, researchers at [psychologist] Ami Klin's lab have developed a groundbreaking eye-gaze methodology for assessing the potential of developing ASD. They have found that at 2 months, infants who later developed ASD actually looked at caregivers' eyes as often as those who did not develop ASD, but that between 2 to 6 months, that ability declined. If replicated and developed into practical screening tools, findings like these could help us identify the very earliest signs that development is not proceeding typically and tailor early interventions to those developmental processes.

What is the focus of your new position?

In general, it's to help government departments and agencies coordinate their efforts on autism and implement the advice we hear from the community. We have an internal federal working group that meets periodically.

One important area we're focusing on is addressing the challenges faced by young adults and youth with ASD who are transitioning to adulthood—for example, obtaining supports and services needed to get post-high-school training, education, employment and social relationships—areas identified in a report by the first national autism coordinator, Dr. Thomas Novotny. While services are generally available to children and teens through schools and educational programs, there's an alarming drop in how connected they are with their communities once they leave school. That means they are vulnerable to becoming increasingly socially isolated and less independent than they could be, and probably more vulnerable to untreated medical or mental health conditions.

What are your hopes for the field?

My ultimate goals are to continue finding interventions that work and building awareness of the strengths of people with ASD. Intervening early is how we're going to get the most bang for our buck, and understanding the neurobiology of ASD will help us get to more effective treatments and interventions. But there remains a real dearth of interventions and services for older adolescents and adults, so we need to keep working on that, as well as on making sure that evidence-based practices are implemented properly.

In terms of my new role, my hope is that by giving the people who make decisions about policy and services a venue to talk together and coordinate, we can make some real changes that make things easier for people with these disorders and their families. ■

SUPREME COURT TO REVIEW DISCRIMINATION IN JURY SELECTION

The court will review a prosecutor's practice of striking African-Americans from the juries of a case that went to trial six times

BY MARC W. PEARCE, JD, PHD, AND KIMBERLY S. DELLAPAOLERA, MA, MLS

In 1996, Curtis Flowers was charged with the murders of four people in Winona, Mississippi. The state initiated separate, successive trials against Flowers for each homicide. Juries in the first two trials found him guilty and recommended death sentences. However, each verdict was reversed on appeal due to "accumulations of errors," including claims of race discrimination in jury selection: In both trials, the prosecutor used all of his "strikes" to exclude African-Americans—significant because Flowers is African-American. The first case was tried by an all-white jury; the second by a jury of 11 whites and one African-American who was included only after Flowers persuaded the trial judge that the prosecutor attempted to strike this juror based upon his race.

A third trial in 2004 consolidated all four homicides into one proceeding. Again, the prosecutor used his peremptory challenges to exclude African-Americans from the jury. Ultimately, the jury included only one African-American member. This jury convicted Flowers on all counts, and again he was sentenced to death. He appealed, and the Mississippi Supreme Court concluded that the prosecution's jury selection strategy presented "as strong a prima facie case of racial discrimination as we have ever seen" (*Flowers v. State*, 2007, at 935). The case was remanded for yet another trial.

In the fourth trial, Flowers was not charged with capital murder, so he would not be eligible for the death penalty if convicted. After challenging jurors for cause (largely on the grounds that they knew the defendant or his family), the prosecutor used all 11 of his peremptory challenges to strike African-Americans from the jury. After these strikes were exhausted, the jury ultimately included seven white jurors and five African-American jurors—which more closely tracked the racial demographics of the community (about 45 percent African-American at the time). This jury deadlocked, and thus resulted in a mistrial. A fifth trial was held in 2008, and a jury composed of nine whites and three African-Americans also deadlocked.



AT ISSUE

Do a prosecutor's "strikes" of African-American jurors violate the Equal Protection Clause?

Jury selection in Flowers' sixth trial, which reintroduced the death penalty as a possible punishment, proceeded much like the first four. Despite having a diverse venire of 89 white and 67 African-American prospective jurors, after challenges for cause related to familiarity with Flowers' family or death penalty views resulted in removal of 49 African-Americans, the prosecution exercised five of its six peremptory challenges against African-Americans. Ultimately a jury of 11 whites and one African-American was seated. After only 30 minutes of deliberation, the jury convicted Flowers on all counts and recommended the death sentence. His latest conviction is being reviewed by the U.S. Supreme Court, which will determine whether the prosecutor's strikes were based on potential jurors' race, in violation of the Equal Protection Clause (*Batson v. Kentucky*, 1986).

As psychological research has shown, racial composition is a reliable predictor of jury verdicts in capital cases, and studies indicate that diverse mock juries deliberate longer, discuss more evidence and make fewer factual errors (e.g., Sommers, 2006 & 2008). Research also suggests that when juries are not representative of the communities from which they are drawn, the public has less faith in the criminal justice system (e.g., Sommers, 2008). Many of these findings are reflected in Flowers' case: The correlation between race and verdict in Flowers' successive trials is apparent, and citizens will certainly draw conclusions about their fairness. ■

● **"Judicial Notebook"** is a project of APA Div. 9 (Society for the Psychological Study of Social Issues).

ROMZICON/THE NOUN PROJECT



Mindfulness-based therapy for sexual issues has been one of the most significant changes in the field.

CE

CONTINUING EDUCATION SEX THERAPY FOR THE 21ST CENTURY: FIVE EMERGING DIRECTIONS

BY KIRSTEN WEIR

More than half a century has passed since famed sex researchers William Masters, MD, and Virginia Johnson began their pioneering research on sexuality and sexual dysfunction. That work laid the foundation for modern sex therapy, and some of the techniques they described in the 1960s are still being used today, says Jennifer Vencill, PhD, a licensed psychologist and certified sex therapist at the Mayo Clinic in Rochester, Minnesota. "They were the foremost people in their field for a reason," she says.

Yet times have changed since those days when miniskirts could scandalize and television couples slept in separate beds. Building on the tools described by Masters and Johnson, a new generation of researchers has identified novel ways to view sexuality and innovative ways to treat sexual problems, including issues with arousal, desire, pain and inability to orgasm.

Even in 2019, such topics can make people blush. Yet psychologists owe it to their patients to update their understanding of sex therapy, experts say. "Sexuality is part of general mental health, and I think all psychologists have a responsibility to know a bit about human sexuality," says clinical psychologist Zoë Peterson, PhD, an associate research scientist at the Kinsey Institute, associate professor of counseling and educational psychology at Indiana University and editor of the 2017 "Wiley Handbook of Sex Therapy." "While it's useful to have a sex therapy specialization, all psychologists should be able to provide their clients some guidance about human sexuality."

Whether sex therapy is a cornerstone of your practice or something you address only briefly, here are five developments to watch.

1 MINDFULNESS-BASED INTERVENTIONS

Sex therapists use a variety of approaches to treat sexual dysfunction. In addition to the techniques outlined by Masters and Johnson, tools such as cognitive-behavioral therapy (CBT), emotion-based therapy and couples communication techniques have been the treatment mainstays for sexual problems. Now, mindfulness-based sex therapy is increasingly recognized as an effective intervention, many sex therapists say. Mindfulness-based therapies are exciting because they are both effective and broadly applicable to many types of sexual problems, Peterson says. "Mindfulness is being applied fairly widely for arousal and desire problems, pain during penetration, lack of orgasm and sexual problems following medical conditions."

Clinical psychologist Lori Brotto, PhD, Canada Research Chair in Women's Sexual Health and director of the University of British Columbia Sexual Health Laboratory, pioneered the use of mindfulness for sexual dysfunction. She first encountered mindfulness during her psychology residency and postdoctoral training in 2002 and 2003, while working with people with parasuicidal behaviors (in which people engage in self-harm activities that are not likely to be fatal—what some people call "cry for help" gestures). The patients were receiving dialectical behavior therapy, which emphasizes mindfulness meditation as a way to address emotion dysregulation. At the same time, she was studying sexual difficulties among women who had survived gynecologic cancer. It struck her that the two groups shared similarities: a lack of sense of self and feeling disconnected from their bodies. If mindfulness could help those with suicidal thoughts, Brotto wondered, might it also help cancer survivors feel connected

CE credits: 1

Learning objectives: After reading this article, CE candidates will be able to:

1. Discuss current and emerging therapies for sexual problems.

2. Describe psychologists' efforts to include the full span of human sexuality and gender identity in new therapies for sexual challenges.

3. Discuss attitudes about sex and sex therapy.

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and present during sexual encounters?

The intervention Brotto developed involves eight weekly sessions delivered in a group format. The treatment is similar to mindfulness-based cognitive therapy, Brotto says, but tailored for a sexual context. Patients learn how to tune in to erotic sensations, for instance, and how to integrate the techniques into sexual encounters back in the bedroom.

In a series of controlled trials over the years, she and her colleagues have demonstrated the effectiveness of mindfulness-based sex therapy, not only among gynecologic cancer survivors but also for people with other sexual disorders. Recently, for instance, they tested the intervention in a small pilot study of women with low sexual desire and arousal—the most common sexual complaint in women, and one with few treatment options. Participants reported significant improvements in sexual desire, sexual function and sex-related distress after the treatment (*The Journal of Sex Research,* Vol. 54, No. 7, 2017).

Mindfulness-based sex therapy is now used around the world, and several other research groups are testing it in various populations. A meta-analysis by Kyle Stephenson, PhD, found evidence that mindfulness-based therapy was effective for treating female sexual dysfunction (*The Journal of Sex Research*, Vol. 54, No. 7, 2017). Brotto and colleagues have also begun applying mindfulness to men's sexual disorders, finding in a feasibility pilot study that the approach has promise for treating men with situational erectile dysfunction (*The Journal of Sexual Medicine,* Vol. 15, No. 10, 2018). She's now studying the intervention in men with premature ejaculation, as well as in prostate cancer survivors.

"Adapting mindfulness to sexual problems has really been helpful for both men and women," says Stanley Althof, PhD, professor emeritus at Case Western Reserve University in Cleveland and executive director of the Center for Marital and Sexual Health of South Florida. "It's been one of the most significant changes in the field."

2 PSYCHOTHERAPY INTERVENTIONS OVER MEDICATIONS

Viagra, the first FDA-approved oral treatment for erectile dysfunction, hit the market in 1998. Two decades later, there's still a big emphasis on pharmacological treatments for sexual problems, notes Cynthia Graham, PhD, a professor of sexual and reproductive health at the University of Southampton in England and editor of *The Journal of Sex Research*. Drug companies have introduced multiple Viagra competitors for men, and in 2015, the FDA approved the drug Addyi (flibanserin) to treat low sexual desire in premenopausal women.

Meanwhile, however, psychologists are demonstrating that more focus should be put on psychological interventions, which have proven to be effective.

In a consensus statement from the 2015 International Consultation on Sexual Medicine, Marita McCabe, PhD, and colleagues concluded that psychosocial factors are clear risk factors for sexual dysfunction, and both women and men with the condition should be offered psychosocial evaluation in addition to medical evaluation and treatment, when appropriate (*The Journal of Sexual Medicine*, Vol. 13, No. 2, 2016).

Even when a man's sexual dysfunction can be treated with medications like Viagra, he can experience psychological consequences that also need to be addressed. "A man with a sexual problem is likely to have issues of self-esteem, lack of confidence and perhaps avoiding intimacy," says David Rowland, PhD, a professor of psychology at Valparaiso University in Indiana and past editor-in-chief of the *Annual Review of Sex Research*. "Most sex therapy in men is directed toward the fallout that occurs because of a sexual problem."

In men, sexual desire is strongly influenced by testosterone, Rowland notes. But in women, sexual dysfunction is often more complex. "Sexual desire in women is more likely driven by a desire for intimacy, feeling close and valued," he says. "It's a common saying—though not entirely accurate—that men just need a place to have sex and women need a reason." That may help explain why sales of flibanserin have been disappointing—and why, Rowland says, psychosocial interventions such as CBT and mindfulness-based sex therapy usually remain the best choice for women.

Of course, both men and women with sexual dysfunction should rule out biological causes,

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Researchers are increasingly studying the span of human sexuality and gender identity, including transgender and gender nonbinary people, those in same-sex relationships and people in nonmonogamous relationships.

Althof says. But pharmaceuticals alone won't cure most sexual disorders. "We must take the psychology, the culture and the relationship into account," he says.

3 EXPANDING INCLUSIVITY

Historically, sex therapy has been rooted in a traditional view: cisgender, heterosexual encounters between a man and a woman. Even within that already narrow definition, sex therapy has mostly been available to white, middle- and upper-middle-class married couples. Increasingly, though, researchers who study sexuality and sex therapy are taking a broader perspective.

"There's been a trend toward expanding inclusivity," Vencill says, to include the full span of human sexuality and gender identity, including transgender and gender nonbinary people, those in same-sex relationships and people in nonmonogamous relationships.

Vencill's work focuses on adapting sex therapy tools to be more relevant to transgender and gender-diverse clients. For example, she says, using the Masters and Johnson sex therapy technique of "sensate focus," couples take turns touching one another as they learn how to better tune in to physical sensations in the body. But the traditional sensate focus script is very heterosexual and describes gendered anatomy. "That script might not apply to people who are gender diverse or nonbinary," she says. "It's important not to assume that someone has a penis or clitoris or, even if they do, that they describe their bodies in this manner," she adds. A more inclusive script would talk about clients' bodies using words they themselves would use.

There's also growing awareness that sexual- and gender-minority people who experience sexual dysfunction may have complicating factors that need to be addressed in treatment. "In many cases, sexual- and gender-minority patients experience a lot of the same problems that any majority group would experience in terms of sexual functioning. But they are often dealing with an added layer of discrimination and marginalization," Peterson says.

Portrayals of transgender bodies are often presented in demeaning or hypersexualized ways in popular culture, which can contribute to negative feelings that transgender people have about their own bodies and sexuality. "In that case, treatment might involve CBT interventions to address sexual functioning, but it might also involve challenging and countering negative messages that the individual has internalized as a result of lifelong exposure to transphobia," Peterson says.

While diversity and inclusivity in sex research are gaining momentum, there's been little yet in the way of published evidence about how best to treat these populations, Peterson and Vencill say. But they predict that



More research is looking at both individual and relational data in studies of sexual dysfunction—and findings are starting to inform the way sex therapists treat patients.

this will be an important area for future research. "What do we do to make our existing sex therapy techniques relevant for people who are not part of a heterosexual, cisgender couple?" Vencill asks. "We have to make sure the techniques we use are applicable and generalizable."

4 THE COUPLE'S PERSPECTIVE

It's hardly a new discovery that it takes two to tango, but most studies have focused on sexual problems at the individual level—especially research on interventions for those problems. Increasingly, researchers are looking more closely at the role of partners. "Sexual dysfunction is often seen as an individual problem, when of course it's so often a couple's issue," says Graham.

When one partner has sexual dysfunction, it can make sex more stressful and less pleasurable for his or her partner. "No wonder that would impact sexual desire," Vencill says. In a review of the literature for the 2015 International Consultation on Sexual Medicine, Brotto and colleagues found studies consistently demonstrating that dysfunction in one partner often contributes to problems in sexual satisfaction as well as sexual functioning for the other partner (*The Journal of Sexual Medicine*, Vol. 13, No. 4, 2016).

Now, more researchers are beginning to look at both individual and relational data in studies of sexual dysfunction, Vencill says. For instance, among heterosexual women who experience pain during intercourse, sympathetic partners might be inclined to stop a sexual encounter that becomes painful. Yet research by Natalie Rosen, PhD, and colleagues shows that women with these sympathetic or "solicitous" partners have greater pain intensity and poorer sexual satisfaction compared with women with partners who encourage them to adapt and find ways to create sexual intimacy without engaging in the activity that is painful (*The Journal of Sexual Medicine*, Vol. 9, No. 9, 2012).

Such findings are starting to inform the way sex therapists treat patients and their partners, Vencill says. "Moving forward, more research on the role of partners in sexual functioning and satisfaction is really critical."

5 CHANGING ATTITUDES TOWARD SEX

In some ways, sex is less taboo than it was when Masters and Johnson began their research. "There's a much greater openness" in younger generations to talk about sex and sexuality, Rowland says. "The conversations are very different today than they were 20 or even 10 years ago."

Nonetheless, sex is still a topic that makes people uneasy. "Culturally, we have a lot of anxiety around sex," Vencill says.

In the United States (and many other cultures), sex often involves mixed messages. "You can joke about sex, but you're not supposed to talk about how it's really going—especially if you're having problems," Peterson says. "On the other hand, there are all these messages suggesting we should be having these amazing sex lives. We're inundated in the popular culture with these very narrow messages about what 'good sex' is, and those

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FURTHER READING

Better Sex Through Mindfulness
Brotto, L.A.
Greystone Books, 2018

The Wiley Handbook of Sex Therapy
Peterson, Z.D. (Ed.)
Wiley-Blackwell, 2017

Principles and Practice of Sex Therapy, 5th ed.
Binik, Y.M., & Hall, K.S.K. (Eds.)
Guilford Press, 2014

Sexual Dysfunction in Men
Rowland, D.L.
Hogrefe, 2012

Psychosexual Therapy in Perspective: Strategies for the Non-Specialist Counselor
Rowland, D.L., & Gutierrez, B.
In "Psychotherapy: Methods, Outcomes and Future Directions,"
D. Brewer (Ed.)
Nova Science, 2016

messages can create a lot of stress."

At the same time, many people still balk at the idea of seeking help for their sexual problems. That's one reason that sex therapists are optimistic about the development of telepsychology and web-based interventions. McCabe and Catherine Connaughton, PhD, at Australian Catholic University, described internet-based approaches to sex therapy in a chapter in the 2017 "Wiley Handbook of Sex Therapy." They concluded that more research is needed, though early studies have shown cybertherapy to be effective for treating a variety of sexual problems in men and women.

Digital interventions can build a bridge to people who have reservations talking about sex in person. "There are a lot of people out there with sexual problems who would never feel comfortable sitting face-to-face and talking about their sexuality or their sexual problems," Peterson says.

LOOKING AHEAD

There's another trend that sex therapists would like to see: Many say they wish more psychologists would take a greater professional interest in sex and sexuality.

"So many aspiring psychologists and graduate students I talk to think that sexual health is in the domain of medicine," Brotto says. "But the bulk of treatment for sexual dysfunction is psychological, and psychologists have a huge role to play in assessing, treating and managing these problems."

While most psychologists' training gives them a strong foundation for treating sexual difficulties, sex-specific training is valuable, especially as it helps psychologists confront their own beliefs, biases and discomfort around sex. "We live in a very sexualized culture, but many of us haven't been taught to have healthy conversations around sexuality or are even taught much about our bodies in a scientifically accurate way," Vencill says. "Where the extra training comes into play is around sexual knowledge, values and attitudes."

For those interested in learning more, the American Association for Sexuality Educators, Counselors and Therapists offers continuing education and certification for sex counselors, therapists and educators. The Society for Sex Therapy and Research also offers resources for professionals, including psychologists, with clinical or research interests in human sexual concerns.

Researchers, too, can find much to explore in the fields of sexual functioning and sexuality, Althof adds. "There's sexual dysfunction, gender issues, the effect of illness and aging on sexuality," he says. "There's often a reluctance to embrace this very important piece of people's lives. But it's a vital field with so many things happening." ■

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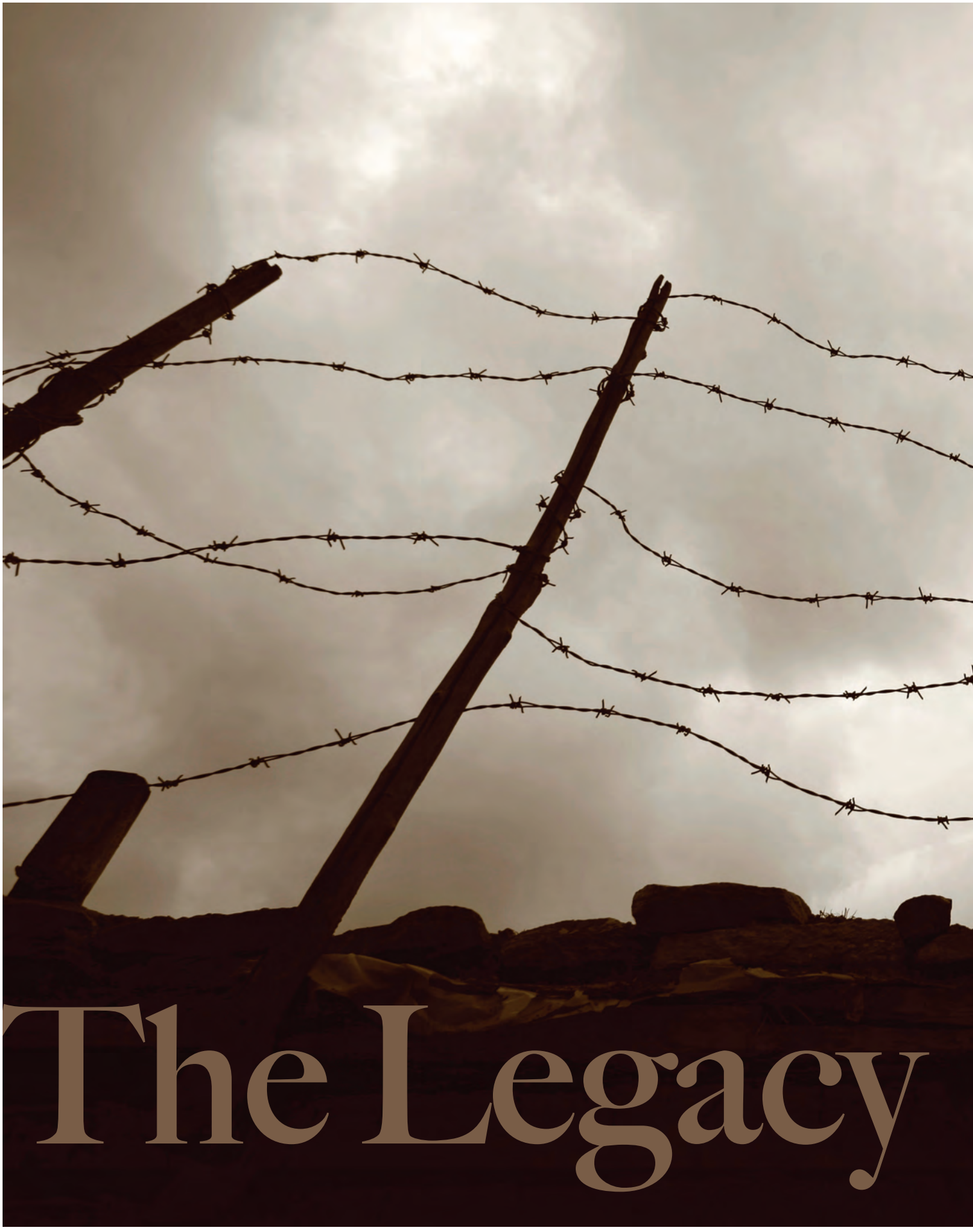
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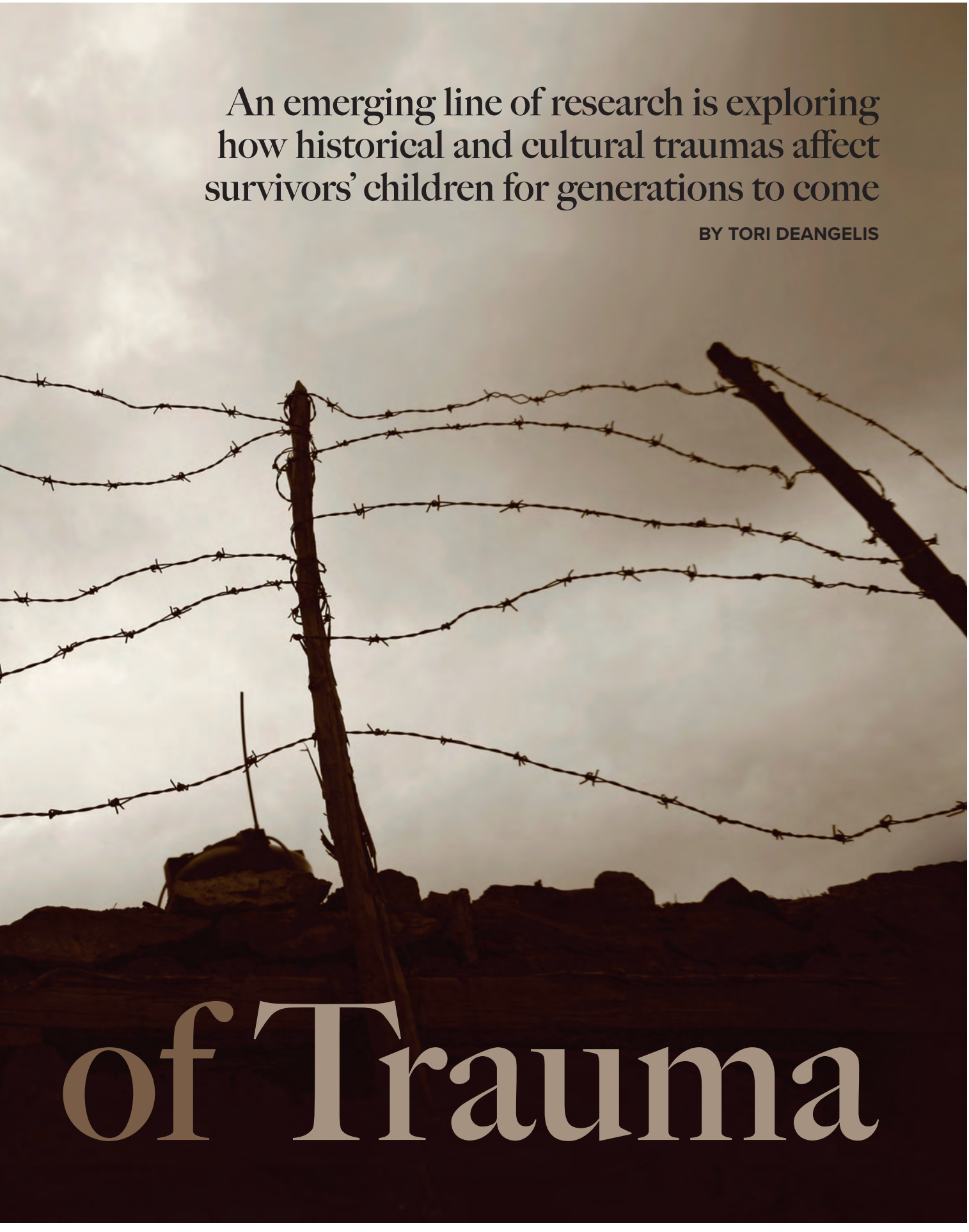
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The Legacy



# of Trauma

An emerging line of research is exploring how historical and cultural traumas affect survivors' children for generations to come

BY TORI DEANGELIS

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In the mid- to late 2000s, Brent Bezo and his wife were living in Ukraine, when Bezo began noticing a kind of social hostility and mistrust among the population. It was subtle, "not necessarily something you'd pick up on if you'd spent only a short time there," says Bezo, a doctoral psychology student at Carleton University in Ottawa. ¶ In his conversations with people, Bezo heard references to the Holodomor, the mass starvation of millions of Soviet Ukrainians from 1932 to 1933, considered by many to be an intentional genocide orchestrated by Joseph Stalin's regime. ¶ Wondering if and how this horrific event continued to resonate with the people, Bezo conducted a qualitative pilot study of 45 people from three generations of 15 Ukrainian families: those who had lived through the Holodomor, their children and their grandchildren. People spontaneously shared what they saw as transgenerational impacts from that time, including risky health behaviors, anxiety and shame, food hoarding, overeating, authoritarian parenting styles, high emotional neediness on the part of parents and low community trust and cohesiveness—what many described as living in "survival mode" (*Social Science & Medicine,* Vol. 134, 2015).

"Each generation seemed to kind of learn from the previous one, with survivors telling children, 'Don't trust others, don't trust the world,'" says Bezo. He is now conducting a larger quantitative study to compare intergenerational effects among Ukrainians who remained in the country after the Holodomor, those who emigrated and a group of Ukrainians unaffected by the event. The work is part of an emerging line of research and clinical work in psychology and related disciplines that is exploring whether and how mass cultural and historical traumas affect future generations. Bezo's observations are compatible with those of researchers who are exploring the intergenerational effects of the Holocaust, the Khmer Rouge killings in Cambodia, the Rwandan genocide, the displacement of American Indians and the enslavement of African-Americans. The transgenerational effects are not only psychological, but familial, social, cultural, neurobiological and possibly even genetic as well, the researchers say.

But except for studies related mainly to the Holocaust, the field is still relatively young and has many unknowns. While trauma researchers have made great strides in understanding and treating single-episode present-life trauma, they are just beginning to explore the impact of intergenerational trauma and its expression, says APA Div. 56 (Trauma Psychology) President Diane Castillo, PhD, a former Texas A&M University associate professor of psychology who has studied and treated combat-related post-traumatic stress disorder (PTSD) for 30 years. The study of PTSD could benefit from the wider lens of an intergenerational perspective, she says, while the study of intergenerational trauma could learn from the systematic work that's been done on PTSD.

Continuing to explore intergenerational effects can help



MELANIE WASSER/UNSPLASH

Across generations, the effects of trauma are not only psychological, but familial, social, cultural, neurobiological and possibly even genetic.

the field better understand and treat psychological pain at its roots, adds Yael Danieli, PhD, co-founder and director of the Group Project for Holocaust Survivors and Their Children in New York, where she has been a senior psychotherapist since the 1970s.

"Massive traumas like these affect people and societies in multidimensional ways," says Danieli, who is also the founder of the International Center for the Study, Prevention and Treatment of Multigenerational Legacies of Trauma. "It behooves us to study this area as widely as possible, so we can learn from people's suffering and how to prevent it for future generations."

A WIDER LENS ON SYMPTOMS

One of the first articles to note the presence of intergenerational trauma appeared in 1966, when Canadian psychiatrist Vivian M. Rakoff, MD, and colleagues documented high rates of psychological distress among children of Holocaust survivors (*Canada's Mental Health*, Vol. 14). Since then, researchers have been assessing anxiety, depression and PTSD in trauma survivors and their progeny, with Holocaust survivors and their children the most widely studied and over the longest period of time.

Most of these studies have found atypically high rates of these disorders. However, in some cases they find little or no effect at all. A 2017 review of 20 studies of children of cultural and war trauma survivors by Cindy C. Sangalang, PhD, of California State University, Los Angeles, and Cindy Vang, of Arizona State University, for instance, found eight studies showing negative psychiatric, psychosocial and/or behavioral effects on survivors' offspring, three showing mixed results and two showing no differences between offspring and controls (*Journal of Immigrant Minority Health*, Vol. 19, No. 3).

Other researchers are taking a broader view of how survivors and their offspring might be affected. In the early 1980s, Danieli began writing about at least four adaptive styles that she and others observed among Holocaust survivors. Examples include "victim," people who have difficulty moving on from

the original trauma and are emotionally volatile and overprotective, and "numb," those who are emotionally detached, intolerant of weakness in others and who maintain a "conspiracy of silence" within the family. (Other styles include "fighter" and "those who made it.")

In clinical, group and community work, Danieli also observed specific behavior patterns among children of Holocaust survivors, including an overly protective stance toward their parents, a high need for control, an obsession with the Holocaust and immature dependency. She called these reactions "reparative adaptational impacts" to highlight the notion that survivors' progeny use them to try to repair the world for their parents, their grandparents and themselves —largely unconsciously. Her related theory predicts a pathway between the initial trauma, the family's history and post-trauma sociocultural milieu, the adaptational styles of survivors, and the intensity of their children's and grandchildren's reparative reactions to them (*American Journal of Orthopsychiatry,* Vol. 86, No. 6, 2016).

In 2015, Danieli and colleagues started building an empirical foundation for her theory by creating the Danieli Inventory of Multigenerational Legacies of Trauma (*Journal of Psychiatric Research,* Vol. 68; *American Journal of Orthopsychiatry,* Vol. 85, No. 3), a three-part questionnaire tailored to adult children of Holocaust survivors. It asks the children about their parents' parenting styles, their upbringing, the effects these influences had on their own lives and about their family history and demographics.



One psychologist has observed specific behavior patterns among children of Holocaust survivors, including a high need for control and immature dependency.

Research is starting to support the theory. In a study reported in *Psychological Trauma: Theory, Research, Practice, and Policy* (Vol. 9, No. S1, 2017), Danieli, Fran H. Norris, PhD, of Dartmouth College, and Brian Engdahl, PhD, of the University of Minnesota, first gave the Danieli inventory to 484 adult children and grandchildren of Holocaust survivors. Then, they conducted additional clinical interviews with a subsample of 191 of those offspring. Overall, 35 percent of the smaller sample had generalized anxiety disorder, 26 percent had a major depressive episode and 14 percent had PTSD. But when they compared those data with the inventory data, 46 percent of those with high reparative impact scores had a psychiatric diagnosis, compared with only 8 percent of those with low scores. In addition, children whose parents scored higher in "victim" and "numb" styles reported a higher intensity of reparative impacts, the team found.

Researchers studying Native American and Canadian populations are likewise finding broad effects among children and grandchildren of survivors of massive cultural oppression. In a 2014 review paper in *Transcultural Psychiatry* (Vol. 51, No. 3), psychologist Amy Bombay, PhD, an assistant professor at Dalhousie University in Halifax, Nova Scotia, Canada, and colleagues examined studies looking at intergenerational effects of Indian residential schools, institutions run by the Canadian government from the 1880s until the mid-1990s. Eliminating the "Indian problem" was the aim of the schools, according to original government texts. The schools provided a substandard education and taught native children to be ashamed of their languages, cultural beliefs and traditions.

Two large-scale national surveys included in the review—the First Nations Regional Longitudinal Health Survey and the Aboriginal Peoples Survey—found that children and in some cases grandchildren of those who attended the schools were more likely to report psychological distress and suicide attempts, to have learning difficulties and problems in school and to contract hepatitis C through drug use than controls whose parents had not attended such schools.

Less directly studied is the multigenerational impact of slavery on African-Americans. But an important line of related research studies the relationship between ongoing racial discrimination and trauma. Monnica Williams, PhD, of the University of Connecticut, who has extensively explored this

SANDRA MATIC/GETTY IMAGES

topic, recently developed a measure to assess anxiety related to racial discrimination. Williams and colleagues found that of 123 African-American students who took the measure, those who reported high rates of perceived discrimination also had higher rates than others of uncontrollable hyperarousal, feelings of alienation, worries about future negative events and perceiving others as dangerous (*Psychology of Violence,* Vol. 8, No. 6, 2018).

While direct studies on intergenerational effects may be sparse, it's not difficult to spot such impacts in current generations of African-Americans, adds Alfiee Breland-Noble, PhD, who directs the AAKOMA (African American Knowledge Optimized for Mindfully Healthy Adolescents) Project at Georgetown University and studies mental health disorders and treatments in African-Americans.

A current example, she says, is the dread that many African-American parents face in talking with sons about potential police encounters. "It's traumatizing for parents and it's traumatizing for kids," she says.

The scenario is part of a legacy that she terms "shared stress"—the feeling that you have to manage everything within your own community because you don't know what you'll encounter in society at large.

"There is a sense among African-Americans and other marginalized people that our stressors are unique to us and not necessarily shared by people outside our groups," she explains. "So, we share stories of our lived experiences that help set the stage for how our loved ones encounter the world." In turn, that can lead to a general distrust of others outside the group—particularly those from historically oppressive groups—along with in-group insularity, she says.

An important line of research is exploring the relationship between ongoing racial discrimination and past familial trauma.



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TRANSMISSION MECHANISMS

Psychologists and others are also investigating *how* traumatic effects may be transmitted across generations. In a qualitative study that echoes Danieli's findings about the importance of family communication and milieu, Lidewyde H. Berckmoes, PhD, of the Netherlands Institute for the Study of Crime and Law Enforcement in Amsterdam, and colleagues spent five months observing and interviewing 41 mothers who lived through the 1994 Rwandan genocide and their teen children.

The team found direct effects of the genocide, including the ways that mothers communicated with their children about the trauma, such as maintaining silence or expressing hope that such an event would never occur again. The investigators also observed indirect effects, such as how the genocide affected the second generation through changes including heightened poverty, greater family work burden and compromised parenting. Meanwhile, teens discussed how they felt these factors affected their own lives. Many said poverty rendered them unable to attend school and forced them to work harder to help keep the family afloat (*Societies,* Vol. 7, No. 3, 2017).

Trauma psychologist Elena Cherepanov, PhD, of Cambridge College in Boston, has been examining how survivors' initial

reactions to an event may affect future generations—a topic outlined in her upcoming book, tentatively titled "Understanding the Transgenerational Legacy of Totalitarian Regimes: Paradoxes of Survivorship." Living under such difficult, oppressive circumstances, she surmises, can lead parents to formulate fear-based "survival messages" that they pass on to their children and grandchildren—ideas like "Don't ask for help—it's dangerous." While the messages may have initially helped people stay alive, in the present they are often irrelevant and may even increase people's interpersonal vulnerability. Fear of personal disclosure and not trusting mental health care providers, for example, "is exactly why it is so hard for trauma survivors to seek and accept support," says Cherepanov, who is comparing these messages in Russian and American samples.

Still another transmission vehicle may be the body itself. Researchers led by University of California, Los Angeles, economist Dora L. Costa, PhD, examined mortality and other Civil War-era data on 700 Union Army prisoners of war (POWs) and 2,500 of their children, along with data on 5,000 non-POW Union soldiers and 15,000 of their children. Starting from the time the sons of these soldiers turned 45, they found that the sons of Union POWs who had endured particularly harsh conditions while imprisoned died at younger ages overall than the sons of POWs who lived in camps under more favorable conditions or than the sons of non-POW soldiers (*Proceedings of the National Academy of Sciences*, Vol. 115, No. 44, 2018).

The researchers posit a potential transmission vehicle for these effects: epigenetics, environmentally driven molecular processes that can turn genes on or off. While the researchers' lack of ability to collect biological samples limited their ability to show a direct association between the earlier deaths and epigenetic changes, in a statistical "process of elimination," epigenetics emerged as a strong contender.

Taking a more direct look at possible epigenetic transmission is psychologist Rachel Yehuda, PhD, director of the Traumatic Stress Studies Division at the Icahn School of Medicine at Mount Sinai in New York. She and colleagues have found, for example, that children of Holocaust survivors with PTSD have lower rates of methylation—one type of epigenetic mechanism—in a particular stress-related glucocorticoid receptor, the GF-1F, than children of survivors who did not have PTSD (*American Journal of Psychiatry,* Vol. 171, No. 8, 2014).

More recently, the team has been looking directly at epigenetic changes across generations. In a well-known study comparing methylation rates in 32 Holocaust survivors and 22 of their children with those of matched controls, they found that Holocaust survivors and their children showed changes in the same location of the same gene—the FKBP5, a stress-related gene linked to PTSD and depression—while controls did not (*Biological Psychiatry*, Vol. 80, No. 5, 2016).

While admittedly small, the study is an important first step, Yehuda and others note, and epigenetics is a fruitful area for further research (*World Psychiatry,* Vol. 17. No. 3, 2018).

PROMISING INTERVENTIONS

Despite the many gaps in understanding the transgenerational effects of trauma, clinicians and researchers are delivering interventions based on recent findings, including at the community level.

One example is a long-running intervention being adapted to First Nation and Native American tribes in Canada and the United States called Strengthening Families. Based on a highly successful evidence-based program started at Iowa State University, it aims to prevent early substance use by improving family communication, reducing family conflict and teaching kids substance-use resistance skills. Working closely with the Ojibwe, Lakota, Dakota, Navajo, Pueblo and other tribes, researchers, including sociologist Melissa Walls, PhD, of the University of Minnesota Medical School, are adapting the program to resonate with each tribe.

"We hear a lot about the loss of a sense of community, the loss of generational ties," says Walls. "It really is a deep hurt, a deep pain—almost a longing for what used to be." The interventions help to address this chasm by bringing together families and the community as a whole, she says.

RESOURCES

Cultural Trauma and Epigenetic Inheritance
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Development and Psychopathology, 2018

International Center for the Study, Prevention and Treatment of Multigenerational Legacies of Trauma
Yael Danieli, PhD, at yaeld@aol.com

International Handbook of Multigenerational Legacies of Trauma
Danieli, Y.
Springer, 1998

Intergenerational Perceptions of Mass Trauma's Impact on Physical Health and Well-Being
Bezo, B., & Maggi, S.
Psychological Trauma: Theory, Research, Practice, and Policy, 2018



COLE DELANCEY/GETTY IMAGES

Two case studies of working with native groups to adapt the protocol are described in an article by Walls, Jerreed D. Ivanich, a doctoral student at the University of Nebraska–Lincoln, and colleagues (*Prevention Science*, online first publication, 2018). One version, called Bii-Zin-Da-De-Dah, Ojibwe for "listening to one another," has been revised over the years to include more culturally relevant material and to be tailored for young children. A fourth iteration of the program is now being tested in a five-year randomized controlled trial funded by the National Institute on Drug Abuse.

The results of these programs can be profound, says Walls, who describes a ceremony held at the end of each intervention. There, parents or caregivers give youngsters a blanket to symbolize their support of the next generation. "It's always powerful," says Walls. "It's a lot more than just a program, I think, for the people who get to do it."

In the clinical realm, Danieli recommends using her inventory to formulate questions and help treat clients. She also suggests that clinicians work with patients to construct multigenerational family trees that include details of a family's trauma history—an activity that can help families move beyond secrets and toward connection and growth.

In a similar vein, Cherepanov suggests the use of a "survival genogram," which adapts the genogram methodology—a pictorial version of a family tree used in psychotherapy to highlight family relationship, health and psychological patterns—to the transgenerational trauma experience. The methodology helps children and grandchildren of survivors to explore ancestral life lessons like "Never let your guard down" in their original context and to examine how such messages can help and hurt them in their present lives (*The Journal of Psychodrama, Sociometry, and Group Psychotherapy*, Vol. 63. No. 1, 2015).

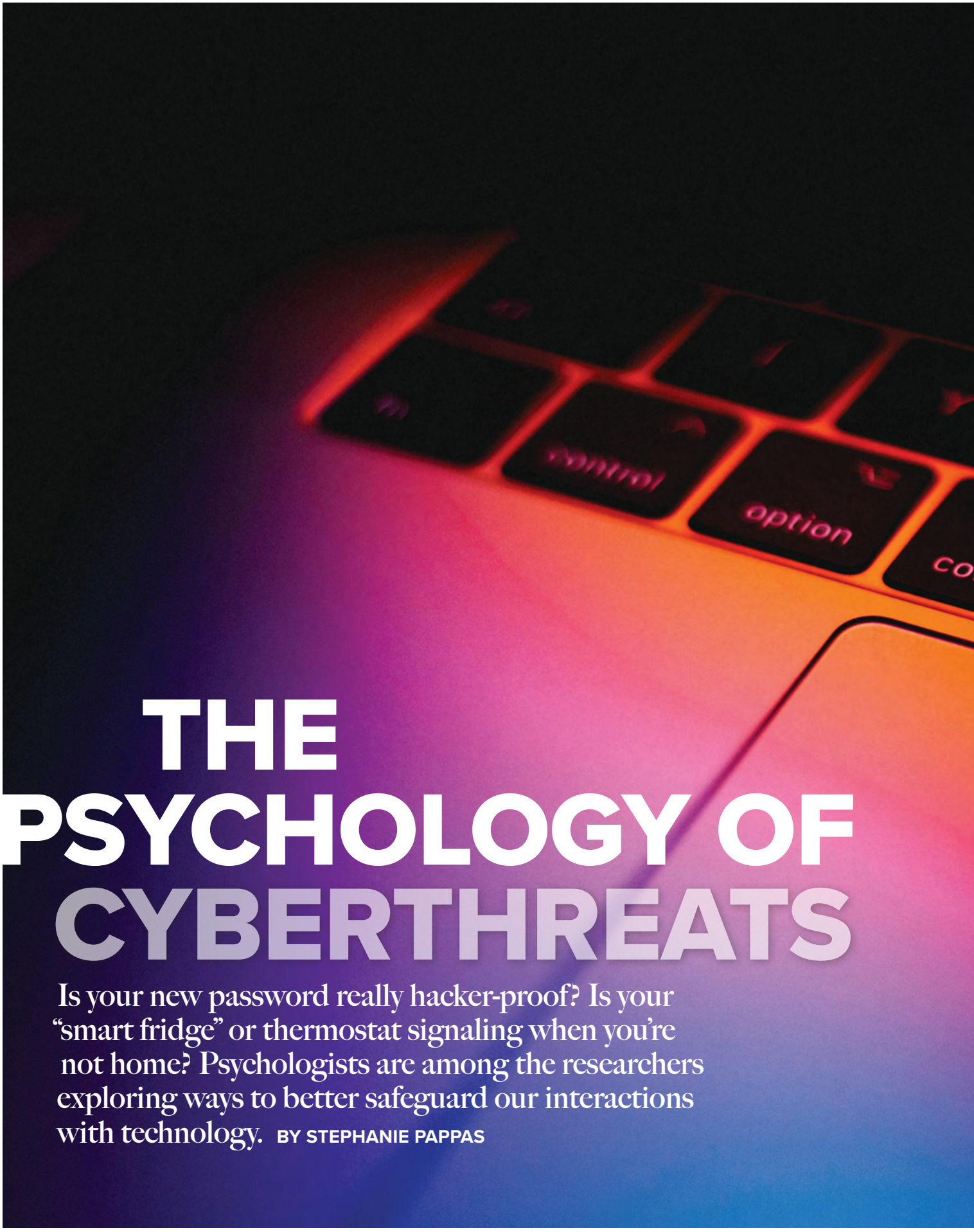
A 2018 study found that the sons of Union prisoners of war (POWs) in the American Civil War who had been imprisoned in harsh conditions died younger than sons of POWs who lived in better conditions.

Meanwhile, Breland-Noble encourages her African-American clients to use a few simple tools to address angry, overwhelmed or numb reactions to historical or present-day race-related injuries. One is simply to name the problem. "We're so used to living with racially oriented worry and fear that we don't necessarily recognize or name it as problematic," she says. "I want people to feel comfortable owning and naming our history."

She also encourages clients to embrace self-care practices, such as mindfulness, exercise or other nurturing activities. A third tool she emphasizes is prevention—reducing exposure to potential triggers such as news about race-based police shootings or other provocative race-related items.

Addressing present-day traumas like racism that relate to the original trauma is key to helping new generations heal and move on, agrees Bombay. Parents can help, she adds, by using the right communication tools.

"It's about finding an age-appropriate balance that provides children with the context of the original trauma," she says, "while at the same time providing them with cultural pride and coping strategies to deal with racism if they encounter it." ■



THE PSYCHOLOGY OF CYBERTHREATS

Is your new password really hacker-proof? Is your "smart fridge" or thermostat signaling when you're not home? Psychologists are among the researchers exploring ways to better safeguard our interactions with technology. **BY STEPHANIE PAPPAS**



ANDRAS VAS/UNSPLASH

IN October 2018, the U.S. Government Accountability Office (GAO) released a frightening report that found that the nation's weapons systems are extremely vulnerable to hackers. The risk, the GAO reported, is not only due to supergenius hackers. Instead, much of the fault lies with Department of Defense (DOD) staff who fail to follow through with basic safeguards, like changing the default passwords that come with their software. In one test, the government's faux hackers were able to guess an administrator password in just nine seconds. ¶ The missiles and bombs of the DOD certainly need better cyberprotection, but defense staff aren't alone in their cybersecurity failures. Industry surveys by LogMeIn in 2018 and Keeper in 2017 suggest that at least half of people make bumbling security moves such as reusing the same passwords over and over. It's a problem that's only likely to deepen as tech-

nology becomes even more intertwined in daily life. Today, computers aren't just located on office desks, but in pockets, thermostats, refrigerators, doorbells and the family sedan, says Peter Hancock, DSc, PhD, a psychologist and human factors researcher at the University of Central Florida (UCF).

"We're in this changeover stage where we're going from pure human control to basically a shared form of control," Hancock says.

In that stage, whether it's in cars or in Wi-Fi-controlled homes, humans can become confused, complacent or both. Their resulting security shortcuts open people up to hacking, identity theft and other cybercrimes. For psychologists studying how humans interact with computers, the landscape of gadgets is dizzying, but the driving question is the same: How can behavioral science help keep people safe in a world where they interact with technology at almost every moment?

'USERS ARE NOT THE ENEMY'

Throughout the 1980s and 1990s, as computers gradually became familiar tools for most people, designers tended to think of end users as "monkeys you can train," says Angela Sasse, PhD, a professor in the computer science department at Ruhr University Bochum in Germany.

"They basically just said, 'You've got to behave this way' and wrote a policy and sometimes enforced that through some technical mechanism," Sasse says. Rarely did designers pause to ask whether people were actually capable of carrying out the policy, she says.

In 1999, Sasse and her colleague Anne Adams, PhD, both at University College London at the time, wrote a provocative paper titled "Users Are Not the Enemy," which is still cited as a key work explaining why software and security design have to take human psychology into consideration (*Communications of the ACM*, Vol. 42, No. 12, 1999). By surveying workers in various industries, Sasse and Adams found that people don't make bad security choices out of stupidity. In some cases, their subjects just hadn't been informed of why their choices mattered. In others, they were juggling the pressure to be productive with challenges like remembering multiple passwords that had to be changed frequently. Unable to do it all,

they resorted to less-than-ideal shortcuts, including writing passwords down where they might be discovered or picking simple, single-word passwords that are easy for hackers to crack.

Since then, Sasse says, technicians have realized that security systems need to take human cognition into account. At the same time, the number of passwords people have to juggle has skyrocketed, creating an impossible memory task for users.

And hacked passwords aren't the only threat: Opportunities for email scams, phishing attacks and malicious apps are now more prevalent than ever. The people who craft these attacks have a "certain amount of psychological skill," Sasse says. That's why as attackers become more sophisticated, the approach to security has to evolve, too.

Improving how people approach their own security often involves fundamental psychological research, says Robert Proctor, PhD, a cognitive psychologist at Purdue University in West Lafayette, Indiana. Basic principles of memory, decision-making and information-framing can inform how security systems are set up.

"We try as much as possible to link up to the basic knowledge of psychology," Proctor says.

PASSWORD PROTECTION

Passwords are a good example. Most people have heard that passwords should be unique. But the factors that make a password strong tend to fly in the face of what works for memory retention. The common psychological shortcuts for remembering a task, such as making a list, are big no-nos for security because they make it easier for other people to access private information, says psychologist Naomi Woods, PhD, an assistant professor of information security at the University of Jyväskylä in Finland.

"We have all these memory techniques and we can't even use them," Woods says.

To make matters worse, Woods and her colleagues have found that people often underestimate their ability to remember passwords, which becomes a self-fulfilling prophecy. These misconceptions of ability, rather than an actual lack of memory, explain why passwords are easy to forget (*International Journal of Human-Computer Studies*, Vol. 111, 2018). That leads to anxiety, which then prompts the security sin of password reuse.

Surprisingly, though, reusing passwords may not be the best memory strategy. In research under review, Woods and her colleagues tested people's memory for reused, modified and unique passwords and found that people remembered unique passwords best. It can actually be harder to recall modified passwords, Woods says, because the memory of one variation tends to interfere with the memory of other variations. Anyone who has sat puzzling over whether a particular password used a "1" or a letter "l"—or was it a "!"?—can probably relate.

Research points to a better memory strategy: mnemonics. In 2017, the National Institute



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MOST PEOPLE HAVE HEARD THAT PASSWORDS SHOULD BE UNIQUE. BUT THE FACTORS THAT MAKE A PASSWORD STRONG TEND TO FLY IN THE FACE OF WHAT WORKS FOR MEMORY RETENTION.

of Standards and Technology (NIST) began to recommend pass*phrases* rather than pass*words* because phrases are easier to recall and more difficult for hackers to guess (NIST, 2017). One common strategy is to pick a sentence and use the first (or second or third) letter of each word to build the password, sometimes substituting numbers or symbols for letters.

But just telling people about mnemonic strategies isn't enough. Systems designers must carefully think through how they present their instructions. If instructions are vague and use a generic example phrase like "Four score and seven years ago," users tend to pick generic password sentences. In one study, among 864 participants who were given generic instructions, 57 people chose a sentence that someone else had also chosen.

"To be or not to be, that is the question" was picked 22 times, for example (*Proceedings of the 2016 ACM SIGSAC Conference on Computer and Communications Security*). But of the 777 participants instructed to think of a personalized sentence that other people would be unlikely to choose, not one picked the same phrase. The study results show how sensitive human behavior is to small tweaks in design, says Proctor.

THE PHISHING TRAP

Psychology-sensitive design also plays a role in efforts to keep people from falling prey to tech-based fraud. Phishing, or tricking people into giving out passwords or personal information by impersonating a trusted entity, is a huge security threat. It's how hackers breached Sony's computer networks in 2014, releasing a cavalcade of embarrassing emails and financial documents.

Phishing scams are often quite sophisticated, Sasse says, using visual clues like company logos to make email messages look legit, and often inducing some kind of time pressure that will make people act without thinking. "They really know how to push people's buttons," she says.

To fight back, browser designers create cues to a webpage's security, like the little lock icon next to a URL that tells users the privacy level of the page they're visiting. But research suggests that these cues don't necessarily work. In one study led by Purdue computer scientist Ninghui Li, PhD, and co-authored by Proctor, researchers highlighted the URLs of both legitimate and phishing webpages to help people decide whether they were legitimate or not. (URLs are unique, so phishing sites must alter them slightly.) Eye-gaze monitoring showed that when people were told to look at the highlighted URLs, they followed instructions.

Unfortunately, that extra attention didn't translate to better judgments about a website's legitimacy (*Human Factors*, Vol. 59, No. 4, 2017). People may not understand the security cues developers put in address bars, the researchers concluded, so education may be the solution.

One controversial approach that some companies take to combat phishing involves conducting fake attacks to catch employees who might fall for real strikes. A real phishing attack might lure employees to a webpage that prompts them to enter a password that attackers could use to access private company information. A fake attack would mimic this approach to collect information on who fell for the fraudulent link.

But this approach can backfire, Sasse says. In one study that fake-phished employees at a real company, researchers set up phishing links to go to a training page that warned people they'd been tricked. Then, the researchers phished the same participants again. There was no difference in the rate of click-throughs after the training—and not only did the training fail, but qualitative interviews afterward revealed that many people felt their company had betrayed and shamed them by putting them through the test (*IEEE Security & Privacy*, Vol. 12, No. 1, 2014).

Some experts argue that it's better to build trust with employees than to try to shock them with a lesson that may make them feel gullible. According to Sasse, security breaches thrive on secrecy and shame. "It's very important to get people to talk about security and help each other," she says.

A CONNECTED FUTURE

The increasing ubiquity of "smart" appliances is another worrisome security domain that demands a psychological approach. In 2013, hackers accessed over 100,000 smart TVs, refrigerators and routers to send out hundreds of thousands

FURTHER READING

GAO Department of Defense Cybersecurity Report
GAO, 2018

How Do We Ensure Users Engage in Secure Online Behavior? A Psychological Perspective
Williams, E.J., et al. International Conference on Cognitive and Behavioral Psychology, 2018

Scaring and Bullying People Into Security Won't Work
Sasse, A. *IEEE Security & Privacy*, 2015

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Sawyer, B.D., & Hancock, P.A. *Human Factors*, 2018



The increasing ubiquity of "smart" appliances is a worrisome security domain that demands a psychological approach.

ZHUDIFENG/GETTY IMAGES

of spam emails. Researchers have reported that out-of-the-box Wi-Fi-enabled devices are extremely vulnerable to hacks; there are even reports of baby monitors being infiltrated ("Smart Card Research and Advanced Applications," CARDIS 2017, *Lecture Notes in Computer Science*, Vol. 10728, 2018).

So far, designers of these devices haven't been good about informing end users about the security risks of these devices. Users are often unaware of the level of identifying information collected by devices such as smart thermostats, which use sensors to detect when homeowners are at home, when they are away and even when they sleep, Proctor says. The marketing of these devices downplays security and privacy concerns, and there are few avenues for warning consumers when their devices might have been compromised. If there had been, Proctor and his colleagues wrote in the journal *Ergonomics and Design*, many users affected by the 2013 hack probably would have taken their smart appliances offline so they'd stop sending spam emails (*Ergonomics in Design*, online first publication, 2018).

MOST OF US ARE UNAWARE OF THE AMOUNT OF INFORMATION COLLECTED BY SMART DEVICES, MANY OF WHICH USE SENSORS TO DETECT WHEN HOMEOWNERS ARE HOME OR AWAY.

"Presenting warnings and sharing information about any potential cyberthreats may allow users to jump back into the loop to make their own decisions about their safety," Proctor and his colleagues wrote.

This sort of shared responsibility for smart devices—part technical, part human—extends to smart cars, says UCF's Hancock. There, it isn't just information security and personal identity at risk, but actual survival—a hacked vehicle, after all, could literally be used to kill someone. "Automated vehicles are going to be the first time we are physically embedded in that technology," he says.

In fact, this future, ultra-connected world may require a whole new approach to security. Researchers in human-computer interaction are already exploring the possibilities. One emerging concept is graphical passwords, which are more difficult to hack than text-based passwords. One example, developed by Susan Wiedenbeck, PhD, a professor emerita and human-computer interaction researcher at Drexel University in Philadelphia, and colleagues is called PassPoints, in which users pick a series of points to click on an image or photograph. To log in, they must remember the click points and their order (*International Journal of Human-Computer Studies*, Vol. 63, No. 1–2, 2005). These passwords are basically unguessable due to the number of possible points that could be used.

Other graphical systems involve choosing a group of images from a huge menu. To enter the password subsequent

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times, the user must pick those same images in the same order.

The idea behind graphical passwords is that people recognize images better than they recall words. But the devil is in the details as to how well graphical passwords work in the real world. One study of the choosing-from-a-menu type found that people struggled to remember multiple image passwords after a few weeks (2014 Twelfth Annual International Conference on Privacy, Security and Trust), but another study found that these recognition-based systems were more memorable than the PassPoints-style point-and-click ones (*Proceedings of the Ninth Symposium on Usable Privacy and Security*, 2013). Wiedenbeck and her colleagues found in their 2005 study that people remembered graphical passwords just as well as text-based ones but took longer to enter them.

Another strategy that required people to use a personal image to build a text password performed better. In one study, a user brought in a picture of a cat named Kali and told the experimenter she'd been known to stick her nose in candle flames and had been the subject of many pricey vet bills. The user came up with the password "G0d$$ofF!re" to combine her memories of the cat's behavior with the cat's name. Image-cued mnemonics worked better than word-based ones, the researchers found, and they were difficult to hack (*Computers in Human Behavior*, Vol. 26, No. 4, 2010).

The future is also likely to bring new advances in security training, Sasse says. Since the 1990s, IT professionals have been gamifying security with exercises like "cybersecurity capture the flag." These events divide people into teams that either attack or defend a computer system. Similar concepts now exist for non-experts. Carnegie Mellon University researchers developed a game called "Anti-Phishing Phil" that uses cartoon fish to teach users not to fall for phishing attacks; their research suggested that the game was an effective training tool (*Proceedings of the 3rd Symposium on Usable Privacy and Security*, 2007).

In 2018, the City of London Police started offering local companies cybersecurity training with a tabletop game involving Legos. And Texas A&M's IT department has won awards with its campus-wide cybersecurity games, which are set up like virtual board games and entice student participants with real-life prizes.

"It's all part of promoting engagement with security rather than beating people with a stick," Sasse says.

Now go change your passwords. ■

Career

NEW IDEAS FOR PSYCHOLOGISTS WHO WANT TO ENHANCE THEIR SKILLS AND ADVANCE THEIR CAREERS



ARE WE ABLE TO MAKE THE BEST DECISIONS FOR OURSELVES?

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ARE HUMANS ABLE TO MAKE THE BEST DECISIONS UNDER UNCERTAINTY?

In Wei Ji Ma's New York University lab, researchers build mathematical and computer models to dissect human cognition and brief policymakers on the implications of psychology and neuroscience research

BY CHRIS PALMER

Imagine this scenario: You're a spy for the resistance. You are in a crowded town square awaiting a rendezvous and an approaching man catches your eye. As he reaches into his coat, a series of questions races through your mind: "Does this man match the description I've been given of my source?" "Is he pulling out the thumb drive of intel I've been waiting for or is it a gun?" "Should I hold out my hand for the drop or should I run?" The answers could determine not only your fate but the lives of hundreds of others. As you churn through various possible outcomes and try to get a better look, time's running out and you need to act. Now.

While most decisions are not nearly so dramatic, many important ones, such as which job offer to accept or which medical treatment to choose, are similarly defined by uncertainties. In each case, the question is: Given all of the available background knowledge and the evidence at hand, what is the best decision?

Wei Ji Ma, PhD, an associate professor of neural science and psychology at New York University (NYU), and the members of his lab create computer models that calculate optimal responses to similar quandaries. Then they compare the models' decisions with what humans actually do in order to better understand how we process information and use this information to guide our behavior.

"There are many blind spots in human cognition that aren't fully mapped out, and we think it's important to learn about the heuristics and shortcuts that people take in order to perceive their world and act accordingly," says Will Adler, PhD, a former graduate student in Ma's lab.

The lab uses puzzles, games and a variety of perceptual and cognitive measures, including eye tracking and response times, to assess human perception and task performance. Ma and his team also collaborate with physiologists to figure out how neural circuits in the brain may implement both optimal and suboptimal decision-making algorithms.

Most of the lab's early work focused on how people perform in low-level perceptual tasks such as visually searching for a target among distractors and engaging in simple memory exercises. But as Ma and his colleagues have refined their models over the years, they've branched out to more complex cognitive tasks such as drawing conclusions about the cause of an event, determining whether it's a coincidence when events occur at the same time and explaining how misinformation can spread in social networks. They've even been using their models to figure out better diagnostic tests for conditions such as attention-deficit hyperactivity disorder (ADHD).

"Using mathematical models and computer simulations, we can reach a much deeper understanding of perceptual and cognitive processes than using experiments alone," Ma says.

RESEARCH FOCI

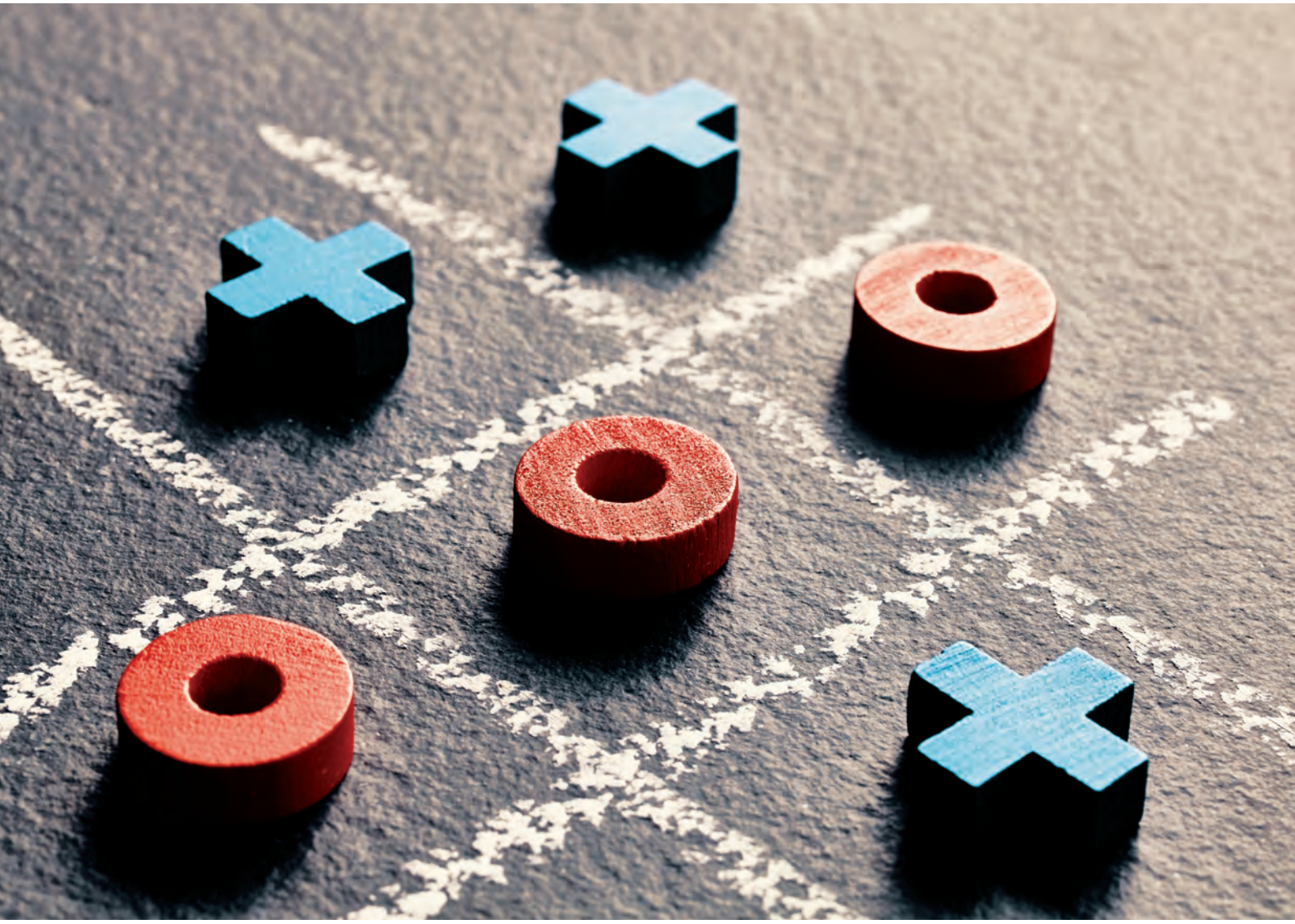
The Wei Ji Ma lab at New York University is exploring:

1. **How close to optimal people's decisions are when faced with uncertain information**
2. **Whether the brain reasons with probabilities in perceptual and cognitive tasks**
3. **How neural circuits can implement decision-making algorithms**

A HUMBLING TRANSITION

Growing up in the Netherlands, Ma was something of a prodigy. He finished high school at age 14 and college three years later. He earned his doctorate in physics from the University of Groningen.

Despite his aptitude for the subject, in his third year of graduate school, Ma became disenchanted with his research. His studies, in string theory, had become increasingly abstract. "At some point it became, 'Who could do the most complicated



MB PROJEKT_MACIEJ_BLEDOWSKI/GETTY IMAGES

The lab uses games, puzzles and cognitive measures to assess human perception and task performance.

math in the shortest amount of time?' and that didn't appeal to me anymore," he recalls. Then, through university seminars and popular books, he was drawn toward the many unanswered questions about the human brain.

In some ways, Ma says, the transition to psychology and neuroscience was easy because former physicists are highly sought out for their quantitative skills. In other ways, he explains, switching fields was hard. "I came at it with the complete misconception that physics could easily solve all problems, including understanding the nature of consciousness," he says.

Ma went on to a postdoctoral research position at Caltech with neuroscientist Christof Koch, PhD, himself a former physicist. There, Ma published his first significant paper (*Journal of Vision*, Vol. 4, No. 12, 2004), which demonstrated that people performing a working memory task can independently encode multiple visual stimuli at the same time, but that the quality of each memory drops off as the number of stimuli increases. In other words, the decline in memory performance is due to "noise" in the brain's representation of the stimuli rather than an absolute limit on storage capacity. "Our research suggested a new way of thinking about visual working memory that has become fairly influential in the field," Ma says of the highly cited paper.

Following his time in Koch's lab, Ma had a second postdoctoral position with Alex Pouget, PhD, at the University of Rochester in New York, where he began exploring how populations of neurons can implement "Bayesian inference." This refers to the concept, named after a theorem by mathematician Thomas Bayes, that the brain calculates the probabilities of events by combining prior beliefs with incoming evidence. Despite its simplicity, the theorem is powerful, which is why it is now used in a wide variety of applications,

including in self-driving cars, medical diagnoses, and separating spam from email.

In one notable paper, Ma, Pouget and colleagues argued that neural circuits in the brain could theoretically implement Bayesian computations (*Nature Neuroscience,* Vol. 9, No. 11, 2006). In another paper, Ma and Pouget teamed up with neurophysiologists to show that Bayesian ideas could help interpret the accumulation of sensory evidence in a brain region called the parietal cortex, in conjunction with a monkey's performance on a behavioral task (*Neuron,* Vol. 60, No. 6, 2008). After four years in Pouget's lab, Ma was hired in the department of neuroscience at Baylor College of Medicine in Texas. There, using related computational models, Ma and his team further investigated the limitations of visual short-term memory (*Proceedings of the National Academy of Sciences,* Vol. 109, No. 22, 2012). In other work, they found that, when faced with noisy sensory input, humans were near optimal at categorizing stimuli (*Proceedings of the National Academy of Sciences,* Vol. 110, No. 50, 2013).

'PLETHORA OF POSSIBILITIES'

In 2013, Ma joined the faculty of New York University, in part to move closer to his wife, a physician who was doing a residency in Philadelphia, and in part to be surrounded by colleagues with a deep interest in computational neuroscience.

Ma has continued to develop numerous collaborations with physiologists. When his team uncovers evidence for new principles of neural computations using behavioral tasks, he works with these collaborators to test the ideas with animal and human subjects, using tools for assessing neural activity such as electrophysiology and fMRI.



Dr. Wei Ji Ma, center, in red sweater, surrounded by his lab members.

COURTESY OF DR. WEI JI MA

Today, Ma's lab—funded primarily by the National Institutes of Health and the National Science Foundation—consists of two postdocs, five doctoral students, three undergraduate students, and one high school student. Much of Ma's recent work involves taking the computational approaches that have been so successful in explaining low-level phenomena, such as visual search and working memory, and applying them to cognitive tasks. "No topic is out of bounds," says doctoral student Jenn Laura Lee, "which is why he ends up with dozens of disparate projects, all connected by the underlying thread of modeling some aspect of cognition or behavior."

One focus of the lab's recent work has been strategy games. "Playing games is actually a very natural behavior that people have done for thousands of years," Ma says.

Even relatively simple games like tic-tac-toe require a sequence of decisions. In Ma's lab, subjects play tic-tac-toe on a four by nine board, where planning out all the possibilities is impossible. "Such combinatorial games are fundamentally interesting because they raise the question, 'How does the human brain deal with this plethora of possibilities?'" Ma says. The lab uses computational models of this game to investigate the cognitive processes underlying sequential planning. Their findings suggest that people explore the tree of possible outcomes less when under time pressure, and that players search this tree more quickly as their play improves (Cognitive Science Society, 2017).

Ma's lab has also begun exploring social decision-making. In one study, he and

his team studied how misinformation could theoretically spread in a social network. A person hearing the same piece of information from two friends will tend to believe it more than if it comes from just one friend. But if both friends heard it from the same source, the person may overestimate the reliability of the information (*Journal of Complex Networks,* Vol. 6, No. 3, 2018). In other ongoing studies, the researchers are testing how people build trusting relationships, how race affects the perception of emotions and how altruism can be characterized.

In addition to explaining how we perceive and navigate the world, a recent study in the lab led by Andra Mihali, PhD, used a simple perceptual and cognitive task to identify behavioral markers of ADHD. She and her co-authors asked subjects to discriminate lines based on either their color or orientation. They found that subjects with ADHD had a harder time keeping track of which feature to pay attention to from trial to trial (*Computational Psychiatry,* Vol. 2, 2018). Such behavioral markers might help clinicians better diagnose ADHD without having to rely on more subjective reports.

OUTREACH, ADVOCACY AND POLICY

Ma and his lab members have also launched two outreach projects to apply their personal experiences and scientific knowledge to benefit fellow scientists and society at large. One such endeavor is Growing Up in Science, an unconventional mentoring project that Ma helped start with NYU neuroscientist Cristina Alberini, PhD, to give scientists a platform to reveal their struggles, failures, doubts and detours (*Science,* Vol. 357, No. 6354, 2017). The project was inspired by more than a decade of mentoring dozens of students and postdocs, many of whom shared their personal struggles with him. Ma realized his trainees could benefit from hearing about the problems he faced early in his career. "There's a large gap between trainees and professors, in part because we faculty project ourselves as infallible," Ma says.

During his own Growing Up talk, Ma recounted the dread he felt after leaving physics to pursue psychology and the crippling sense of impostor syndrome he felt during his academic training. More than two dozen psychologists and neuroscientists, mostly from the NYU community, have participated in the series.

Two years after launching Growing Up, Ma and Adler helped start the Scientist Action and Advocacy Network (ScAAN), a grassroots advocacy group that provides volunteer data analysis, literature reviews and other expertise to social justice and environmental organizations that aim to influence policy. ScAAN partners with nongovernmental organizations (NGOs) that understand the legislative process but need scientific expertise. "We take complicated figures from neuroscience or psychology papers and we simplify them into easy-to-read line graphs and bar plots," says Adler, now a computational researcher at the Princeton Gerrymandering Project.

In 2016, ScAAN worked on Raise the Age NY, a project aimed at raising the age of criminal responsibility from 16 to 18 in New York state. ScAAN gathered neuroscientific evidence indicating that the developing adolescent brain is different from the adult brain both in its sensitivity to trauma and in its amenability to rehabilitation programs. Members of the Children's Defense Fund presented the evidence to New York state legislators. The Raise the Age bill passed in 2017.

For another project, ScAAN teamed up with PlasticBagLaws.org, another NGO, to explain to New York Gov. Andrew Cuomo and state legislators the potential effect on consumers' decision-making and behavior of a 5-cent mandatory fee on plastic bags. Lee, who serves as ScAAN's president, says while a bag-fee bill has not yet passed, "our goal is to use behavioral psychology research to help bring about smarter policies."

Such projects, Ma believes, underscore the positive influence strong science can have. "Unfortunately, scientists get incentivized for publishing papers and securing grants, and little else—not good teaching, not good mentorship, and not outreach, advocacy and policy," he says. "I think that's a total shame, because in the long run that's where scientists can have the biggest impact." ■

OUTREACH FOCI

Wei Ji Ma, PhD, is also actively involved with:

Growing Up in Science
A seminar series in which researchers share with students stories of personal and career struggles

Scientist Action and Advocacy Network
A grassroots advocacy group that provides volunteer data analysis, literature reviews, and other expertise on psychology and neuroscience to social justice and environmental organizations that aim to influence policy

● **"Lab Work"** illuminates the work psychologists are doing in research labs. To read previous installments, go to www.apa.org/monitor/digital and search for "Lab Work."

NEW WAYS TO FIND THE RIGHT MENTOR

Thanks to new technology and a variety of innovative programs, it's easier to find a mentor suited to your needs

BY CHRIS PALMER



Until recently, if you wanted someone to help guide you in your career, the pool of available mentors was limited by geographical location—specifically by your university. And the pool of possible mentors who shared similar values, experiences and backgrounds with you was even smaller.

Now, thanks to mobile devices, email and other technologies, it's much easier to find the best mentor for your unique needs. You can even find mentors who offer just short-term guidance on specific topics, peer-to-peer mentors or reverse mentoring relationships in which early career psychologists guide already established ones.

APA divisions, psychology leaders, students and others have developed innovative mentoring approaches to help in any form, area or level you need. Here are some of the most interesting developments.

VIRTUAL MENTORING

Not all mentoring relationships are built to last for years. For some students, having easy access to a variety of leaders in their field can help meet their immediate mentoring needs.

"Our division has always had a mentoring program, but we ran into some of the same challenges other divisions did—students didn't feel like they were really connecting well with their mentors long-term," says Desa Karye Daniel, a counseling education doctoral student at the University of New Mexico and a student representative for APA Div. 45 (Society for the Psychological Study of Culture, Ethnicity and Race).

So, in 2017 Daniel and the division's mentorship committee launched a virtual mentoring program. Rather than matching one student to one mentor, they recruited several Div. 45 psychologists to serve as mentors on specific topics.

For the program's first year, eight mentors met with students virtually for an hour a week for three weeks. In the first session, the mentor gave a formal talk about a specific topic. The second and third sessions were more informal, giving students a chance to ask questions.

"That first session really gives you an idea of who that mentor is and if you want to actually attend the following sessions," Daniel explains.

Early feedback indicated that participants wanted more mentors to choose from and fewer sessions. So, in 2018 the program recruited 13 additional mentors who provided just two sessions: an initial overview session and a free-form question and answer session. One of the most popular was a session with Cynthia de las Fuentes, PhD, an Austin, Texas–based psychologist, on how to start a private practice. Another well-liked session was hosted by Div. 45 President Helen A. Neville, PhD, a professor of African-American studies and educational psychology

OUR MENTORING SERIES

This article is the second in a *Monitor* series on mentoring. The January issue presented best practices in mentoring, in March we'll focus on mentoring programs for diverse psychologists and in April we will report on ethical issues in mentoring.



ROBERT NEUBECKER

at the University of Illinois at Urbana-Champaign, who talked about grant writing and the publication process.

In just two years, the program has blossomed, with more than 150 students participating in real time in the first year and 400 in the second. Hundreds more have since viewed the archived sessions online.

"We've had amazing, amazing feedback," Daniel says. "People were super excited about the topics we offered and about the diversity of the mentors."

Div. 45 is experimenting with other novel approaches to mentoring as well. These include short-term, goal-oriented mentoring focused on practical topics such as applying for scholarships and submitting proposals to APA. The division also hosts an annual in-person mentoring session at APA's Annual Convention. Similar to speed dating, these sessions give students a chance to visit one mentor at a table to chat about a specific topic, then move to another table after several minutes. "Our virtual mentorship is super successful, but people still need face-to-face interaction," Daniel says.

THERE'S AN APP, OF COURSE

Dating is also a good metaphor for another new mentoring tool, a networking and mentoring app called Grip that APA's Continuing Education Committee is using to bring together people at its conferences.

First used at APA's 2018 Annual Convention in San Francisco, Grip pulls in registration information about APA members—their division affiliations, interests, fellowship status and more—to come up with matches for a range of purposes.

"Grip can help early career psychologists meet a variety of needs, whether they're trying to figure out the ins and outs of setting up a private practice, negotiating tenure and promotion or interviewing for a job," says Greg Neimeyer, PhD, associate executive director of APA's Office of Continuing Education in Psychology. "Grip can be especially useful at our big meeting, where we've got more than 10,000 people, many of whom want to find ways to connect with one another in meaningful ways," he says.

As with dating apps like Match.com or Tinder, users swipe through potential matches and select those they want to meet with. The app even recommends spots for easy meet ups at the convention.

As Grip begins to generate data from interactions and user feedback, it may become useful for other purposes as well, Neimeyer says. These data may

indicate patterns, for example, that reflect the kinds of things early, mid- or late-career psychologists are looking for, which could inspire the creation of formal career development programs offered by the Continuing Education Committee.

PROJECT-BASED MENTORING

Not all mentoring occurs at conferences or in the halls of academia. For psychologists who have been out in the field for a while, learning new skills and acquiring new competencies can be critical for career development. Div. 13 (Society of Consulting Psychology) recognized that its members could benefit from hands-on, project-based mentorship, while also creating a much-needed pipeline of leaders for its board.

"Like all boards, we had a backlog of projects," recalls Carolyn Humphrey, PhD, founder of the Charlotte, North Carolina–based Consulting Psychology Group. "And it was increasingly difficult to get division members to step up to leadership positions."

The solution Humphrey and fellow board member Melanie Kinser, PhD, founder of the consulting firm ThinkWyn, hit upon was to kill two birds with one stone by creating a year-long mentoring program, which they dubbed the Leadership Development Initiative, and having the participants work on projects to advance the board's mission. Humphrey and Kinser prioritized 10 projects the board needed to complete that corresponded to a set of competencies they identified as important for the field of consulting psychology. Then they recruited 10 mentees through a competitive selection process, bringing them to Seattle for a three-day session before the division's February 2017 conference, where they did a 360-degree competency assessment, a management simulation, and team-building and peer-coaching exercises.

Over the next 12 months, the mentees met virtually as a cohort, talked regularly with their mentors and worked on their projects, which included creating a membership survey, implementing a branding initiative and updating board policy guidelines.

"We really progressed on some critical projects," Humphrey says.

Another plus: The program also filled several vacancies on the board, with nine of 10 mentees taking division leadership positions.

"That was not expected," Humphrey says. "Not only are they in leadership positions, they're way ahead of the game. Unlike previous incoming boards, this group had already spent a year working together."

EGALITARIAN MENTORING

Another novel approach to mentoring makes it an explicitly egalitarian enterprise. That's what APA Div. 35 (Society for the Psychology of Women) is doing with its Mentor Match Program, which it bills as a feminist mentoring program open to both female and male feminist psychologists.

RESOURCES

APA Division 13 Leadership Development Initiative
www.societyofconsultingpsychology.org/leadership-development-initiative

APA Division 45 Mentoring Program
division45.org/students/division-45-mentoring-program

APA Graduate and Postgraduate Mentoring
www.apa.org/education/grad/mentors.aspx

"Historically, mentoring doesn't necessarily take into account what the mentee thinks, feels or values," says Olivia Moorehead-Slaughter, PhD, a psychologist at the Park School in Brookline, Massachusetts. "All of those things are central in feminist mentoring, which is by definition mutually respectful, nonhierarchical and sometimes bidirectional" (*Mentoring & Tutoring*, Vol. 25, No. 5, 2016).

Mentor Match assumes that power is shared and there is mutual agreement about what the mentoring will be about, adds Moorehead-Slaughter, who initiated the program. "The purpose is not for the mentee to be a cookie-cutter copy of the mentor, but for the mentor to be a source of wisdom, advice and support in the areas identified by the mentee," she says.

"Mentor Match is another outlet for women graduate students to talk through personal and professional challenges in a safe place with someone who's been there and can relate to their experiences," says Monica Ellis-Blied, PhD, a psychologist at the U.S. Department of Veterans Affairs' VA Loma Linda Healthcare System in California, who organizes Mentor Match along with Alexandra Minieri, PhD, a psychologist at George Mason University Counseling and Psychological Services.

Because of its lack of hierarchy, feminist mentoring can be bidirectional, says Moorehead-Slaughter, with senior career psychologists encouraged to request mentoring from early career psychologists. "Implementing new technology,

such as telepsychology and social media marketing, is one area where we really learn a lot from our younger colleagues," she says.

THE STUDENT IS THE TEACHER

Not only do young people have a wide variety of tech skills they can impart to more senior colleagues, they also often approach problems with a fresh perspective. Reverse mentoring is tapping into this opportunity, says 2016 APA President Susan H. McDaniel, PhD.

"Any time you take an important leadership role, understanding how talented young people think is critical," she says. "Their viewpoint is different, and they sometimes have the best ideas. But there's not a systematic way to hear from them."

McDaniel says the idea of using reverse mentoring occurred to her after working with a group of younger colleagues to pass the policy requiring at least one early career psychologist on every APA board and committee. "When I was elected APA president, I thought it might be really helpful to get a group of seven or eight early career folks representing different facets of psychology and ask them to mentor me. We then organized monthly calls," she explains. "I would ask the group, 'Here's what we're up against. What do you think I should do about it?' And then I'd sit back and listen to their points of view, which were often different than those I heard from more experienced leaders across the association. This early career psychologist mentoring group was very helpful to me and informed many of my decisions during my president-elect and presidential years."

Not only do young people have a wide variety of tech skills they can impart to more senior colleagues, but they also often approach problems with a fresh perspective.



McDaniel was not the only one to benefit from the collaboration: The early career psychologists gained valuable leadership experience and networking opportunities, says Lindsey Buckman, PsyD, founder of Phoenix-based Buckman Psychological Consultants, who was part of the group. "Having that sort of access to an APA president is certainly unique, and I really appreciated the chance to consult with Susan and provide my feedback," Buckman says.

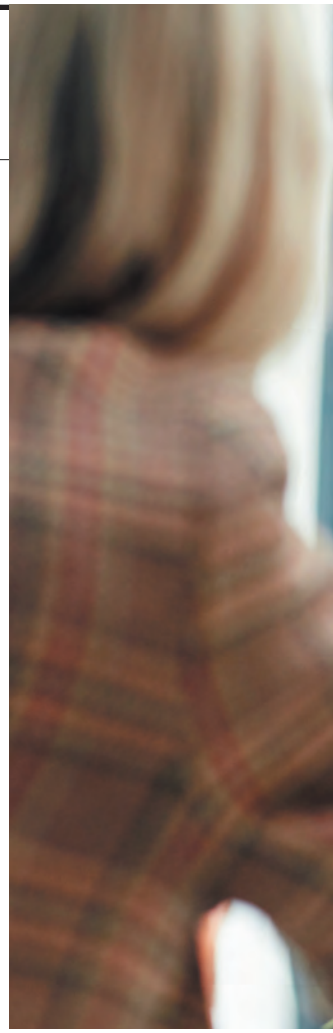
PEER-TO-PEER MENTORING

Another growing mentoring relationship is peer-to-peer mentoring, which is the focus of the Peer Collaboration Program run by the American Psychological Association of Graduate Students' Committee for the Advancement of Racial and Ethnic Diversity (CARED).

"The impetus behind the peer-to-peer mentoring was our own personal experiences," says CARED member Fiona Thomas, a doctoral student in the clinical psychology program at Ryerson University in Toronto. "Being from diverse backgrounds, we wanted to give graduate students a way to connect with fellow students when the opportunity to meet up face-to-face with people in their program or in their area wasn't available."

The Peer Collaboration Program was conceived of by former CARED member Shadab "Daisy" Hussain and was initially developed by Hussain and current CARED member Ryan C. Warner in late 2016. The most recent cycle started in March 2018 with 14 groups of three to four people each. The groups meet via email, Google Hangouts or other online platforms to discuss prompts that cover topics relevant to ethnic minorities in psychology such as professional identity development, career goals, self-care, diversity-related advocacy and conducting research related to racially and ethnically diverse populations.

"The program is something that I wish I would have had when I first started my doctoral training—a time when I felt like I was grasping for straws trying to find a community," says CARED member Mary Odafe, a doctoral student in the clinical psychology program at the University of Houston. "If a program like this had been around, I certainly would have participated, so I'm happy that we get to be a part of bringing that to others." ■



HOW TO FORGE PARTNERSHIPS WITH PHYSICIANS AND OTHERS

Demand for behavioral health services in medical groups is creating new business opportunities for psychologists

BY HEATHER STRINGER

In 2014, after two decades of treating patients at his group practice, the Center for Cognitive & Behavioral Therapy in Columbus, Ohio, psychologist Kevin Arnold, PhD, decided it was time to revolutionize his practice model. During the previous several months, he'd heard speakers at three conferences describe how behavioral health integration into primary care was the future of health-service psychology. Arnold suspected a co-located care model, where he treated patients alongside primary-care physicians, would increase access to his mental health services and improve patient outcomes by providing immediate feedback to physicians about patients' behavioral health problems and coordinating care.

But first he had to sell the idea to physician practices.

Arnold pitched the concept to Central Ohio Primary Care (COPC)—a group of more than 400 providers. "We made a strong case based on improved care for patients and financial incentives from health insurance providers as a result of health-care reform," Arnold says. A psychologist in the clinic, he told them, could improve patient outcomes, and insurance companies are increasingly rewarding practices with monetary bonuses for providing a higher quality of care.

One of their pediatric practices agreed to run a pilot project to see if having Arnold in their office improved patient care. With the co-location system, pediatricians referred children and adolescents with such diagnoses as anxiety, depression and gastrointestinal problems. Arnold saw those patients weekly on a half day he spent at the practice. The physicians were impressed when Arnold was able to resolve difficult cases after six to eight visits, and his referrals increased. It quickly became clear that there were far too many patients to see in just four hours a week, so the physicians asked Arnold to come to the pediatric practice three half days a week and invited another provider from Arnold's team to work there an additional half day.

A SUCCESSFUL PARTNERSHIP

The physicians he works with are grateful for the support. "We see a lot of pediatric patients who have mental health issues that arise while they are growing, and I can only offer them general guidance," says Bonnie Pugh, MD, a pediatrician at COPC. "Some of them need more sustained support from a mental health professional, and the beauty of having a psychologist in the office is that there is a lot more collaboration."

Word spread about the pediatric group's success with this new model of care, and now Arnold is co-located with four COPC practices and two other medical groups in the area. Working alongside physicians has been highly rewarding for the psychologists, the physicians and the patients, says Arnold, who encourages other psychologists to consider such collaborations.

"I think our vitality as a profession will depend on tackling mental health issues that are co-morbid with physical issues, and we need to educate physicians about the benefits of this model," he says.

One of those benefits is that patients seem to get better faster, Arnold says. "When people see a psychologist in a primary-care setting, they have a different mindset than when they see me in my private practice office. The medical environment seems to set a different tone, and they are more motivated and less likely to cancel."



LAFLOR/GETTY IMAGES

NETWORK EARLY

How can other psychologists replicate Arnold's success? The first hurdle is finding physicians and other health-care providers who are willing to invite psychologists into their offices. Earning that opportunity starts long before meeting with physicians and their administrative staff.

Before approaching medical practices about the idea of co-location, Denver practitioner Helen L. Coons, PhD, developed strong, collaborative relationships with physicians, nurse practitioners, physician assistants, genetic counselors and physical therapists who already referred patients to her. "That means sending consult notes with the patient's status and treatment goals, and following up with phone calls when appropriate," says Coons, who specializes in women's health and mental health and has been working with physician groups for almost 20 years.

That type of communication between psychologists and physicians is surprisingly uncommon, says Arnold Holzman, PhD, managing partner of Behavioral Health Consultants, LLC, in Hamden, Connecticut. "I've been accepting referrals from medical groups for 30 years, and when I send a clinical follow-up note, I still get responses from physicians saying I was the first mental health professional who gave them any feedback about a patient."

He urges psychologists to view themselves as health-care providers who respect the confidential nature of their relationships with patients yet also communicate with physicians about patient needs. "Doctors want to know about the symptoms, treatment plan and progress, but not really the details about the patient's history of abuse or other private information."

One way to increase patient referrals is by attending conferences where you can introduce yourself—and your services—to other health professionals.

BUILD CONTACTS

Another way to increase patient referrals is to offer to give "lunch and learns," staff in-service training or continuing education to health-care providers beyond your referral networks, says Coons. She formed connections by speaking to nursing and medical groups about such topics as coping with cancer, delivering difficult medical news and pregnancy loss.

Psychologist Jennifer Harned Adams, PhD, expanded her network by attending the annual meeting of the Childbirth and Parenting Association of Colorado, where she met lactation consultants, doulas and labor and delivery nurses. "I was surprised to learn that I was the only mental health professional who attended," says Adams, who runs a private practice in Denver. "The people there were excited to have a therapist who wanted to connect with the same patient population."

Adams started giving talks at the organization's conferences on such topics as recognizing the symptoms of postpartum depression. Soon after, she met a lactation consultant who worked at Presbyterian/St. Luke's Hospital in Denver, which specializes in treating women with complicated pregnancies. Five years

later, the hospital offered her a contract position for two days a week in the Center for Maternal Fetal Health, where she works with mothers who are on long-term bedrest and families with babies in the neonatal intensive care unit.

"Many of these families are far from home, and I help them deal with the difficult dynamics that arise," Adams says. "There may be older children at home, fear about a baby's health, stress on a couple's relationship and relatives who have opinions about how care should be managed." By supporting families, Adams not only frees providers to focus their attention on the medical needs of the mothers and babies but also helps staff understand how to communicate effectively with parents and other family members.

NEW OPPORTUNITIES

While improving patient care is an invaluable selling point for psychologists who want to co-locate with physicians, psychologists should also be aware of new ways they can add revenue to medical practices thanks to provisions of the Affordable Care Act (ACA), says Doug Tynan, PhD, director of APA's Office of Integrated Health Care.

Under the law, medical groups can receive bonuses from insurers for meeting patient outcome goals related to lower hospital readmissions, reduced emergency room use, diabetes control and a variety of other measures. Psychologists can play an important role in helping physicians reach these goals, Tynan says.

"People with diabetes, for example, are much more likely to be depressed, and this increases the risk of poorly controlled diabetes," he says. "Psychologists can help these patients with setting goals, identifying negative thoughts and other behavioral interventions, which could lead to significant financial bonuses for the practice if these patients can better manage the disease."

Eugene, Oregon–based psychologist Teri Strong, PhD, had been practicing as a psychologist for 20 years when she decided to tap into the incentives of the ACA to improve patient care and expand her reach. Strong collaborated with a large medical group that had received federal and state grant money to establish integrated behavioral health services in their primary-care clinics. "I knew many of the physicians in the medical group, so collaborating with them was a natural outgrowth of these relationships," she says.

Strong quickly realized that she alone could not meet the needs of all the patients in the Oregon Medical Group, which included 100 medical providers. So, she offered to create a team of mental health professionals with varying specialties who could consult in the medical offices and provide care for patients.

"I knew it was a financial risk because I would be spending some of my time forming and managing this new group, and also taking on administrative overhead and staffing costs that were not directly reimbursed by the grants or by billing," says Strong.

But her risk paid off. She started with three employees at Strong Integrated Behavioral Health in 2014 and had doubled in size by 2016. Now, she has a staff of 42 psychologists, professional counselors, social workers and postdoctoral psychology trainees who treat patients in adult medicine, pediatric primary care and pain management settings.

"We contract with all payers, including Medicare, Medicaid and all commercial insurance, so we can serve the entire population of patients who need our services," says Strong, "And this fits with the social justice mission of our practice."

She also hired a training director who teaches new employees how to consult in an integrated-care setting because most don't have experience working in a physician-run practice. Employees learn about the medical terminology and medications related to their patient population and how they can leverage short-term treatments, including cognitive-behavioral therapy, for 30-minute appointments.

Strong's group practice has attracted early career psychologists, practitioners who have returned from retirement and other seasoned psychologists interested in shifting to integrated care.

"Providing opportunities for mental health professionals to learn new ways of practicing has been the most gratifying thing I've done in my career," Strong says. "And many of the patients we see in the medical clinic would not have necessarily come across town to see someone in private practice." ■

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CATERING TO THE NEEDS OF WORKERS IN BIG TECH

At Crossover Health, psychologist Ross Nelson is part of a team providing care to employees of Silicon Valley companies

BY ZARA GREENBAUM



To kick off his workday at Crossover Health, clinical psychologist Ross Nelson, PsyD, huddles with seven other health-care providers at the integrated medical group: a primary-care physician, nurse, physical therapist, health coach, chiropractor, acupuncturist and optometrist. Together, they discuss patients' physical and mental health needs and exchange their knowledge about such conditions as depression, stress, vitamin D deficiency and lower back pain. When they aren't with patients, the team spends the rest of the day working in a large, open-concept "bullpen," trading notes about individuals and treatment plans.

"The bullpen is where a lot of the magic of integration happens," says Nelson, the behavioral health program manager at Crossover Health, based in Northern California. "It's a special opportunity to collaborate—literally elbow to elbow—with a really diverse team of providers. It doesn't get much more patient-centered than that."

Founded in 2010 by Scott Shreeve, MD, Rich Patragnoni, MD, and Nate Murray, Crossover Health provides comprehensive health-care services to employees of large technology companies in Silicon Valley—including Apple, Facebook and LinkedIn—on or near their campuses. The company now has 19 clinics in the Bay Area, Texas, Idaho, Seattle, New York and Boston and several more opening in 2019.

Providers at Crossover Health say their integrated approach takes care to a new level.

"Many groups say they have an integrated model, but the providers are all housed separately," says Leslie Gerber, RN, a market practice manager who oversees nine Crossover clinics in the Bay Area. "But in the way our physical space and our sessions are designed, we actively facilitate, encourage and promote that collaborative piece to occur every day, all day."

HOMING IN ON EMPLOYEE STRESS

It's no secret that employees of technology companies often work long hours and experience stress on the job. In 2015, a *New York Times* exposé of Amazon revealed a highly competitive company culture, and in a subsequent survey of tech workers by Open Sourcing Mental Illness, a nonprofit dedicated to raising awareness about mental wellness in the industry, 71 percent of respondents said their productivity is affected by a mental health issue.

Crossover caters to the needs of this fast-paced community by making care more accessible. LinkedIn and Facebook, for example, have custom-built Crossover clinics on campus, while other companies' employees go to nearby clinics via free Lyft rides provided by Crossover Health.

In another effort to meet the needs of its tech-savvy patients, Crossover has woven technology into each step of its operations. Patients book appointments, message providers and monitor health scores such as depression and anxiety assessment results using the medical group's online portal. Crossover also delivers behavioral health services virtually when employees can't get to the clinic.

The group's behavioral and mental health offerings are tailored to the needs of these employees, whose top concerns include anxiety, depression, occupational stress and relational conflict.

"There are also some specific



CHRISTIE HEMM KLOK

Clinical psychologist Dr. Ross Nelson has daily huddles with seven other health-care providers at the integrated medical group: a primary-care physician, nurse, physical therapist, health coach, chiropractor, acupuncturist and optometrist.

stressors that come up around working for tech companies, like a lot of pressure to perform and perfectionism," says Nina Kalus, PsyD, clinical psychologist at one of Crossover's shared clinics in Mountain View, California. To meet those needs, Crossover hires and trains psychologists to treat workplace stress and anxiety, relationship conflict, workaholism, achievement addiction and imposter syndrome.

Practitioners use a combination of cognitive-behavioral therapy, acceptance and commitment therapy, dialectical behavioral therapy and mindfulness-based interventions in their work. For example, to treat imposter syndrome, Nelson helps patients challenge negative beliefs and distorted thoughts (such as "Others think I'm a fraud" or "I'll never be successful") using cognitive strategies including David Burns' externalization of voices framework, the role-playing exercise that identifies distortions and encourages behavioral strategies such as self-disclosure.

Psychologists and other providers also rely heavily on Crossover's internal referral system to optimize care. When one patient complained of ongoing back and joint pain along with other obesity-related difficulties during a primary-care visit, she received referrals for physical therapy, acupuncture and health coaching—and her work with those providers revealed that she was likely experiencing depression. After receiving psychotherapy, the patient reported an elevated mood, improved diet and exercise routine and eventually

● The *Monitor*'s **"Adventures in Integrated Care"** series explores the work psychologists are doing as members of interdisciplinary teams. If you have a story to share, contact editor Sara Martin at smartin@apa.org.

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an end to her joint pain. "She really navigated the integrated-care model in a beautiful way," Nelson says.

Kalus says many of her patients share similar stories—they've been struggling with depression or anxiety for years but never received treatment. "We're working to both decrease stigma around mental health and to increase accessibility," she says. "One thing that's great about our behavioral health program is that it's so normalized as just one of the many services we offer."

PAYING FOR CARE

At Crossover, contracted companies finance their employees' health care rather than charging patient visits to insurance. "We're not constrained by our providers being paid only when their patients continually come in for treatment," says Nelson, adding that patients are typically more willing to access care when they don't pay a fee for each visit.

As a result, the group offers an array of specialty offerings, including "lunch-and-learn" sessions on such topics as improving workplace communication. Some providers teach regular classes on sleep, postpartum recovery, and stress and anxiety. Others offer group therapy sessions, on-campus wellness workshops, and grief or trauma support groups.

Crossover recently began offering hourlong educational webinars—a session Nelson teaches on managing stress and anxiety is particularly popular—and will soon launch a virtual therapy orientation to educate new patients about the treatment process and to share self-help resources. "This can be really useful for reducing concerns around stigma or the anxiety that tends to come up when treatment begins," Nelson says.

Where possible, Crossover tailors its offerings to dovetail with the priorities of its member companies. When several clients announced mental health as a 2018 company focus, the medical group amped up relevant class and seminar offerings on campus.

"These companies' willingness to take a stand to help their employees has provided a great opportunity for us to partner up and emphasize the services we offer in the area of behavioral health," says Gerber.

Data show that Crossover's integrated model is popular, with a patient satisfaction rate of 96.3 percent.

"Ultimately, the biggest need that we meet is for access," says Gerber, explaining what makes Crossover so popular with its members. "We have in-network, available, high-quality, cost-effective providers, care and resources for all of the services that we offer. We save people time and we empower them to get care that they otherwise may never receive." ■



Almost half of the nearly **30 million people living with diabetes** in the United States experience **mental health challenges.**

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Mental Health Provider Diabetes Education Program

This program sponsored by a grant from The Helmsley Charitable Trust.



“The podcast is a lot of work, but when I’m in the moment of an interview, it comes to life and thrills me all over again,” says Dr. David Van Nuys.

PSYCHOLOGY'S PODCAST PIONEER

For 13 years, David Van Nuys has been bringing psychology to the public with "Shrink Rap Radio"

BY SHAUNA REID

David Van Nuys, PhD, host of the popular psychology podcast "Shrink Rap Radio," began podcasting in 2005 and has now produced more than 600 episodes, each featuring in-depth interviews with leaders from across the broad field of psychology, from "Happiness and Health" with Dacher Keltner, PhD, to "The Promise of Technology for the Aging Brain" with Adam Gazzaley, MD, PhD. The show has had over 4.5 million downloads from listeners across 212 countries.

Van Nuys is an emeritus professor of psychology at Sonoma State University in Rohnert Park, California, where he served as that department's chair for seven years. He was recognized as an APA Citizen Psychologist in 2018 for his pioneering podcasting work. He also runs a market research consulting business with such clients as *The New York Times* and Apple Inc.

What inspired you to start "Shrink Rap Radio"?

I was an enthusiastic ham radio operator as a kid and learned a lot about electronics. I'd planned to major in electrical engineering but ended up becoming a psychologist after a college class on abnormal psychology captured my interest.

Flash forward to 2005, when I read a magazine article about Adam Curry, one of the pioneers of podcasting. I thought, *What the heck is a podcast?* The word intrigued me. I dove in and learned all I could. It appealed to the youngster in me that had loved talking to people from all over the world on ham radio.

I had been a practicing psychologist for over 20 years at that point, as well as a market research consultant, so an interview show made sense.

How did the podcast evolve from there?

I followed my instincts. After interviewing people I knew for the early episodes, one day I read an article in *The New Yorker* about Philip Tetlock, PhD, a psychologist who'd written "Expert Political Judgment: How Good Is It? How Can We Know?" a book about political judgment. I emailed him requesting an interview, and he said yes.

After that, I realized I could simply reach out to people in the broad world of psychology. I didn't have to know them. It was like fishing. *Can I get this person? Can I get that person?* I enjoyed catching big fish. As "Shrink Rap Radio's" audience grew, the big fish started to approach me either directly or via their publishers and publicists.

"My psychology and market research background means that I know how to prepare ahead of time to keep an interview on point, and also be flexible to make it feel conversational."

How do you put the show together?

I do everything myself, from setting up interviews, researching and preparing, conducting and recording the interviews to editing and publishing the episodes online. It takes about 10 hours of work per episode. Podcasting has become a lot easier, with technology and services for recording, editing and publishing that have lowered the entry bar considerably. I've had great support from the listener community, too, with enthusiastic volunteers helping with social media and transcribing episodes. The podcast is largely self-funded, although I occasionally get listener donations and a small amount of revenue from offering advertising space on my website. The podcast is a labor of love rather than a "quit your day job" venture.

How did your audience grow?

It's been organic. I've not done much to promote it other than encouraging listeners and guests to spread the word. Over time I've learned I have a wide range of listeners—bright adults curious about psychology, undergraduate and graduate students, psychotherapists, either experienced or in training, and professorial types.

CHRISTIE HEMM KLOK

It's gratifying to discover that my peers find value in the show. Some psychology professors are assigning selected interviews to their students. "Shrink Rap Radio" interviews are also being used for over 100 online continuing-education units through the Zur Institute, which provides online continuing education for mental health professionals.

What makes for a good interview?

You've got to be curious and do your homework. My psychology and market research background means that I know how to prepare ahead of time to keep an interview on point, and also be flexible to make it feel conversational.

● **Listen to** the "Shrink Rap Radio" podcast at www.shrinkrapradio.com or search for "Shrink Rap Radio" in iTunes and other podcast apps.

I also look for the pieces of the guest's work that touch me, and I share some of my own experiences as well. The guest is the star, but using stories from my own past helps me connect with my guest and lets my audience know that I'm not an expert on a pedestal—I'm just a human being who struggles with some of the same issues that they do.

I've had guests compliment me because they're so used to quick interviews with soundbites, usually with people who are not in the field. They appreciate having a whole hour to talk about their passion.

After 13 years and more than 600 episodes, what keeps you motivated?

The positive listener feedback is gratifying. The podcast is a lot of work, but when I'm in the moment of an interview, it comes to life and thrills me all over again.

As far as I know, I was the first psychologist to create a psychology podcast. I'm certainly the person who has been doing it the longest. Now there are many others, but I tend not to monitor them. It gratifies me that "Shrink Rap Radio" is still listed under "What's Hot" in the higher education section of iTunes, even though there's more competition now. ■

RELATED RESOURCES

How to Create Your Own Podcast
Stringer, H.
Monitor on Psychology, 2017

Speaking of Psychology
APA's podcast series highlighting psychological research




Barlow


Hooker


Berridge


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PSYCHOLOGISTS IN THE NEWS

Boston University hosted a festschrift celebrating the research, clinical and training achievements of **David H. Barlow, PhD,** in October. Barlow is the founder and director emeritus of the university's Center for Anxiety and Related Disorders, one of the nation's leading centers for anxiety treatment. At the festschrift, Barlow also accepted an APA Presidential Citation from then-APA President Jessica Henderson Daniel, PhD, for supporting students of color as director of clinical training at Boston University, and for preparing all his trainees to serve a diverse society.

Fordham University distinguished psychology professor **Olivia Hooker, PhD,** died in November at age 103. Hooker was on the Fordham faculty from 1963 to 1985 and was one of the founders of APA's Div. 33 (Intellectual Disabilities and Developmental Disabilities/Autism Spectrum Disorder). She was the first black woman to enlist in the Coast Guard in 1945 and was among the last surviving witnesses to a race-related attack on a black section of Tulsa, Oklahoma, in 1921.

The University of Louisville has presented its $100,000 Grawemeyer Award for Psychology to **Kent Berridge, PhD,** and **Terry Robinson, PhD,** for their incentive-sensitization theory of addiction. The theory posits that "liking" and "wanting" are separable in the brain, and that the dopamine system in people who are addicted to drugs becomes hypersensitive to drugs and drug cues, producing a "wanting" that can last for years. Their 1993 paper on the theory has been cited more than 6,500 times and is considered an important step in the effort to identify more effective ways to treat addiction.

The Schwartz Center for Compassionate Healthcare has named **Terry Stancin, PhD,** as its National Compassionate Caregiver of the Year for her role in establishing the multidisciplinary Kidz Pride Clinic at MetroHealth System in Cleveland, one of the nation's first clinics dedicated to the medical and mental health needs of transgender youth. Stancin also focuses on improving care for underserved children, including those exposed to trauma and poverty. She is the first psychologist to receive this award.

Judith S. Beck, PhD, has earned honorary doctorates from Assumption College in Worcester, Massachusetts, and the Philadelphia College of Osteopathic Medicine for her outstanding contributions to the field of psychotherapy. Beck has served as president of the Beck Institute for Cognitive Behavior Therapy for 24 years and is also a clinical professor of psychology in psychiatry at the University of Pennsylvania.

The National Commission on Correctional Health Care has elected **Thomas J. Fagan, PhD,** as chair of its Board of Directors. Fagan, who has been APA's liaison to the commission board since 1996, is focused on improving health and mental health care in jails, prisons and juvenile confinement facilities. He has worked for the Federal Bureau of Prisons for 25 years, in a variety of positions, including director of clinical training and the prison system's chief hostage negotiator. Fagan is also an emeritus professor at Nova Southeastern University.

The Southern Pain Society has presented its Dr. Hubert and Renee Rosomoff Award to **Geralyn Datz, PhD,** of Southern Behavioral Medicine Associates in Hattiesburg, Mississippi, for her outstanding contributions to pain treatment. Datz has established an effective 20-day outpatient pain clinic for injured workers that focuses on eliminating or replacing opioids and teaching pain sufferers how to manage their symptoms without medication. ■

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—Sylvanna M. Vargas,
APF Drs. Ruth and Joseph Matarazzo Scholarship Recipient

For more information about how you can support the future of psychology through the American Psychological Foundation, please contact Miriam Isserow at 202-336-5622 or misserow@apa.org.

BY LEA WINERMAN



MOST AMERICANS SUPPORT FEDERAL RESEARCH FUNDING

A majority believe that spending taxpayer money to advance science and medical research is worthwhile, finds a Pew Research Center poll—but there is a political divide.

80%

The percentage of Americans who believe that government investments in **medical research** "usually pay off in the long run." **Eighty percent** also believe that's true for engineering and technology research, and **77 percent** do for basic research.

92%

The percentage of self-identified **liberal Democrats** who believe that investments in basic research usually pay off in the long run. In contrast, **61 percent** of conservative Republicans do. The divide is similar for engineering and technology research and medical research.

57%

The percentage of Americans who say that government funding is **"essential"** for scientific progress. **Forty-two percent** believe that private industry funding alone will ensure enough progress.

78%

The percentage of **liberal Democrats** who believe that government funding is essential for scientific progress. **Sixty-five percent** of moderate/conservative Democrats do, as do **52 percent** of moderate/liberal Republicans and **31 percent** of conservative Republicans.

Source: Pew Research Center American Trends Panel. (2018). Methodology and results available at www.pewresearch.org/wp-content/uploads/2018/07/FT_ScienceGovernment_Topline_Methodology.pdf.

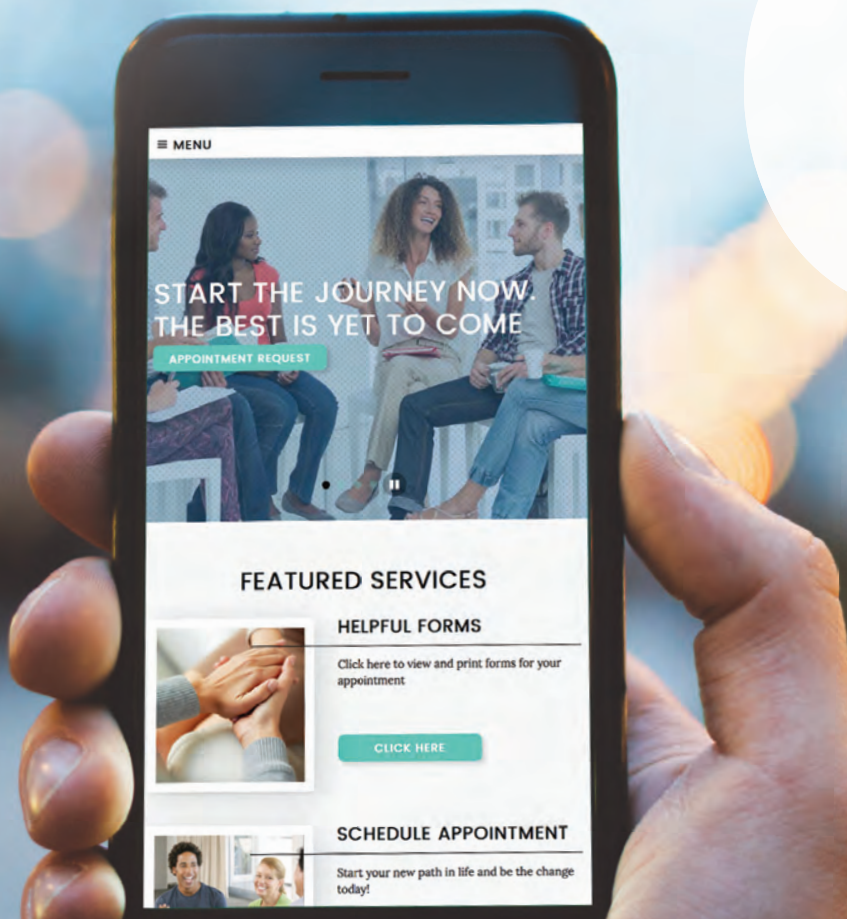
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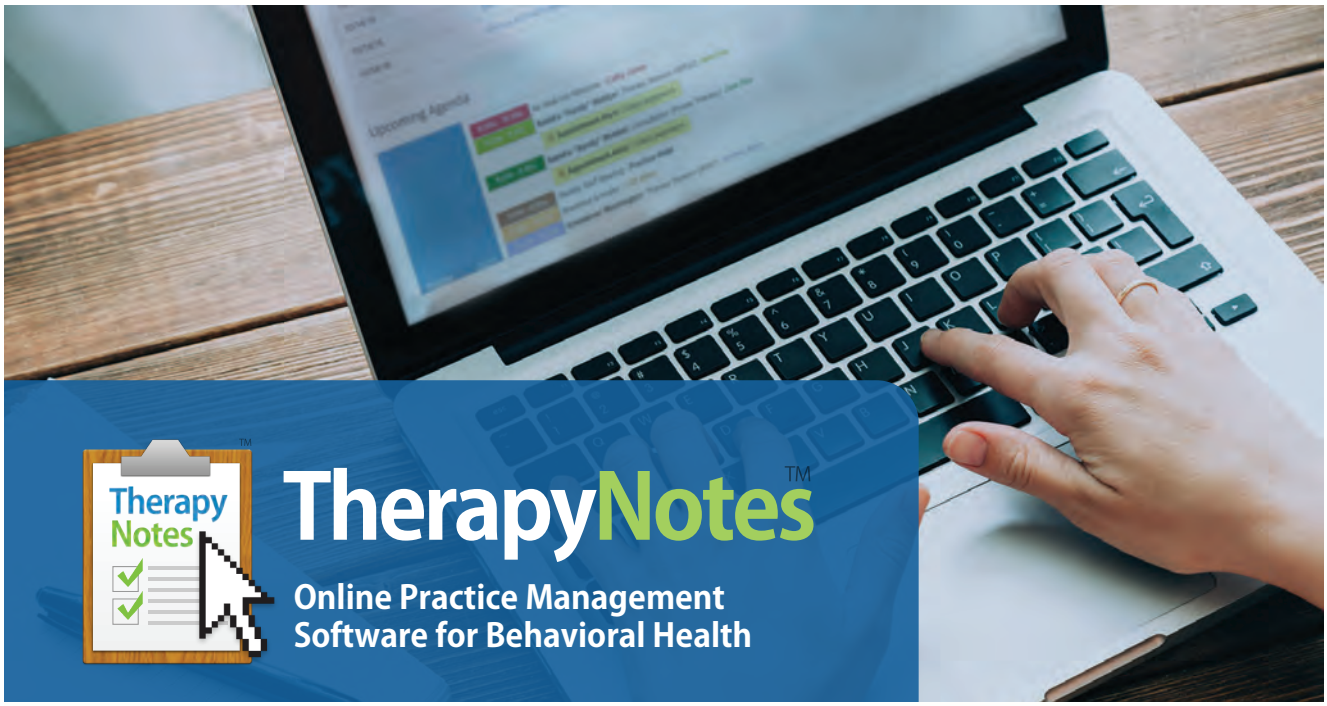
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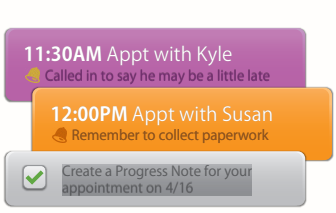
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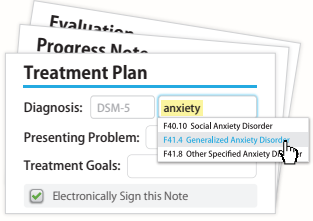
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