ADELPHI UNIVERSITY
NEW YORK

ACADEMIC & CREATIVE RESEARCH

MAGAZINE //// FALL 2019

SEEKING SOCIAL JUSTICE

Adelphi Researchers Break Down Barriers—and Transform Lives—in Our Communities and Around the World

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Academic and Creative Research Magazine is published annually by the Adelphi University Office of University Communications and Marketing. Address correspondence to: *Academic and Creative Research Magazine*, Adelphi University, Levermore Hall, Room 206, One South Avenue, P.O. Box 701, Garden City, NY 11530 or email **ucomm@adelphi.edu**.

If I've learned anything from my 41 years in higher education, it's that while classroom instruction is fundamental to the process of imparting knowledge to our students, original research, creative endeavors and community service are essential to the cultivation of empathy, insight, and critical and innovative thinking skills. Recent research by Adelphi faculty strongly supports this observation [Parkin, Hung, pp. 20-22].

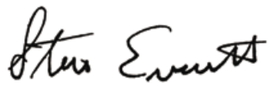
At Adelphi University, we embrace this reality and foster a transformative learning environment by supporting research by faculty and students across all disciplines. Our robust intellectual environment enriches our students, our faculty and the world around us.

Research at Adelphi ranges from the micro—such as the role of cytokinin genes and protein in algae's ability to migrate from water to dry land [Heyl, p. 25]—to the macro, addressing such issues as the role of community in improving outcomes for people with mental health diagnoses [Gonzales, p. 50].

In the Fall 2019 edition of Adelphi's *Academic and Creative Research Magazine*, we offer a sampling of the many research and creative projects taking place within our community. Consistent with our core principles, social justice is a prevalent theme in this edition. In these pages, you will see multifaceted projects such as an exploration of the intersection of art, feminism and activism [Weida, p. 17]; a deep look at aging-related disorders and ways to address them [Kaplan, Randazzo, Namasivayam-MacDonald, pp. 33-35]; and an inside look at the strategies employed by brave and successful female entrepreneurs in the United Arab Emirates [Erogul, pp. 30-31].

Human history will always be a never-ending story of change, evolution and adaptation. By asking important questions, taking the time to do thorough and exacting research, and sharing the results through peer-reviewed journals, academic conferences and the popular press, we expand our collective knowledge and are making the world a better place.

I hope you will enjoy this outstanding collection of articles about the great discoveries and creative work that take place at Adelphi University.



Steve Everett, D.M.A.
Provost and Executive Vice President

A Growing Grant Culture

> When you win, it's transformative. Along with the ability to complete my research on Atomic Physics With Rapidly Frequency Chirped Laser Light, I was able to take most of my undergraduate research team to the American Physical Society meeting in March—a career-shaping moment made possible by an NSF grant I never thought I could win."
>
> **—Matthew Wright, Ph.D., department chair and associate professor of physics**

Grants are the foundation for advanced research, and Adelphi faculty members were highly successful in attracting funding from prominent organizations in 2018–2019.

Leading the way was the $1.2 million National Science Foundation (NSF) grant awarded to The New York Noyce STEAM Pipeline: Preparing Next Gen Science Teachers, an innovative Adelphi program that prepares science teachers for positions in high-needs school districts. Faculty members also received grants from the National Institutes of Health, the U.S. Department of Health and Human Services, the New York State Education Department, and other organizations.

The University supported 24 diverse research projects with Faculty Development Grants in 2018–2019, funding academic investigation into subjects from power and safety on New York dairy farms to opioid use disorders and potential uses of virtual reality in education.

The catalyst behind Adelphi's growing grant culture is the University's Office of Research and Sponsored Programs, which promotes grant opportunities and helps faculty members and administrators obtain external funding. The office provides the Adelphi community with access to the Sponsored Programs Information Network (SPIN), a web-based database of more than 40,000 funding opportunities and 10,000 sponsors.

Still, obtaining funding is always a challenge, one that involves hard work and the proper approach. Matthew Wright, Ph.D., department chair and associate professor of physics at Adelphi, made that clear in "How I Got a Grant I Never Thought I Could Get," an op-ed in the May 20, 2019, edition of *Inside Higher Ed*. Filled with straightforward advice for obtaining funding, the article includes practical tips for grant seekers.

"When you win, it's transformative," Dr. Wright wrote. "Along with the ability to complete my research on Atomic Physics With Rapidly Frequency Chirped Laser Light, I was able to take most of my undergraduate research team to the American Physical Society meeting in March—a career-shaping moment made possible by an NSF grant I never thought I could win."

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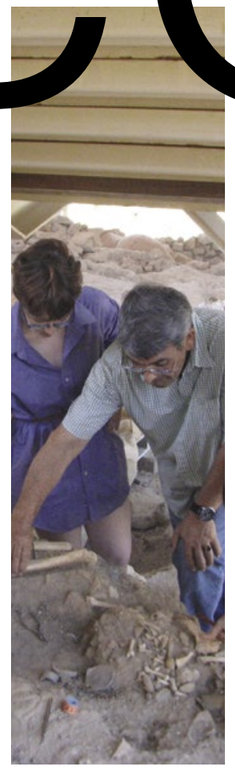

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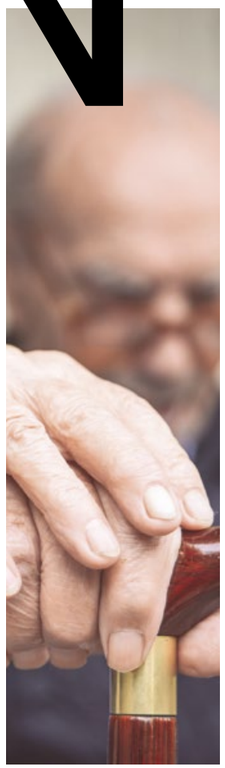

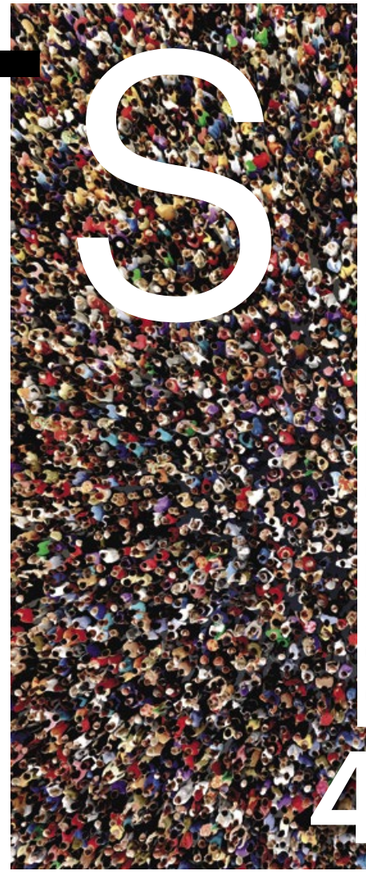

FOCUS ON SOCIAL JUSTICE

Adelphi faculty transform lives through community-engaged scholarship

Support the Adelphi Fund.

Help spark student discovery and fuel innovative research.

Through small classes, close interaction with faculty and hands-on research experience, Adelphi customizes the college experience by giving each student a personalized education with lifelong benefits.

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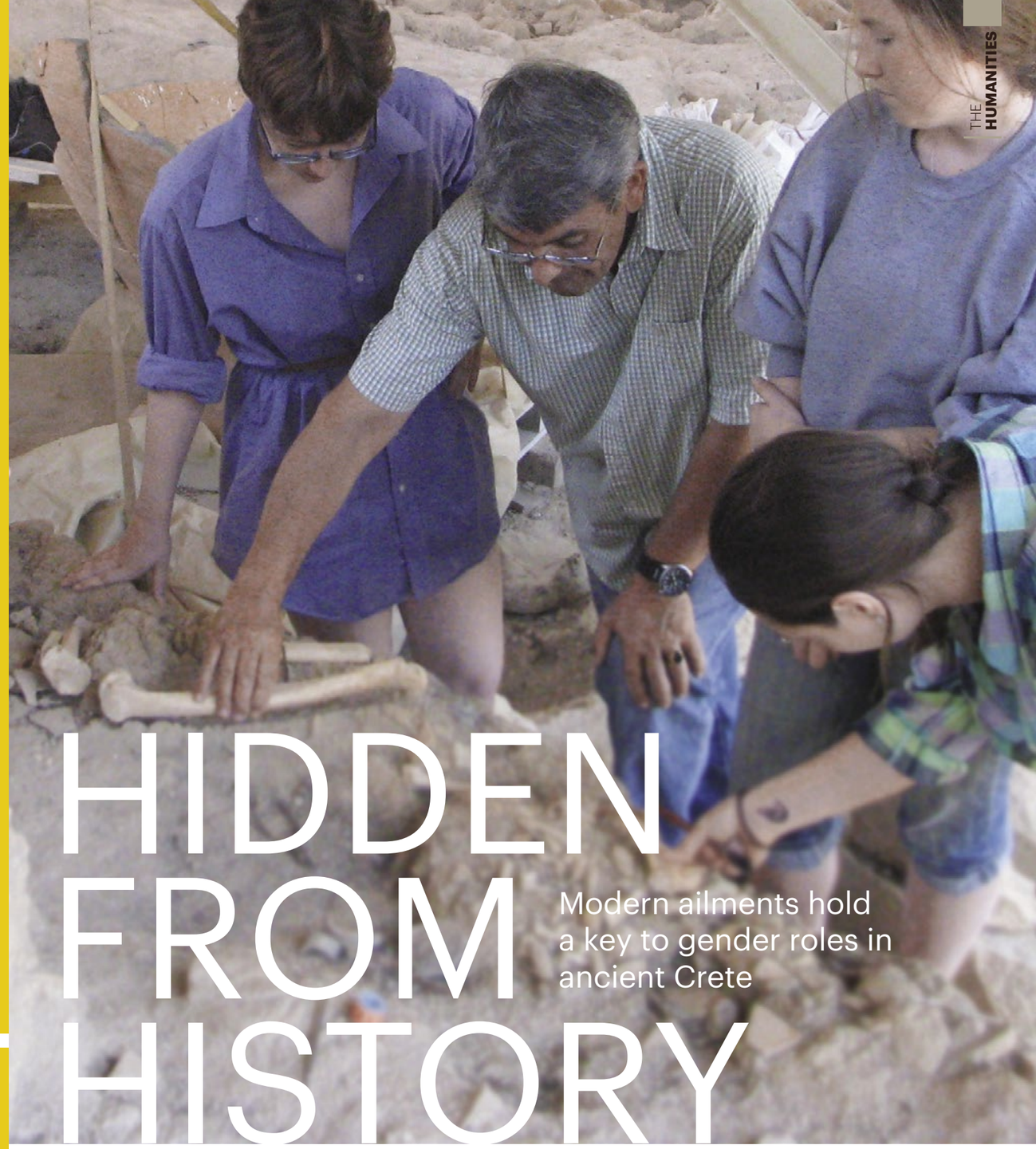


HIDDEN FROM HISTORY

Modern ailments hold a key to gender roles in ancient Crete

Buried in a grave wedged between two funeral pyres on the Greek island of Crete, one 3,000-year-old female skeleton puzzled Anagnostis Agelarakis, Ph.D., archaeologist and professor of anthropology. The woman was inexplicably laid to rest on her side, with knees and hips slightly bent. On one side of the body, her joints were so worn down that the bones were almost completely smooth.

Anagnostis Agelarakis, Ph.D., is renowned for his archaeological work, leading to discoveries and research that have shed light on life in ancient Aegean civilizations. His research has been widely published in scholarly journals and featured in mainstream media outlets throughout the world.

> “Everyone is always so impressed by the skill and sophistication our students demonstrate.”
>
> **—Anagnostis Agelarakis, Ph.D.**

Through years of detective work with faculty from several different departments at Adelphi, Dr. Agelarakis and his team were able to determine why the woman was buried in such an unusual manner. In the process, they challenged long-held beliefs about the role of women in ancient Greece.

To unlock the secrets of the woman buried on her side, Dr. Agelarakis and his team used computer models to examine whether tasks thought to have been performed by women at the time—spinning wool, weaving fabric on a loom, planting and harvesting crops—could have caused her physical condition. When none of these possibilities panned out, they interviewed modern-day craftspeople from nearby villages to learn more about tasks that put stress on one side of the body.

Finally, the team met a master ceramicist with similar ailments who lived less than a mile from the dig site—and realized they had found a match.

Dr. Agelarakis and his colleagues worked closely with the ceramicist for seven years, learning traditional methods for throwing clay. “I told her I didn’t want her to do anything with ready-made clay,” he said. “I wanted her to start from the beginning when she fetched the clay from the quarry. We needed to see the entire process from the beginning to the end.” Dr. Agelarakis speculated that a kick wheel, much like the one used by the ceramicist, would cause the same stress-related injuries suffered by the skeleton. His hypothesis was later confirmed by a ceramicist in Adelphi’s art department.

The research—made public last year at a conference at the Museum of Ancient Eleutherna—“rocked the boat” for many archaeologists working in Greece, Dr. Agelarakis noted. “This was the first female ceramicist ever discovered in Greece. Previously, the craft was thought to have been exclusively male dominated during this period. And this skeleton wasn’t just any ceramicist, but a master ceramicist who did this work day in and day out.”

The female artisan is one of many groundbreaking discoveries Dr. Agelarakis has made at Eleutherna, a centuries-old community on Crete. He unearthed two nearby funeral pyres in the cemetery of Orthi Petra with the cremated remains of more than 100 warriors, revealing much about the burial customs for those who died on the battlefield. (*The Anthropology of Tomb A1K1 of Orthi Petra in Eleutherna,* (University of Crete Press, 2005); “A Dignified Passage through the Gates of Hades,” (*Archaeopress Archaeology*, 2016).

And just feet away from those funeral pyres, he discovered an ornate eighth-century B.C. tomb containing the remains of four females ranging in age from 7 to 70, thought to be a high priestess and her three protégés, “Arcane Whispers Echoed from Burial M at Orthi Petra in Eleutherna: Contributions of Anthropological Research,” in *Princesses of the Mediterranean in the Dawn of History* (Museum of Cycladic Art, University of Crete, Hellenic Ministry of Cultural Affairs, 2012). That find was named one of the top archaeological discoveries of 2009 by *Archaeology Magazine*.

After more than four decades of experience in the field, Dr. Agelarakis still remembers his first dig. In 1975, as an undergraduate at Sweden’s Lund University, he traveled to the Greek island of Thasos, following a passion he’d first developed in high school while volunteering at archaeological sites. “On that dig, I realized for the first time that those antiquities are humanity’s record and should be open to all people throughout the world,” Dr. Agelarakis said.

On a return trip to Thasos in 2002, this time with a group of Adelphi archaeology students, Dr. Agelarakis made another discovery: the remarkably well-preserved skeleton of an older man from the Hellenistic period who had been killed by a spear to the chest. The puncture wound to the sternum told Dr. Agelarakis a great deal about the man’s death. “This wasn’t an injury on the battlefield,” he said. “The spear wasn’t thrown, it wasn’t hurled. It clearly had been done when the individual was being restrained.”

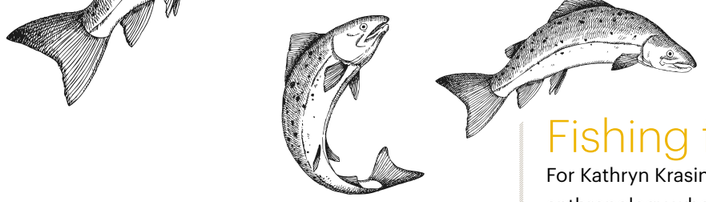
Testing this bone fragment with a puncture (left) led to Anagnostis Agelarakis, Ph.D.’s conclusion that the wound was caused by execution by spear.

Dr. Agelarakis calls the research, which was published in *Archaeopress Archaeology* in April 2019, the result of a “real team effort.” Sean Bentley, Ph.D., associate professor of physics at Adelphi, helped analyze the skeleton’s wound, calculating the force, speed and momentum of the spear strike. Using all the data collected, David Hornung, professor of art and art history, was able to cast in bronze an exact replica of the sharp heptahedrical base edge of a thrusting spear—called a styrax—used for the execution.

Other research conducted by Dr. Agelarakis tells the story of a bloody battle between the Byzantines and the invading Ottomans in the early 1380s. The decapitated skull of one of the defenders—found in a cemetery first uncovered by Dr. Agelarakis and his team in 1991—may have been a trophy taken by the victorious Turks. The find is a “truly spectacular time capsule of the Late Byzantine period,” he explained. His findings were published in *Byzantina Symmeikta*, the journal of the National Hellenic Research Foundation, in 2017; they were also reported in a January 31, 2019, article in *Forbes*.

But none of this work is possible without the team of archaeology students who spend their summers at dig sites around the Mediterranean, according to Dr. Agelarakis. “Everyone is always so impressed by the skill and sophistication our students demonstrate,” he said. “We are ambassadors representing not only Adelphi, but the United States.”

Over the years, Adelphi’s summer field work program has attracted significant outside funding from organizations such as the Leon Levy Foundation, which recognize the program’s value in revealing how people lived millennia ago. “We are filling in many aspects of the historical record, a story never reported by historians in great detail, and it’s all substantiated by tangible data,” Dr. Agelarakis said. “We are writing the story of these ancient people.” ■



Bridges and Pipelines

As the first library liaison for the Bridges to Adelphi program, which provides support for students on the autism spectrum and those who are nonverbal or facing neurological-social challenges, James Cho, M.L.I.S., is committed to establishing a pipeline to the academic library workforce for students.

"Bridges students are very accomplished individuals. They are high school graduates and were accepted to Adelphi on their own merits," said Cho, who is a catalog and metadata strategies librarian at Swirbul Library.

Cho's cataloging unit hires one Bridges student each semester to expose them to library science. One former student worker was recently accepted to a master's program in library and information science at a university in New York state.

One of many resources Cho and his Bridges colleagues provide to students is a webinar based on Universal Design for Learning principles, which supply approaches that accommodate all kinds of learners.

Working with students one to one can solve problems with communication and comprehension, which is why Cho offers individual consultations. Instead of lecturing on abstract concepts, Cho chooses to use goal-based instruction and hands-on exercises. This is proven more effective in helping students develop information literacy skills.

"I feel that as a librarian, in conjunction with all the other support systems in place for them, my job is to help unlock their potential," he said.

Cho's article, "Building Bridges: Librarians and Autism Spectrum Disorder," detailing his work, was published in 2018 in Volume 46, Issue 3 of *Reference Services Review*.

Fishing for Historical Clues

For Kathryn Krasinski, Ph.D., an associate professor of anthropology who studies ancient food economies, the Lajat site near Wasilla, Alaska, is a gold mine. It contains evidence of salmon harvesting dating back to the Little Ice Age (1270–1870 A.D.), and provides clues to the way Alaska Native cultures developed long-distance trails to distribute food. She wrote about it in "Archaeological Concepts of Remoteness and Land-Use in Prehistoric Alaska," published in March 2018 in *Human Ecology*.

The Power of Words

Writing "provides a new way of envisioning and inhabiting the world" for Jacqueline Jones LaMon, M.F.A., J.D., associate dean of the College of Arts and Sciences. A former English department chair, LaMon is the author of two poetry collections and a novel. As a 2019 BAU Institute Fellow, she worked on *What Water Knows,* her poetry collection touching on everything from the Middle Passage to climate change and "the beauty inherent in fluidity."

Ode to Eastern Europe

Grammy-nominated Christopher Lyndon-Gee, associate professor of music, has enjoyed a long, illustrious career as a classical conductor and composer and has recorded 86 CDs and counting. His latest, *no yesterday, no tomorrow*, released in December 2017 on the Naxos label, features the Lithuanian National Symphony Orchestra performing three works by leading Lithuanian composer Onutė Narbutaitė. It earned five stars for recording quality and the rare five stars for performance in the March 2018 issue of *BBC Music Magazine*. "Narbutaitė's work is most beautiful and nostalgic, bringing to life an era and a way of being that is past," Lyndon-Gee noted. Lyndon-Gee most recently recorded for CD three world premieres of the great Ukrainian composer Valentin Silvestrov, and he is currently writing a violin concerto for the young Lithuanian violinist Justina Auškelytė that will premiere next September at the Warsaw Autumn Festival.

Christopher Saucedo, ***Water Bottle Buoy***, 2017, dimension variable, bottle is 54 inches tall, EPS foam, steel and rope

The Rising Tide

Visual artist Christopher Saucedo, M.F.A., associate professor of art and art history, is no stranger to drawing inspiration from disaster. After his studios were twice destroyed by hurricane flooding—first by Katrina, then by Sandy—Saucedo began focusing on what he calls the "duality of water" in his studio art practice. This work culminated in "Self Portrait as Water Bottle Buoy," a sculpture that replicates the exact physical volume of his body as measured by water displacement, indicating both "the drinking water we consume to live and the rising seawater that will one day consume us all." It was displayed in Spring 2018 at the Vessels of Mercy, Vessels of Wrath expo in New Orleans and in September 2018 on Governors Island in New York City.

Vanquishing Horror With the Written Word

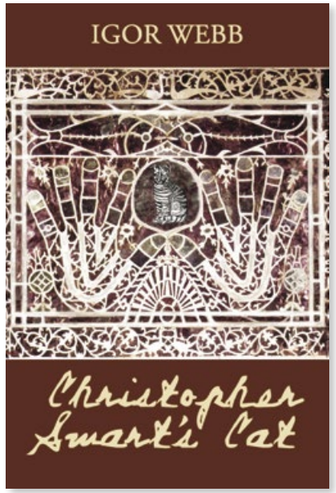
In an age of what often seems like renewed cruelty, Igor Webb, Ph.D., professor and director of Adelphi's creative writing M.F.A., explores how to live in the face of barbarism and death in his recent book, *Christopher Smart's Cat* (Dos Madres Press, 2018).

Part memoir, part fiction, the book is a meditation on displacement. It focuses on the lives and work of writers from Central Europe who, like Dr. Webb, survived the Holocaust.

Christopher Smart's Cat takes place in a semi-fictitious location, Pannonia, the ancient Roman name for what is now called Central Europe. However, Dr. Webb uses Pannonia as a symbolic setting: "a place with a long history of barbarism that is also at the center of the European 20th century."

The book's title comes from the 18th-century mystical poet Christopher Smart, who wrote his greatest work, "Jubilate Agno" (Rejoice in the Lamb), while incarcerated in a mental hospital. But the poem—which extols the virtues of Smart's cat, Jeoffry—is suffused with joy, Dr. Webb noted. Jeoffry can, among other abilities, "swim for life," leading Dr. Webb to conclude that "Smart is a kind of antidote to or inspiration against death."

Likewise, Dr. Webb's work celebrates finding joy in the wellsprings of curiosity and discovery, an ethos that also shapes his teaching at Adelphi. "I would like my students to leave my classes more curious than they came in, wondering about life and art, and eager to read everything to sate their curiosity."



Flowers in the Ancient Canopy

A fossilized tree rewrites the evolutionary record

Michael D'Emic, Ph.D., has made important discoveries of dinosaur remains that have led to insights on dinosaurs' evolution and habitat. His work has been featured on National Public Radio, in *Time* magazine, NBC News and media outlets around the world.

A discovery in Utah shows that flowering trees grew in North America 15 million years earlier than previously thought.

Approximately 90 million years ago, during the Turonian period, a vast expanse of sea stretched across North America from the Gulf of Mexico to the Arctic Ocean. Along the shore in what is now Utah, pterosaurs flew in the sky, sharks swam in the water and beaked dinosaurs foraged on the land. And, thanks to a 2018 discovery by Michael D'Emic, Ph.D., assistant professor of biology, we now know something surprising about the forest canopies growing inland: They included flowering trees.

This groundbreaking discovery was the result of old-fashioned detective work. Visiting Utah in pursuit of dinosaur bones, Dr. D'Emic found himself face-to-face with an enormous fossilized log at least six feet in diameter. The tree seemed incongruous with its surroundings, which raised a crucial question: How did it get there? Studying the land around him, Dr. D'Emic looked for clues to recreate the events that brought the log to its final resting place. "Geologists can read rocks like a book because the type of deposition leaves a signature in the rock itself," he explained.

What Dr. D'Emic observed was evidence of a devastating storm. Such a large log could only travel all the way to the sea by way of fast-flowing water; likewise, the sand he found embedded in the nearby stones was extremely coarse, which could only have been the result of tremendous water energy. Given the tree's place in the rock formations, it likely arrived in its resting place around 92 million years ago.

But what kind of tree was the specimen? To find out, Dr. D'Emic sent a sample to Nathan Jud, Ph.D., assistant professor of biology at William Jewell College. After cutting three samples with a diamond rock saw, Dr. Jud mounted them to glass slides and sanded them so fine light could shine through. Under the microscope, he found a tree that was not just an angiosperm, or flowering plant, but one of a size—170 feet—not thought to exist until 15 million years later. The two presented their findings in "A new fossil assemblage shows that large angiosperm trees grew in North America by the Turonian (Late Cretaceous)," published in the September 26, 2018, issue of *Science Advances*.

"This discovery rewrites what we thought about the origin and evolution of large flowering trees," Dr. D'Emic said. It also deepens our knowledge of a period with a very patchy fossil record. "Our tree fossil was discovered in a time and place with a very high sea level," Dr. D'Emic said, "so it was an extremely fortunate and rare event that preserved it within a delta along the margins of ancient coastal Utah."

While further research and exploration of the fossil record will be required to create a full picture of the ecosystem in which the angiosperm lived, Dr. D'Emic's work indicates that—contrary to prior belief—dinosaurs and large angiosperms coevolved.

Changing our conception of the past has broad implications for the present and future, including our efforts to manage the effects of a changing climate. "Flowering plants are important for humans because nearly every plant we eat is an angiosperm," Dr. D'Emic noted. "We can better learn how to predict and manage change in the future by understanding how ecosystems responded to previous environmental change."

The location of Dr. D'Emic's find is confidential to protect the site from poachers, but he is hopeful this discovery will spur additional explorations that produce specimens for public consumption. "We are in a golden age of paleontology," he said. "There still remains a lot to explore." ■

THE HUMANITIES

A War of Good Intentions

Exploring the tragic history of U.S.–Taliban relations

After the Soviet Union left Afghanistan in 1989, militias vied to fill the power vacuum there, spurring a brutal civil war that consumed the country. One contender for power, Mohammad Omar, a veteran of the battle against the Soviets, entered the fight by taking a government checkpoint near Kandahar. From there, Omar never looked back. By September 1996, he and his soldiers had taken Kabul; by November, they had petitioned the United States for recognition as the official government of Afghanistan. They called themselves the Taliban.

As Jonathan Cristol, Ph.D., Levermore Global Scholars Fellow, writes in his new book published in 2019 by Palgrave Macmillan, *The United States and the Taliban Before and After 9/11*, this moment represented a fork in the road for the United States. "The Taliban wanted a good relationship with our government," he explained. They sought the many benefits diplomatic recognition would have conferred: prestige, a seat at the United Nations and, they hoped, the chance to realize their long-standing goal of developing a profitable oil pipeline.

But the United States denied diplomatic recognition. "The Taliban's treatment of women made it politically difficult to recognize their government or to have a publicly positive relationship," Dr. Cristol said. Nevertheless, the United States had a cordial relationship with the Taliban for many years, and American officials met regularly with Taliban officials.

That cordiality became impossible when Mohammad Omar's friend, Osama bin Laden, suddenly appeared on the international stage. Bin Laden lived in Afghanistan under Omar's protection, and from there orchestrated terrorist attacks in Kenya and Tanzania in 1998. The United States insisted the Taliban hand bin Laden over if they wanted to gain diplomatic recognition—a moment, Dr. Cristol argues, that represented another consequential fork in the road. Although as many as 70 percent of Taliban leaders wanted to extradite bin Laden, Omar refused, and the Taliban's relationship with the United States continued to sour.

After the attacks of September 11th, the United States gave Mohammad Omar one last chance to hand over bin Laden. When Omar stood by his friend, the United States invaded. Nearly two decades later, the results of this decision are unequivocal. "We have lost the war," Dr. Cristol said. "The Taliban controlled more territory at the end of 2018 than they did in 2002. And we will ultimately take the same deal with the Taliban that we could have had 20 years ago. Another lasting consequence is that the Taliban now are worse than the Taliban then. It's a tragedy."

The tragedy has some bright spots, Dr. Cristol believes. "We did make life better for many people," he said. "That is primarily true in Kabul, where women attend universities and more opportunity is available than it had been under Taliban rule." Unfortunately, as the United States prepares to withdraw, those gains will likely be reversed.

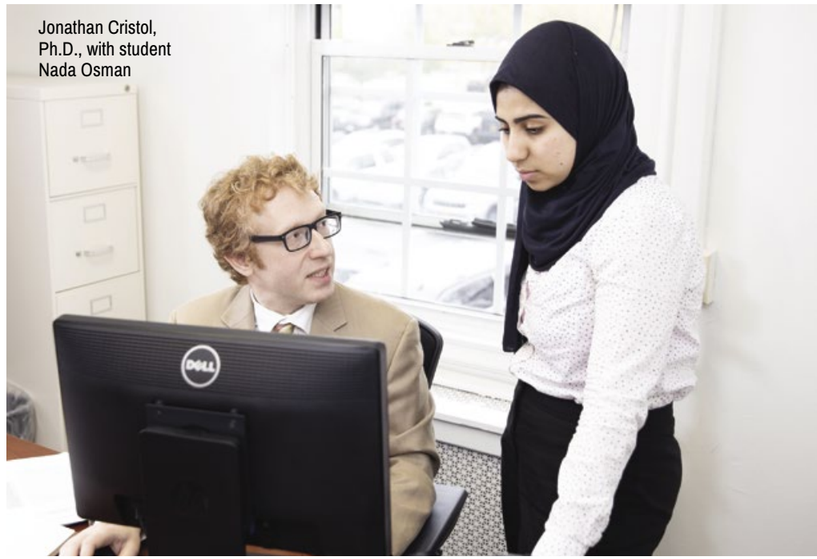
So what should the United States do? "I do think that we must withdraw from Afghanistan," Dr. Cristol said. "But it's imperative that we do not withdraw from Afghanistan, which could have dire consequences. Both of those statements are true." There may be a way to satisfy these contradictory demands, though. "We need to withdraw with honor," he explained. "We need to guarantee the safety not only of the people who worked with us, but also the people who will be in danger when we leave—female teachers, students, professionals, musicians."

How the United States handles this transition remains to be seen. Still, Dr. Cristol urges voters and politicians to learn a simple but profound lesson from this conflict. "Everyone on the U.S. side meant well and made reasonable decisions, and it still turned out badly," he said. "Decisions that seem obvious—like toppling the Taliban after 9/11—are always more complicated than we'd like to think." ■

Jonathan Cristol, Ph.D., is a Levermore Global Scholars research fellow who writes and speaks about international security and U.S. foreign policy in the Middle East and East Asia. He is a senior fellow at Bard College's Center for Civic Engagement.

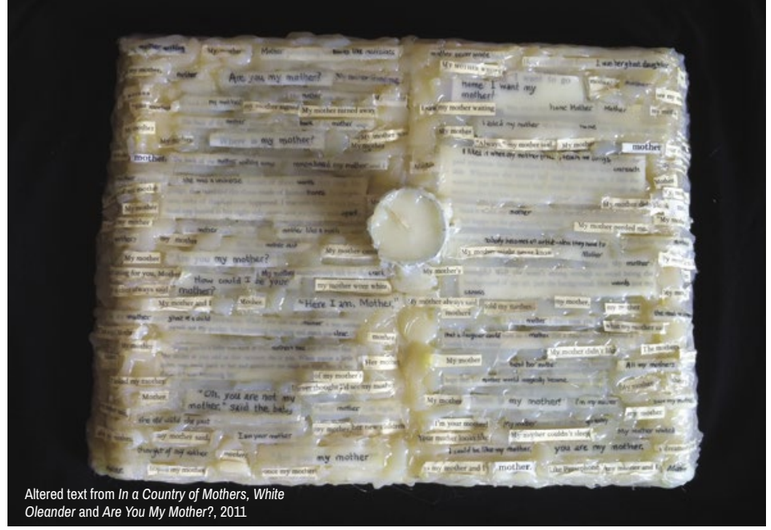
THE HUMANITIES

The United States insisted the Taliban hand bin Laden over if they wanted to gain diplomatic recognition—a moment, Dr. Cristol argues, that represented another consequential fork in the road.



Jonathan Cristol, Ph.D., with student Nada Osman

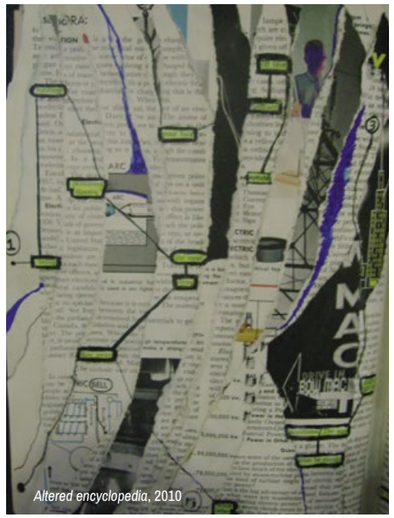
Rapunzel. 2013



Altered text from *In a Country of Mothers*, *White Oleander* and *Are You My Mother?*, 2011

Activist craftwork stands at the forefront of a new political language, with all its possibility to build community and creativity.

—Courtney Weida, Ed.D.



Altered encyclopedia, 2010

Two collections featuring essays by Dr. Weida.

Toes. Stoneware. Ongoing

Courtney L. Weida, Ed.D., is the Ruth S. Ammon School of Education's director of graduate art education. Her research interests include gender and visual culture, community arts, studio crafts, digital learning communities and art education research methodologies.

THE HUMANITIES

Feminism in the Arts

New uses of old forms challenge the patriarchy

Picture this: Walking down a quiet street in upstate New York, you come upon an abandoned gas station with a pair of decommissioned gas pumps out front. The sight is ordinary, except that every surface of the station and pumps has been covered with squares of different fabrics and colors, all quilted together. What you've come across is "The Gas Station Project," a work of art meant to explore power structures and the world's reliance on fossil fuels. It's the fruit of a collaboration between dozens of artists worldwide, who are all part of the International Fiber Collective (IFC).

Working alongside the IFC to document, analyze and contribute to the collective's digital outreach was Courtney Lee Weida, Ed.D., associate professor and director of graduate art education. "The Gas Station Project" meshed naturally with Dr. Weida's long-standing interest in fiber feminism. "I think feminism should be interdisciplinary and intersectional," she said. "I approach it as an artist and female maker who is still learning from women's traditions of the past as well as contemporary artistic innovations."

Dr. Weida's research examines the intersections between textiles and feminism in many art movements, including the Pussyhat Project protests of President Donald Trump's inauguration and The Exquisite Uterus Project, which encourages artists to make art inspired by the uterine form. Since craftwork has traditionally been the domain of women, Dr. Weida sees a natural connection between textiles and feminism—or "craftivism."

Dr. Weida's interest in feminist art, however, is not limited to craft arts. In 2018, she contributed a chapter to the essay collection *Jessica Jones, Scarred Superhero* (McFarland), which received the Popular Culture Association's 2018 Susan Koppelman Award for best anthology in feminist studies in popular and American culture. In the chapter "From the Hellmouth to Hell's Kitchen," Dr. Weida analyzed the television series *Jessica Jones* and *Buffy the Vampire Slayer* through a feminist lens. She believes these shows are important parts of a larger feminist project in the age of #MeToo and #TimesUp.

"Both shows explore gender around psychological issues of extraordinary strength and of human frailty," Dr. Weida said. "And both shows emphasize very deep female friendship." The eponymous heroines of *Jessica Jones* and *Buffy* find support, motivation and empowerment in their strong female networks.

Yet Jessica and Buffy still struggle to persevere in the face of the overwhelming problems confronting contemporary women. Indeed, *Jessica Jones* is "revolutionary" because the show presents "rape as told and defined by survivors, substance addiction and recovery, lesbian sexuality and domestic violence, abortion following sexual assault, and various women's responses to post-traumatic stress disorder." *Buffy*—though very much a creature of the 1990s with its whitewashed cast—also explores queerness, sexual assault and addiction in surprising ways.

These shows do not shy away from depicting the consequences of the injustices their heroines face, either. Dr. Weida points to the ambivalence Jessica and Buffy feel about their strength, their morality and their place in the world—investigations of female power that resonate deeply with her students and offer much-needed diversity in superhero world. "If we conceptualize superheroes as fictional leaders, role models or even unlikely educators, these representations matter," Dr. Weida said.

Dr. Weida's current research maintains her focus on new intersections of art and feminist activism, from superhero shows' examinations of motherhood to further collaborations with fiber artists. "Activist craftwork stands at the forefront of a new political language," she writes in her chapter in *Makers, Crafters, Educators: Working for Cultural Change* (Routledge 2018), "with all its possibility to build community and creativity." ■

Riddles of History

Researching the lives of Japan's indigenous peoples

Every book of history is based, in large part, on detective work. The historian sifts through various pieces of evidence to construct a narrative of what happened. This task is hard enough when recent, well-documented moments are concerned, but when a historian sets out to chronicle obscure events from the distant past, writing history can border on the impossible.

Kirsten Ziomek, Ph.D., associate professor of history, co-director of Asian Studies and author of the new book *Lost Histories: Recovering the Lives of Japan's Colonial Peoples* (Harvard University Asia Center, 2019), took on a subject so challenging she wondered if some "histories are essentially unknowable." A reasonable concern, given that most histories of the Japanese Empire wholly reiterate colonial narratives.

Preparing to embark on the project, Dr. Ziomek also wrestled with questions of academic ethics. Who has a right to write histories of indigenous peoples? Is there a danger of reinscribing violence on indigenous people by misrepresenting their history? But, Dr. Ziomek realized, staying silent ran the risk of letting colonial narratives go unchallenged, so she resolved to right the historical record and document the experiences of the Ainu, the Okinawans, the Micronesians and Taiwan's indigenous peoples, including the Paiwan. Among all the disparate populations in the Japanese Empire, these four "fit the least easily into the [colonial] concept of *dōbun dōshu* (common culture, common race)."

Lost Histories: Recovering the Lives of Japan's Colonial Peoples mixes conventional sources with unconventional ones. Dr. Ziomek applied a critical eye to records from Japanese colonial sources "to make sure [I] was not replicating Japanese imperial rhetoric and propaganda." This process involved cross-checking information in the colonial record with information in other sources and languages, especially interviews and oral histories when possible.

Dr. Ziomek also drew on smaller, more personal artifacts. For instance, she received permission from the descendants of Pete Gorö—an Ainu man who came to America in 1904 as part of the human display at the World's Fair—to show photos from his sightseeing tour of St. Louis. She also included postcards showing the Paiwan in London in 1910 for the Japan-British Exhibition. Through the accounts written on these cards, Dr. Ziomek was able to construct a sense of what the Paiwan experienced in England. No other book in the Japan studies field has made such extensive use of photographs.

Dr. Ziomek's book exposes the errors in conventional histories of colonized populations, which largely present them as passive victims of Japanese expansion. Colonized people were empowered to shape their experiences, she believes. Because the Japanese colonial effort was weak throughout much of its territory, "the Japanese needed men of influence and chiefs [in Taiwan] to act as facilitators to the point they would grant the rebels immunity," Dr. Ziomek said. "This disrupts conventional notions of the 'civilized Japanese' ruling the 'savages,' and instead shows how, in fact, the Japanese relied on and worked with the very people they maligned in media."

Thanks to its unique scope, the book brings readers closer to a neglected time and culture. "Looking at four areas of the Japanese empire, I described the local administrative apparatuses the Japanese put in place for each as well as ethno-racial hierarchies specific to each region," Dr. Ziomek said. "This gives a real sense of the vast expanse of the Japanese empire and the sheer complexity involved in governing such diverse peoples."

Still, Dr. Ziomek stresses, the book is not the "definitive" account of these colonial cultures. Rather, it's an attempt to deepen our understanding of cultures that have too long been marginalized, helping to right present-day wrongs. "How we think about the world and the political and current events is informed by the past and what has happened," she concluded. "If our understanding of past events is skewed, it affects how we view certain people and their ability to shape their own lives in the past and today." ■

THE HUMANITIES

"How we think about the world and the political and current events is informed by the past and what has happened."

—Kirsten Ziomek, Ph.D.

Kirsten Ziomek, Ph.D., is co-director of Adelphi's Asian Studies program and the author of *Lost Histories: Recovering the Lives of Japan's Colonial Peoples* (2019). She is currently working on her second book about World War II and Japan's colonial peoples.

Top: Yayutz Bleyh pictured when she worked as an instructor at Neihengping Aboriginal Language Institute. Credit: Taiwan sōtokufu banzoku chōsakai banzoku chōsa hōkokusho 6, no. 3. Taipei: Taiwan sōtokufu banzoku chōsakai, 1920.
Bottom: Karafuto Ainu Participants at the 1912 Tokyo Colonial Exposition. This card is unique as it shows spectators in the shot. Credit: Author's collection.

REIMAGINING THE CLASSROOM

Two professors find new ways of engaging students

Thanks to recent breakthroughs in the science of education, the college classroom is at the center of a pedagogical revolution. Old models that emphasize traditional teaching are being supplemented with new ones that incorporate the growing body of evidence supporting experiential learning. Instead of attending lectures, students can design and perform their own lab experiments or go out into the field to see how theoretical concepts apply in the real world. Experiential learning courses not only promote student engagement, but also better prepare students to put what they learn to practical use when they leave school.

> "The fallacy of teaching is that you can make students do something. You can only create a space in which students can grow."
>
> **—David Parkin, Ph.D.**

Adelphi students are already experiencing the power of this novel approach. David Parkin, Ph.D., associate professor of chemistry, and Chia Yuan Hung, Ed.D., associate professor in the Ruth S. Ammon School of Education, have developed new pedagogical techniques to promote learning. Their students may be encouraged to work on "leveling up," for example, as a player might in a video game. Each in his own way, Dr. Parkin and Dr. Hung are reimagining—and reinventing—the classroom from the ground up.

Dr. Parkin, for instance, has figured out how to make chemistry more appealing to non-science majors—in his case, nursing students. They come in, he says, reluctant to learn chemistry at all, so he does all he can to make the material practical and engaging. "The fallacy of teaching is that you can make students do something," Dr. Parkin explained. "You can only create a space in which students can grow."

That means creating a classroom built around active learning. Detailed in "Promoting Nursing Students' Chemistry Success in a Collegiate Active Learning Environment: 'If I Have Hope, I Will Try Harder,'" published online on September 20, 2018, in the *Journal of Chemical Education*, Dr. Parkin studied the best ways to create "a learning environment in which students would feel motivated to learn and would gain confidence in their ability to learn chemistry," maintaining that a mix of contextual scenarios, group activities, clear learning outcomes and a supportive instructor would effectively boost their confidence.

Dr. Parkin's classroom reflects his conclusions—there are no lectures or slideshows because "the excitement is in the laboratory. It's the discovery that's interesting." To help students discover science for themselves, for instance, he divides them into groups of 12 and assigns each one a role in the laboratory work. Then, he sets these teams to work solving chemistry problems that will inform their future roles as nurses. The results are audible. "If you come into my class, it's extremely loud," Dr. Parkin said. "That means people are engaged. They're talking, they're arguing. No one looks at their watch. The focus is not on me. It's everywhere."

Dr. Hung, who has received numerous grants for his pedagogical research, is also committed to creating a classroom shaped by student needs and interests—though he does so through a designer's lens. "Design thinking," he said, "is a way of defining the problem. The first step is empathy. You gather information from those that your work will impact in order to understand their priorities and concerns. In teaching, that's the students." Dr. Hung has found that even though professors and students generally want the same thing—"meaningful work tied to the real world"—the significance of an assignment isn't always clear. "It's

David Parkin, Ph.D., a three-time recipient of the Adelphi University President's Research Award, is an African Regional Senior Research Fulbright Fellow. He specializes in enzymology, teaching practices in chemistry, cognition and the STEM disciplines.

Chia Yuan Hung, Ed.D., is associate professor in the educational technology program at the Ruth S. Ammon School of Education. His research interests include youth culture, technology-mediated communication, human-computer interaction, design thinking, gamification and instructional design.

> Design thinking is a way of defining the problem. The first step is empathy. You gather information from those that your work will impact in order to understand their priorities and concerns. In teaching, that's the students."
>
> **—Chia Yuan Hung, Ed.D.**

Chia Yuan Hung, Ed.D., discussing design with student Wendy Hsu

easy for professors to forget what it's like being a student," Dr. Hung noted. "Empathy can expose that."

Dr. Hung has developed a system to make sure his teaching reflects his dedication to empathy. At the beginning of each course, he gives each student a two-question survey: If this is the worst course you will ever take, what will be its characteristics, and if this is the best course you will ever take, what will be its characteristics? After altering his course plan to align with student responses, he evaluates the success of his changes through a weekly survey given to the class.

Likewise, Dr. Parkin uses data to determine the efficacy of his pedagogy. His primary metric is a simple one: confidence. Through before and after surveys, he determines whether his students have become more confident. "Confidence is linked to motivation," he said. "If you have hope, you will try harder. A self-directed critical thinker is confident enough to do their own research." As Dr. Parkin sees it, fostering confidence in his students prepares them to be more successful in whatever work they pursue.

Dr. Hung is also looking for new ways of keeping students engaged and confident by developing a pedagogy based on gamification, a process he examined in "Gamification as Design Thinking," an article published in 2018 (Vol. 30, No. 3) in the *International Journal of Teaching and Learning in Higher Education*. Gamification, broadly speaking, "involves taking elements that are often found in games, such as badges, levels, points and leaderboards, and applying them to a nongame context." In a gamified course, a professor may have a system of awarding students points, which, when accrued in sufficient numbers, can be exchanged for extra credit.

Although there are many ways to apply gamification in the classroom, the technique is at its most effective, Dr. Hung believes, when education is framed in gaming terms. "Games are feedback systems; players always know how they are doing and what they should do next," he observed. "Classes can sometimes be opaque, and gamification can be one way to remedy that." But Dr. Hung retains a healthy skepticism and recently explored the limits of current iterations of educational gamification in his article "A Critique and Defense of Gamification," published in the Summer 2017 issue of the *Journal of Interactive Online Learning*. "On the one hand, I see that gamification exists in the real world that seems to genuinely change behavior," he said, "but research does show some downsides. Some students don't like the competitive aspect of it. The issue is that a lot of it depends on what the gamification system looks like and how it is implemented. It is up to the designer."

While these two professors are taking different approaches to improving higher education, their success stems from the same classroom philosophy: that students should have the chance to collaborate and be creative—as well as fail. "Research on learning shows that students benefit from having the ability to take risks and make mistakes," Dr. Hung said. Dr. Parkin concurs, explaining that students in his courses are at first unhappy with having to make decisions. "But they stay the course, they make it and they're proud. I empower them to do something really hard." Both professors, in finding ways to reinvent the classroom, are creating the transformative experiences teachers have fostered for generations. ■

TRAUMA ACROSS CULTURAL BORDERS

Roni Berger, Ph.D., professor in Adelphi's School of Social Work, is personally connected to her research on cross-cultural trauma. An immigrant to the United States from Israel, Dr. Berger has worked and taught in countries around the globe and spent years as an adolescent therapist. Working with Adelphi colleagues Rani Varghese, Ed.D., and Laura Quiros, Ph.D., she published "Reflective Practices for Engaging in Trauma-Informed Culturally Competent Supervision" in the *Smith College Studies in Social Work* in March 2018. Now partnering with an Israeli team of researchers, she's studying how individual and social factors impact the psychological well-being of Palestinian and Jewish Israeli adolescents. Data from more than 1,000 participants was collected and evaluated, leading Dr. Berger and her colleagues to conclude that Israeli adolescents' cultural and socioeconomic backgrounds significantly shape their level of psychological distress and conception of self. The team's full findings will be published in several forthcoming articles.

Rethinking Educational Environments

Dolapo Adeniji-Neill, Ph.D., associate professor and department chair of the Ruth S. Ammon School of Education within the College of Education and Health Sciences, focuses her research on sociological and cultural factors that influence education. Most studies of school environments rely exclusively on input from adults, but she and Adelphi colleague Devin Thornburg, Ph.D., surveyed hundreds of urban high school students for their article "Dreams, Possibilities and Necessity of Public Education Through Urban Students' Eyes" (*Journal of Social Sciences*, 2018). She hopes their paper serves as a catalyst for further research centering on student perspectives.

Partners in Progress

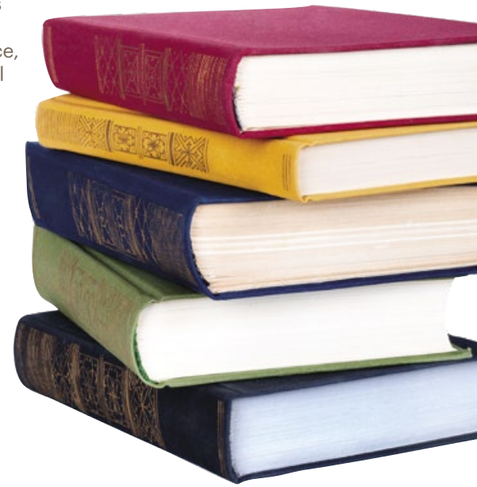
Solutions for successful library-nonprofit collaboration

"Libraries and nonprofits/NGOs both serve critical needs in communities," said Tatiana Bryant, M.P.A., M.L.I.S., assistant professor of University Libraries at Adelphi. While libraries and nonprofits worldwide have historically developed many fruitful partnerships, academic research on the topic is scarce, which does little to "inform or inspire...professionals in this area," Bryant said. Her newest project aims to fill that gap—illuminating existing partnerships and encouraging the possibility of stronger ones.

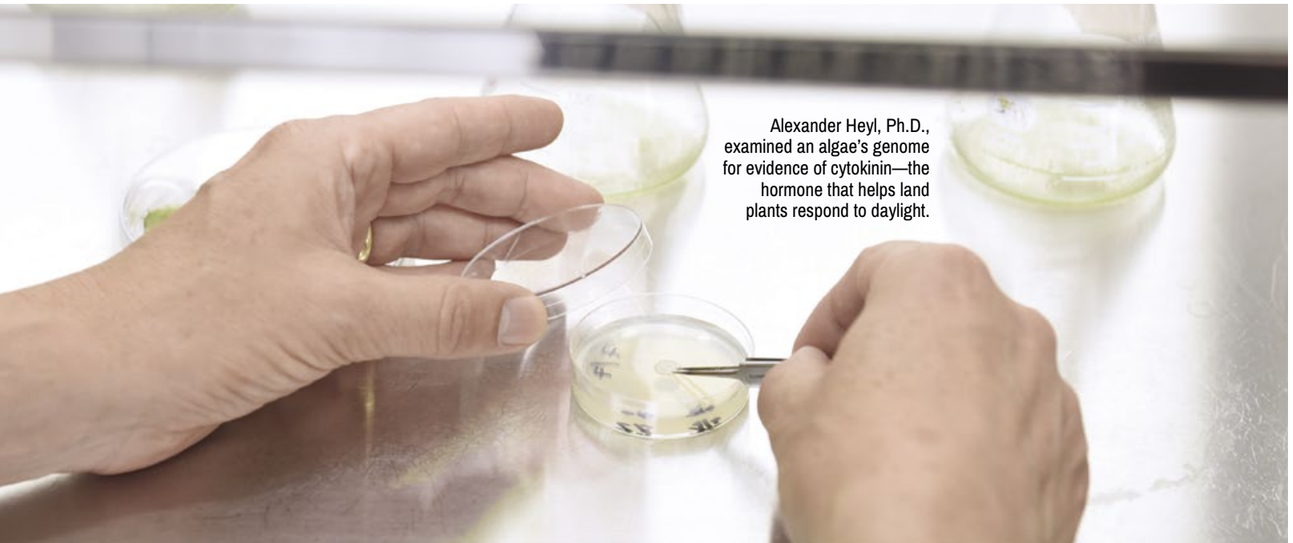
The monograph *Libraries and Nonprofits: Collaboration for the Public Good* (Litwin Books/Library Juice Press, 2019), which Bryant co-edited with Jonathan Cain from the University of Oregon, includes more than a dozen case studies of these synergies, discussing their impact as well as lessons learned. "A successful collaboration between nonprofits and libraries can take many forms," Bryant noted, "but both partners should have their prioritized, articulated, community-centered goals met through it."

The book also offers best practices for libraries interested in delivering meaningful services and programming to their communities. One immediate fix is instituting a general ethic of care, Bryant suggests, such as ensuring inclusive language in signage and advertising or providing catering, child care and transportation to boost program attendance.

Bryant's research mirrors new community-focused initiatives in the works at Adelphi, including the Community, Justice, Leadership and Global Citizenship initiative as well as Adelphi's recent collaboration with Long Island nonprofit The Interfaith Nutrition Network (The INN). Swirbul Library will also host Adelphi's new Innovation Center, a student-centered research lab set to open in September 2019 that will consult for local nonprofits.



Alexander Heyl, Ph.D., is researching the evolution and functioning of signaling pathways, particularly in the origin of a class of plant hormones called cytokinins. He holds a Ph.D. from the University of Cologne, Germany.



Alexander Heyl, Ph.D., examined an algae's genome for evidence of cytokinin—the hormone that helps land plants respond to daylight.

THE SCIENCES

How Plants Took the Land

A breakthrough in genetics rewrites the story of life

More than 500 million years ago, at the beginning of the Paleozoic era, dry land was utterly barren, little more than storm-lashed rock, sand and dirt. The seas, however, teemed with life, ranging from ancient forms like single-cell bacteria to complex, newly appearing forms like fish. But the first organism with the get-up-and-go to colonize the land? The humble algae.

Thanks to groundbreaking research by Alexander Heyl, Ph.D., assistant professor of biology, and his colleagues, we now have a better understanding of how algae may have turned conqueror. Dr. Heyl and his collaborators recently sequenced and annotated the genome of an algae known as *Chara braunii*. Because this algae is part of the group Charophyta—the group of algae that colonized the land—understanding the species' current genetic profile could offer insight into the evolutionary record.

"If you take a fish to dry land," Dr. Heyl explained, "it's not going to do very well. It's the same with plants. We wanted to understand how plants came to land." The earth's surface is a hostile environment for plants that evolved in the sea. The sun's ultraviolet radiation, for instance, is just as threatening to unadapted plants as it is to humans. Even the force of gravity is absorbed differently on land, requiring novel adaptations for plants to survive. Dr. Heyl was curious about a particular aspect of adaptation: "What does it take to develop a hormone system to live on land?"

Sequencing the data was straightforward due to recent technological innovations, so Dr. Heyl's mission became "figuring out what all the data mean." The project's leader, Stefan Rensing, Ph.D., professor of biology at the Philipps University of Marburg, in Germany, asked scientists around the world to analyze the genome through the lens of their particular expertise. Together, the team of scientists then published their findings in "The *Chara* Genome: Secondary Complexity and Implications for Plant Terrestrialization," which appeared in the July 12, 2018, issue of the leading scientific journal *Cell*.

Dr. Heyl scoured the genome for evidence of cytokinin, the hormone that helps plants on land respond to changes in sunlight, defend against predators, grow and perform many other functions. "We know which amino acids are important and which are not," he said, explaining which genetic sequences he sought. But what he found surprised and puzzled him: while he discovered genes for the production of cytokinin, he didn't find ones for the group of protein regulators believed to be essential to utilizing the hormone. "The question is," Dr. Heyl said, "do these plants actually react to cytokinin?"

Many explanations remain plausible. Unlike in animals, where hormones usually perform only one or two simple functions, "plant hormones are multitaskers," Dr. Heyl said. The missing regulators may indicate, then, that *Chara braunii* put cytokinin to purposes different from those of the algae's modern descendants.

Additional research will be required to discover the evolutionary process that led to the initial development of this and other hormones. Dr. Heyl hypothesizes that existing hormones in the original charophytic algae at some point started to perform new tasks. When these new functions were well established in the life of the plant, the hormones slowly changed in a process of specialization that eventually produced new hormones.

> **"If you take a fish to dry land, it's not going to do very well. It's the same with plants. We wanted to understand how plants came to land."**
>
> **—Alexander Heyl, Ph.D.**

To test this and other hypotheses, Dr. Heyl plans to experiment on mosses, some of the most primitive land plants on earth. In its genome, he hopes to find clues that will flesh out the still-breaking story of algae's colonization of land.

"There's a race to study the ancestors of plants," Dr. Heyl said. ■

Brian Stockman, Ph.D., shown here in the lab with his students, seeks to defeat a parasitic protozoan with promising chemical compounds.

New Treatments for Parasitic Infections

An innovative approach to curing a drug-resistant parasite

The most pervasive nonviral sexually transmitted disease, a parasitic protozoan known as Trichomonas vaginalis (T. vaginalis), poses a deadly and intensifying threat. Already infecting more than 300 million people worldwide, it results in preterm delivery and low birth weights in infants. In adults, it increases the risk of HIV-1 infection and HPV infections that result in prostate or cervical cancer. Perhaps most alarming, T. vaginalis is growing increasingly resistant to the drugs that have been used to treat it for the past 50 years.

The need for a new treatment grows more urgent by the day. "Treatment with a mechanism of action distinct from existing drugs would provide a second line of therapy," said Brian Stockman, Ph.D., associate professor and chair of the Department of Chemistry. "It would improve outcomes for the increasing number of patients with drug-resistant T. vaginalis infections."

After closely studying the protozoan, Dr. Stockman and his five collaborating students—Samantha Muellers, Juliana Gonzalez, Abinash Kaur, Vital Sapojnikov and Annie Laurie Benzie—identified several possible points of attack. "T. vaginalis," Dr. Stockman explained, "has several Achilles' heels that can be targeted for the development of new drug treatments."

He and his lab decided to exploit one particular Achilles' heel: The parasite is incapable of generating its own nucleobases, the essential building blocks of all genetic code. Without nucleobases, T. vaginalis cannot survive. And because the parasite cannot generate them on its own, "T. vaginalis must scavenge them from host cells using nucleoside salvage pathway enzymes," Dr. Stockman said.

To obstruct that scavenging process, Dr. Stockman decided to target two of T. vaginalis' enzymes using a fragment-based approach. In what represented the first known application of fragment screening to ribohydrolase enzymes, he would test a diverse set of chemical compounds to see which ones had the intended effect.

"The main challenge for us," he said, "was getting access to a collection of fragments to screen. We solved this by partnering with AstraZeneca's Open Innovation platform." Thanks to this partnership, Dr. Stockman gained access to more than 2,000 compound fragments. After running a series of tests, he and his students identified several promising classes of compounds and published their findings in *ACS Infectious Diseases* (January 31, 2019).

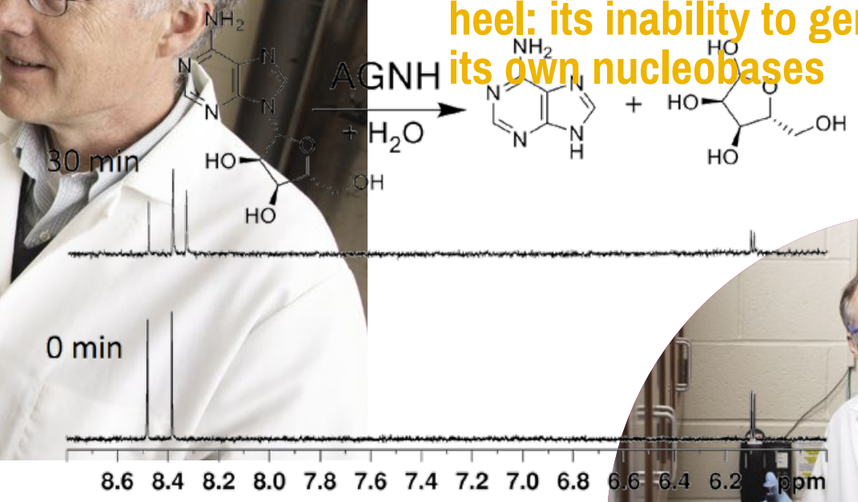
Now, Dr. Stockman and his collaborators have entered a new stage in the treatment development process. Co-investigator Melissa VanAlstine-Parris, Ph.D., associate professor of chemistry at Adelphi, will lead the medicinal chemistry phase, working to increase the potency of promising compounds. Dr. Stockman, meanwhile, is immersing himself in new cell culture methods in order to test the most potent compounds later this year.

While the initial results are promising, the future of this research remains unclear. "It will take at least three to four more years to evaluate whether these two enzymes are viable drug targets," Dr. Stockman said. If they are, in fact, viable, the team will continue the drug development process. If not, Dr. Stockman will shift his focus to other enzymes.

But regardless of how successful these compounds prove, the findings already represent a major breakthrough in our war against drug-resistant diseases. "Our results could provide useful insights for targeting related enzymes," Dr. Stockman explained, "and the most potent compounds discovered may also be broadly applicable to infections caused by related parasites." Just which compounds are most useful, however, remains to be seen. ■

Brian Stockman, Ph.D., researches biochemistry, biophysics and biomolecular structure. He received a federal grant in 2017 from the National Institutes of Health to immerse undergraduates in hands-on use of the nuclear magnetic resonance (NMR) spectroscopy and researching trichomoniasis.

Finding a parasite's Achilles' heel: its inability to generate its own nucleobases



Geoffrey Ream, Ph.D., focuses on sexual and gender-minority (LGBTQ+) youth issues, suicide, homelessness, substance abuse, religion and faith development. He also specializes in survey research and advanced statistical methods. He holds a Ph.D. in Human Development from Cornell University.

Research Sheds Light on a National Tragedy

Younger LGBT Youth Are More Likely to Die by Suicide

When Geoffrey Ream, Ph.D., associate professor in the Adelphi University School of Social Work, set out to study the variability in circumstances around suicide deaths among youth and young adults by sexual/gender identity, he didn't anticipate the media attention around one finding.

In his study, "What's Unique About Lesbian, Gay, Bisexual, and Transgender (LGBT) Youth and Young Adult Suicides? Findings From the National Violent Death Reporting System," *Journal of Adolescent Health* (May 2019), Dr. Ream found that almost one-quarter (24 percent) of 12- to 14-year-olds who died by suicide were LGBT. Only eight percent of 25- to 29-year-olds who died by suicide were LGBT.

The finding that the disparity between LGBT and non-LGBT suicide is greatest at younger ages was picked up by Reuters and inspired articles in many publications. But Dr. Ream said the focus of his paper was about how each subgroup—gay male, lesbian/gay female, bisexual male, bisexual female, transgender male, transgender female, non-LGBT male and non-LGBT female—has its own specific risk profile for suicide.

For instance, he found that most non-LGBT males and bisexual males died by firearm and had intimate partner problems that contributed to their deaths. Non-LGBT females and LGBT persons other than bisexual males were generally less likely to use firearms. They were also more likely to have psychiatric diagnoses, prior thoughts of suicide and family problems contributing to their deaths.

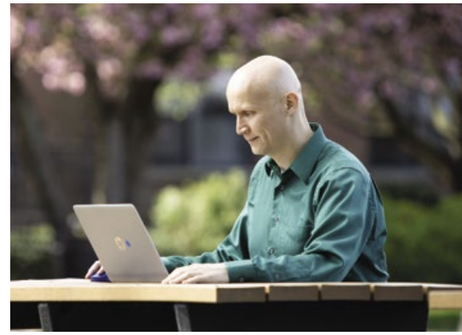
"With gay males, their precipitating social stressor was equally likely to have been an intimate partner problem as a family problem. For lesbians, their precipitating social stressor was almost always a romantic partner problem," Dr. Ream said. "Bisexual males had about the same risk profile as non-LGBT males. Bisexual females had some of the highest rates of all of the risk factors I studied.

"This underscores what a lot of us in the field have been saying," he continued, "which is that bisexual, lesbian and gay are not all the same population. They have to be thought of differently. Trans persons have to be thought of differently too, but I didn't get very many statistically significant findings about them. This is probably because whatever unique risk factors they have weren't in the codes that came with the data."

Speculating on why the LGBT versus non-LGBT suicide disparity was so much higher at younger ages, Dr. Ream said, "They don't have the same maturity to deal with problems that they will when they get older, and they don't have as many places to turn outside of the family for support if the family reacts badly [to their sexuality]."

Dr. Ream said that suicide prevention and intervention efforts targeted at LGBT youth may increase their effectiveness by attending to differences by age, sexual orientation and gender identity.

Though the media have focused on the age results in his findings, Dr. Ream thought the most important thing was how the data became available.



"People like The Trevor Project, the American Psychological Association and a lot of the different advocacy and activist organizations lobbied hard for years to get the Centers for Disease Control to collect national data on LGBT youth suicide," he said. "Now we have a nationally representative psychological autopsy data set—full of the stories of people we've already lost—maintained by the government. That's the big deal. I was just the last-mile delivery person by getting it into publication."

While Dr. Ream doesn't think his findings contribute anything new to the understanding of why the LGBT suicide disparity exists, he believes that the media coverage of his paper may have profound effects.

"What I think my paper, and the coverage of it, did was to make LGBT suicide more straightforward to talk about," he said. "People used to say, 'LGBT people are more likely to report suicide attempts,' or 'being LGBT is associated with higher likelihood of suicide.' Now advocates can unequivocally say that LGBT youth are more likely to die by suicide, especially the young teens." ■

Murat Sakir Erogul, Ph.D., focuses his research on entrepreneurship, gender and identity, organizational leadership and family business management. He has published research on the topic of female entrepreneurs in developing and emerging countries.

“What is needed is bottom-up change. We can all contribute towards more equality through self-reflecting on our own biases.”

—Murat Sakir Erogul, Ph.D.

Women Entrepreneurs in the UAE

Beating the odds in a patriarchal society

Starting a successful business is hard enough in the best of circumstances—an entrepreneur needs capital, strong social networks and a legal system that ensures a level playing field for businesses big and small. Women entrepreneurs in deeply patriarchal societies must contend not only with these challenges but with others that severely restrict their freedom.

Yet many women in traditional patriarchal societies are launching successful businesses. How do they do it?

After 11 years of living in the United Arab Emirates (UAE), Murat Sakir Erogul, Ph.D., assistant professor of management in the Robert B. Willumstad School of Business, decided to find out. Specifically, he wanted to understand how each entrepreneurial woman’s activities, attitudes and aspirations “helped some women move forward and others not.”

Patriarchal systems are ripe for study in the UAE, where mixing with men, working late and traveling alone are taboo for women. And though these attitudes are changing, Dr. Erogul said, “the concept of a working woman (a wife, a daughter) is seen as something shameful. The thought is that the man is not able to financially take care of his family.”

To understand how women are navigating these constraints, Dr. Erogul conducted a series of interviews with successful and unsuccessful women entrepreneurs, asking them questions about belonging, legitimacy, justification, challenges, emotions and strategies. He then analyzed the women’s stories and ideas about identity to find patterns and trends.

Simply conducting such interviews posed its own challenges. “As a male, I knew I should not initiate reaching out for a handshake,” Dr. Erogul said. Some women were hesitant to sign consent forms, fearing a breach of their anonymity. Still others declined to be interviewed because they worried Dr. Erogul’s data would reinforce the perception that Emirati women are oppressed.

Despite these obstacles, Dr. Erogul sat down with many women entrepreneurs, usually in their places of business, and listened to their stories. What they told him came as a surprise. “The women who were able to achieve their objectives were the ones who facilitated cooperation, collaboration and coordination with men in their networks of family and close friends,” he said. This dependence on cooperation with men contradicted the existing literature, which held that women should not cultivate male network partners.

Dr. Erogul also found that a common identity emerged among successful women entrepreneurs, who universally tended to exhibit “the behavior of self-agency.” Further, Dr. Erogul identified the process by which women in the UAE gain power and self-agency: They erode the systems that oppress them through a series of “micro-emancipations.” That is, women “know [their] boundaries but strategically—slowly, incrementally, tactfully, thoughtfully—push and change them,” he said.

These micro-emancipations collectively result in a process Dr. Erogul labels “strategic disobedience.” This concept, Dr. Erogul’s unique contribution to the field, explains how women both resist and comply so that men ultimately “become their network partners with whom they can cooperate and collaborate rather than try and avoid.” Over the course of his interviews, he encountered women who had, through strategic disobedience, convinced aggressive and oppositional husbands to support their wives’ businesses.

Dr. Erogul published his findings in “Strategic (dis)obedience: Female entrepreneurs reflecting on and acting upon patriarchal practices,” in the September 2018 issue of the journal *Gender, Work & Organization*. The article was co-authored by Salvador Barragan, Ph.D., of Thompson Rivers University, and Caroline Essers, Ph.D., of Radboud University.

Still, Dr. Erogul cautions, more research in other contexts is required before we can dub this strategy a blueprint for women’s emancipation. In the meantime, he urges ordinary citizens “on the ground” to do what we can. “What is needed is bottom-up change,” he said. “We can all contribute towards more equality through self-reflecting on our own biases.” ■

Honesty Is the Best Policy

More companies are realizing that corporate social responsibility (CSR) can be a driver of corporate reputation—and profits. The question for companies is whether to report on their CSR activities, especially when doing so raises the possibility of having to disclose problematic outcomes.

In "Self-Reporting CSR Activities: When Your Company Harms, Do You Self-Disclose?" published in *Corporate Reputation Review* in December 2018, Zachary Johnson, Ph.D., and Yun Jung Lee, Ph.D., associate professors of marketing in Adelphi's Robert B. Willumstad School of Business, along with Minoo Talebi Ashoori, Ph.D., assistant professor of marketing at Purdue University, link companies' self-reporting of CSR activities to their overall CSR reputation.

The article concludes that companies benefit from self-reporting, even when reporting negative information, for several reasons. First, if companies do not self-report, stakeholders may rely on third-party information that can be one-sided. Second, self-reporting helps build trust, demonstrating a company's commitment to openness and its willingness to confront problems.

According to Dr. Johnson, self-reporting also makes third-party information more positive and reduces the effects of negative third-party information. "We empirically found that companies that admit to their mistakes improve their reputation, which leads to improved profits," he said.

Much of Dr. Johnson's research centers around CSR's effect on brand reputation and consumer decision-making. In April 2019, he published "Good guys can finish first: How brand reputation affects extension evaluations" in the *Journal of Consumer Psychology*, which indicates that consumers who value close relationships and empathy will support a socially responsible company.

The Colorblind Classroom

All classroom interactions are not created equal, according to Shilpi Sinha, Ph.D., associate professor and director of the Childhood Education program in the Ruth S. Ammon School of Education within the College of Education and Health Sciences. Her research explores how the social-historical construction of race shapes the different ways educators of color and white educators interact with their white students.

Dr. Sinha published two papers on the subject in the May 2018 issue of *Studies in Philosophy and Education*: "The Racialized Body of the Educator and the Ethic of Hospitality: The Potential for Social Justice Education Re-visited" and "Introduction to Deconstructing Privilege in the Classroom: Teaching as a Racialized Pedagogy."

We are at a watershed moment in our history, Dr. Sinha argues, when the language of tolerance and multiculturalism is not enough to address racial tensions and prejudice. Instead, we must take a harder look at our "understanding of the social-historical context of whiteness, privilege and the construction of bodies as raced" and strive to correct imbalances.

Dr. Sinha believes that the discourse on education, teaching and learning has not been sufficiently informed by the experiences of educators of color. Her research is a response to that, one she hopes will show administrators in higher education how to better address the challenges faced by educators of color. "It is important to understand educators as raced beings rather than as inhabiting some universal or abstract sense of an 'educator'," Dr. Sinha said, "which has real material effects in terms of how one moves through or is prevented from moving through the world."

Playing to Win

Meredith Whitley, Ph.D., believes sports can be "incredibly transformative." A professor of health and sport sciences in the College of Education and Health Sciences, she has helped develop sport-based programs for disadvantaged youth around the world who lack access to safe, supportive spaces. She is also active in the field of Sport for Development and Peace (SDP), which promotes sport, physical activity and play as a platform for holistic youth development and community building.

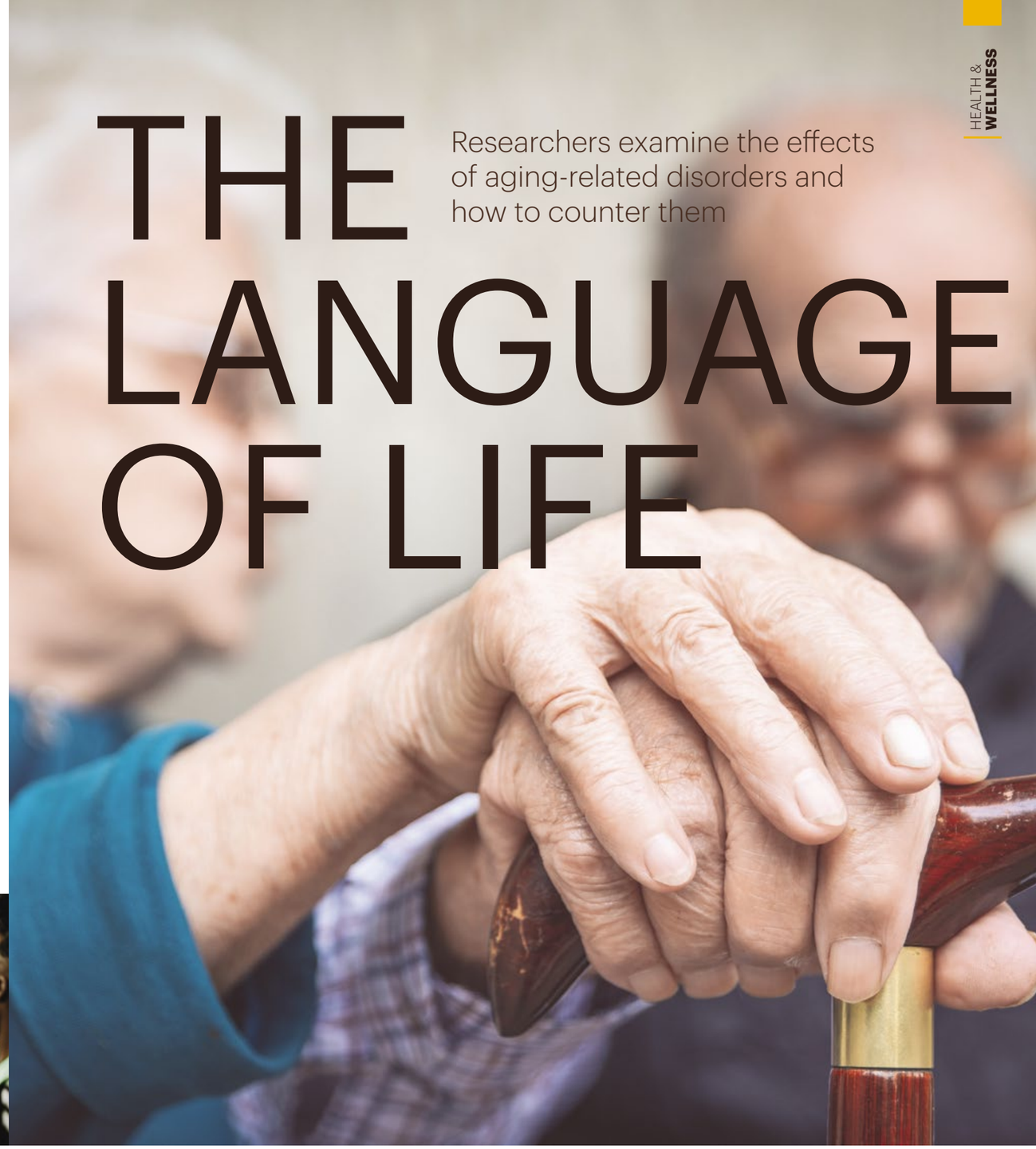
Sport programs are not uplifting by default, and Dr. Whitley is exploring ways to design and implement sport settings to minimize the negatives, like bullying and violence, and enhance the positives. Achieving that will take a village.

Her paper "Sport for development and peace: Surveying actors in the field," in the February 7, 2019, *Journal of Sport for Development*, assesses the state of the SDP field and suggests improvements. For the field to continue growing, Dr. Whitley said, "we must ensure that actors in the field—ranging from coaches, mentors and organizational leaders to professors, students, and policymakers—have better access to training and education, greater support from governments and other stakeholders, and meaningful, rigorous research and evaluation."

Dr. Whitley proposes recommendations for collaboration in "A systems theory of development through sport for traumatized and disadvantaged youth," published in *Psychology of Sport and Exercise* in 2018. In it, she calls for a constellation of partnerships that include coaches, researchers, funders, social workers, psychologists and teachers. Dr. Whitley hopes to build support networks where young people can safely "grow, play, learn and dream."

THE LANGUAGE OF LIFE

Researchers examine the effects of aging-related disorders and how to counter them



As the global population ages, the number of people living with dementia is growing rapidly, along with the need for improvements in care for them. Adelphi faculty members are studying ways to give a better quality of life to patients with dementia and ease the emotional burdens of family caregivers. Here are ways that three Adelphi professors are doing that.

Daniel B. Kaplan, Ph.D., is a clinical social worker whose research includes intervention and implementation studies that will optimize care services, clinical interventions and support for older adults with mental and neurological disorders.

Daniel B. Kaplan, Ph.D., collaborated on the Alzheimer's Poetry Project (APP).

Examining—and improving—social services for older adults with dementia

Daniel Kaplan, Ph.D., assistant professor in the School of Social Work, specializes in promoting geriatric mental health. He works with a mentor, Barbara Silverstone, Ph.D., to create workforce-enhancement programs for social work supervisors, helping them gain skills to effectively support social service providers serving older adults, including those living with dementia. Dr. Kaplan was co-investigator for the pilot study of a multistate implementation of their training model and reported the results in "NASW's Supervisory Leaders in Aging: An Acceptable and Feasible Model for Training and Supporting Social Work Supervisors" published in the December 2018 issue of *Clinical Social Work Journal*. Their latest work includes Adelphi's own social work supervision training initiative, Social Work Practice Fellows, which was recently tested in four regions across the Northeast.

Dr. Kaplan is the principal investigator in two studies of the Alzheimer's Poetry Project (APP), an intervention focused on creativity, joy, humor and personhood. APP facilitators engage groups of people with dementia who recite famous poems and express themselves through the co-creation and performance of original poetry. Dr. Kaplan and poet Gary Glazner, who founded APP, collaborate to study Poetry for Life—a program for middle and high school students who receive instruction in APP methods and visit local elder care settings to facilitate APP workshops—to measure how poetry-based intergenerational experiences impact students' views on aging, dementia, the arts and careers in healthcare. They are also studying the implementation of APP in 20 nursing homes throughout Wisconsin, evaluating impacts among the staff trained to deliver the intervention. They published an overview of their work, "The Alzheimer's Poetry Project," in the December 2018 issue of *JAMA: The Journal of the American Medical Association*.

Exploring language impairment in older adults

Melissa A. Randazzo, Ph.D., assistant professor of communication sciences and disorders in the College of Education and Health Sciences, is investigating how aging-related disorders affect patients' understanding of speech. "We know very little about how the clinical populations we serve interpret visual mouth cues," she said.

Conducted in Adelphi's Neurocognition of Communication Disorders (NCCD) Lab, her research uses electroencephalography (EEG) to examine audiovisual integration—how the brain processes what we see, such as mouth movements, and what we hear when someone is talking. Research in audiovisual integration is particularly important for aging-related disorders such as presbycusis (aging-related hearing loss) and aphasia (language impairment following stroke or other brain damage).

Older adults losing their hearing come to rely on looking at a speaker's mouth movements, especially in noisy environments, Dr. Randazzo notes. While people with aphasia tend to have poor auditory processing for speech sounds, it's unclear if looking at the speaker's mouth helps them understand speech better, or if that simply constitutes information overload. "For both disorders, we tend to use these mouth movements as cues during treatment, yet we don't know how the brain processes this information and integrates it with what is heard," she explained. "This is an important line of inquiry for developing new and better treatments."

Dr. Randazzo wrote the entry on audiovisual integration in the *Encyclopedia of Human Communication Sciences and Disorders* (2017) and presented "Neural Correlates of Audiovisual Integration in Presbycusis" at the Fall 2018 conference of the Society for Psychophysiological Research in Quebec City, Canada. As a complement to her own work, Dr. Randazzo, along with senior department colleagues, oversaw the dissertation written by doctoral student Susan DeMetropolis, "Word Associations in Early-Stage Alzheimer's Disease: EEG Evidence," which was developed in the NCCD lab and stemmed from DeMetropolis' clinical work as a speech-language pathologist.

DeMetropolis observed that individuals in the early stages of dementia did not use adjectives when describing an object, but relied instead on verbs and nouns. Because the subtle cognitive and language changes associated with incipient dementia tend to go undetected, the findings can be used to develop more effective assessment and treatment tools.

Focusing on the swallowing issues that afflict patients with dementia

In addition to language impairment, swallowing impairment can also affect quality of life for patients with dementia and create challenges for caregivers. As a graduate student, Ashwini Namasivayam-MacDonald, Ph.D., assistant professor of communication sciences and disorders, pursued a clinical placement working with dementia patients, which sparked her interest in finding ways to help maintain their quality of life for as long as possible. The lead author of "Quantifying Airway Invasion and Pharyngeal Residue in Patients with Dementia," published in *Geriatrics* in January 2019, Dr. Namasivayam-MacDonald focuses on understanding the swallowing difficulties that ensue from dementia. Recent research has suggested that up to 93 percent of people with dementia have some type of swallowing impairment, which puts them at risk for malnutrition, dehydration, pneumonia and even death. "Many people with dementia are put on modified diets or feeding tubes due to swallowing difficulties. However, many do not receive comprehensive swallowing assessments. My lab is focusing on teasing apart exactly what parts of the swallow are affected," Dr. Namasivayam-MacDonald said. She hopes to develop treatment solutions that can be implemented in the early stages of dementia to preserve swallowing function. Her work also informs clinicians of the common swallowing impairments found in people with dementia so they can better assess these deficits. Dr. Namasivayam-MacDonald is one of the few researchers in her field to bridge the gap between swallowing impairments and nutrition (including hydration) as well as caregiver burden. As a clinically trained speech-language pathologist, she stresses the importance of partnering with other healthcare professionals on a comprehensive approach to optimizing care for dementia patients. "All of the systems in our body are connected, so it would be naïve to assume that when one is not functioning the others are," she said. ■

Establishing connections using a 128 electrode sensor net for electroencephalographic (EEG) research

Melissa Randazzo, Ph.D., CCC-SLP, is director of the Neurocognition of Communication Disorders (NCCD) Lab, where she uses EEG to examine the neural underpinnings of multisensory integration in relation to linguistic and cognitive processing. The NCCD Lab supports student research in the development of clinically relevant research questions and hands-on training with neuroimaging equipment.

Ashwini Namasivayam-MacDonald, Ph.D., a speech-language pathologist, is director of Hy Weinberg Center's Aging Swallow Research Lab. Her research focuses on optimizing nutrition and hydration for older adults with swallowing difficulties and swallowing-related caregiver burden.

The Science of Effective Teaching

A psychologist uses data to teach students holistically

Visit an elementary school, and you may come upon a surprising sight: classrooms full of preschoolers practicing yoga. Still more surprising? These yoga classes weren't organized by physical education teachers, but by school psychologist Lea A. Theodore, Ph.D., visiting professor at Adelphi's Gordon F. Derner School of Psychology. "I wanted to find an intervention that students could use not just in the short term," she said, "but something they could go back to when they were stressed or having difficulty focusing."

Dr. Theodore's initiative to promote pre-K yoga instruction—which research has shown improves student performance—is part of a larger effort to develop data- and research-based methods to teach students holistically. "I have focused my scholarship on effectively bridging the gap between research and practice to improve the academic, social and emotional adjustment and functioning of children," she said.

Dr. Theodore is currently co-editing a work that will help bridge that gap: the *School Psychology Desk Reference*, to be published by Oxford University Press. She has written numerous chapters and articles this academic year that are now in press, including "School-Based Interventions" for the *Cambridge Handbook of Applied School Psychology* (Cambridge University Press).

Too often, Dr. Theodore said, teachers fail to adopt new best practices because no one shows them how. That's where a good school psychologist comes in.

"School psychologists are suited to treat the whole child, supporting children academically and with respect to their psychological well-being," she said. "They bring evidence-based strategies and solutions that create positive academic and social-emotional outcomes for children."

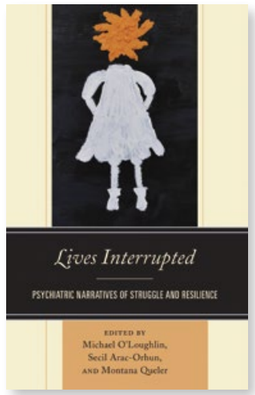
Changing Narratives

A psychologist helps trauma patients live full lives

"Trauma cannot be prevented. We do not speak of a 'cure,'" said Professor Michael O'Loughlin, Ph.D., who teaches in Adelphi's Ruth S. Ammon School of Education within the College of Education and Health Sciences and the Gordon F. Derner School of Psychology. Despite this sober reality, his new book, *Lives Interrupted: Psychiatric Narratives of Struggle and Resilience* (Lexington Books, July 2019), co-authored with Secil Arac-Orhun and Montana Queler, details the difference effective treatment can make.

The book—based on extensive interviews with patients—documents the psychosocial factors, such as trauma, that contribute to severe psychic distress. For deeply distressed patients, Dr. O'Loughlin said, "the thought pattern is often quite fragmented, and it takes considerably more work to construct written life narratives to tell the person's life story."

This narrative work is essential to clinical efforts to alleviate trauma, which often leads to the harmful internalization of feelings. "The solution from a psychoanalytic perspective is speech," Dr. O'Loughlin said. "What is unspeakable needs to be rendered speakable." Working through this process can "make traumatized feelings manageable," he said. "Constructing a new life narrative might allow for a full life despite the catastrophic mental event."



Throughout his career, Dr. O'Loughlin has examined the consequences of unmanaged trauma across generations and cultures. A child born to traumatized parents can be "drawn away from its own developmental trajectory" even though the child did not experience the traumatic event. Similarly, societies can collectively retain—and pass on—unmanaged trauma, a phenomenon Dr. O'Loughlin has explored in the contexts of Irish and indigenous Australian history.

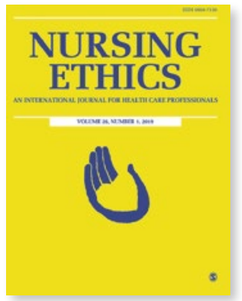
But by reclaiming intentionally buried memories and changing the memories' narratives, traumatized peoples can name traumatizing experiences and begin to break free from their pasts. Dr. O'Loughlin has devoted his career to creating healing spaces in which people may do just that.

The Challenge Ahead for Physical Education

Kevin Mercier, Ed.D., associate professor in the Department of Health and Sport Sciences in the College of Education and Health Sciences, has been focusing on students' changing attitudes toward physical education. His studies have shown that their positive attitudes "decrease as they get older and at a sharper rate for girls than boys. The teacher and the curriculum, plus an overemphasis on competition, contribute to these declining attitudes," he said. "Since attitudes impact decisions to be physically active, the challenge now is to help all students have enjoyable and meaningful experiences in physical education."

Understanding Nursing Ethics

Given the increasing diversity of their students, Jane H. White, Ph.D., professor of nursing, and her Adelphi colleagues Anne Peirce, Ph.D., and Bill Jacobowitz, Ed.D., speculated that self-identified culture and religion might play a part in nursing students' moral decision-making. The resulting study, "The relationship amongst ethical position, religiosity and self-identified culture in student nurses" (*Nursing Ethics*, 2018), confirmed it. The study was the first in the United States to address moral orientation in undergraduate nursing students.



Talking Success

Dana Battaglia, Ph.D., associate professor and chair of the Department of Communication Sciences and Disorders, has spent her career researching the most effective ways of treating people on the autism spectrum.

"The most misunderstood aspect of autism," she said, "is looking at this disorder based solely on deficits." Some aspects of autism spectrum disorder (ASD) that have historically been pathologized—such as echolalia—are actually essential to language learning. As the director of Adelphi's Language Observation and Analysis Laboratory, Dr. Battaglia has studied many ASD clients' language skills to dispel myths about language and autism. For instance, in "Autism Spectrum Disorders and Word Association" in *Speech-Language Pathology Casebook* (Thieme, 2019), Dr. Battaglia showed that the verbal skills of people on the autism spectrum do not lag behind those of their neurotypical peers.

Rather, what people on the autism spectrum need from their speech pathologists, Dr. Battaglia suggests, is instruction in effective communication strategies. "Adult-based social skills, such as performance in a job interview, must be explicitly taught to individuals with ASD," she said. Dr. Battaglia served as a consultant and liaison for Bridges to Adelphi's pilot program, Talking Success, which helped students build specific interview skills based on their self-identified goals. "This collaboration had great impact," she recalled.

As part of her newfound passion for Scholarship of Teaching and Learning—a revolutionary pedagogical approach to student learning—Dr. Battaglia is currently focused on the best ways to teach critical thinking skills, which often lead to strong clinical skills down the line. "This work is tremendously relevant to developing students who are to become exemplary clinicians," she said.

Korede K. Yusuf, M.B.B.S., Ph.D., has written numerous articles on maternal/reproductive health, infant health and HIV. She is also a reviewer for a number of scientific journals, including the *Journal of Health Care for the Poor and Underserved*.

> “It is well known that the future health of individuals is determined long before they are born.”
>
> **—Korede K. Yusuf, M.B.B.S., Ph.D.**

Early Interventions

The impact of maternal issues on infant health

According to the World Health Organization (WHO), more than 3 million child fatalities in 2017 could have been treated or prevented. Moreover, WHO reports that approximately 830 women die every day from preventable causes related to pregnancy and childbirth, and a startling 99 percent of maternal deaths occur in developing countries.

Korede K. Yusuf, M.B.B.S., Ph.D., assistant professor in the College of Nursing and Public Health, has dedicated her career to changing these statistics. She aims to find solutions that address maternal and child health inequalities—and save lives.

“Globally, women and children constitute a vulnerable population and experience public health problems at higher rates than the general population,” she said. “My goal is to understand how we can optimize growth and development of fetuses, improve child health and survival, reduce maternal experience of violence and generally reduce health disparities and improve the health of women and children across the world.”

Dr. Yusuf published a series of studies on links between maternal health and fetal development. “It is well known that the future health of individuals is determined long before they are born,” she said. “The health of a mother and what she eats, drinks or is exposed to environmentally not only affects her, but impacts her baby too.” Dr. Yusuf’s article in the October 2018 issue of the *Southern Medical Journal*, “Effects of maternal carbohydrate and fat intake on fetal telomere length,” explores whether mothers’ high carbohydrate and fat consumption during pregnancy influences the length of telomeres in infants. Telomeres are nucleotide sequences at the ends of chromosomes that promote chromosomal stability. Notably, their length can be used as a biomarker of cellular aging and the development of diseases such as Alzheimer’s disease, cardiovascular disorders and cancer. “If we can identify modifiable factors that affect telomere length, especially in infants, we may be able to reduce the prevalence of certain diseases through health education and interventions,” said Dr. Yusuf.

Dr. Yusuf’s research team collected umbilical cord blood from 62 women at a university hospital and compared telomere length for those classified as high fat and high carbohydrate consumers. They found that high fat consumption had a significant negative effect on telomere length. “To our knowledge, this study was the first to show a relationship between maternal high fat consumption and shortened fetal telomere length,” she said. Their findings point to the importance of promoting a healthy diet during pregnancy.

Dr. Yusuf also recently published the results of two studies examining links between fetal health and folic acid given by doctors to pregnant women who smoke. Working with faculty members from the University of South Florida, she recruited 345 pregnant smokers at a community health center in Tampa, Florida, to participate in the clinical trial.

Appearing in the May 2019 issue of *JAMA Pediatrics*, “Comparing folic acid dosage strengths to prevent reduction in fetal size among pregnant women who smoked cigarettes: A randomized clinical trial” reported on how folate dosage could alter fetal body size. “We hoped to understand the effect of higher-strength folic acid versus standard-of-care folic acid on infants’ birth weight and the risks of small-for-gestational-age (SGA) infants,” said Dr. Yusuf.

Smokers on higher-dose folic acid delivered infants with a higher birth weight than smokers on a standard dose, and mothers who received the higher dose had a lower risk of having babies with SGA compared to those taking the standard dose. The findings suggest that higher-strength folic acid supplementation in pregnant smokers might be a safe, effective way to improve birth outcomes and reduce low birth weight.

Another 2019 article based on Dr. Yusuf’s research, “Folic Acid Intake, Fetal Brain Growth, and Maternal Smoking in Pregnancy: A Randomized Controlled Trial,” published in *Current Developments in Nutrition*, looked at the impact of high-strength folic acid on fetal brain growth. According to Dr. Yusuf, folic acid prevented a reduction in fetal body size, but not fetal brain size. Higher-dose folic acid, however, did cause a reduction in brain-body ratio (BBR).

“A high BBR signifies a larger brain weight for a given head circumference, and this is commonly observed in SGA infants and intrauterine growth restriction,” Dr. Yusuf noted. “Smokers in pregnancy may benefit from folate supplementation in reducing the risk of having infants with impaired brain-body proportionality.”

Dr. Yusuf hopes to further explore how pregnant smokers’ folic acid intake shapes infant brain growth. She is interested in studying the effect of starting folate supplementation early on, beginning even before conception and continuing until delivery, which could help ensure the proper development of fetuses. Equipped with Dr. Yusuf’s wide-ranging insights into maternal health, public health organizations and healthcare providers may be able to change the lives of women and children around the globe. ■

The Future of Medicine Is Digital

Providing health informatics and nursing students with the skills they need for the 21st century

That Fitbit on your wrist is just the beginning of what researchers are calling a revolution in healthcare. It's part of a vast array of wearable devices, smart home systems and other digital tools that allow healthcare providers to monitor patients as they go about their daily lives.

But while the technology exists, today's medical professionals don't always receive the training they need to use it. This "digital skills gap" extends to the next generation—including nursing students at many institutions—who don't have access to novel informatics tools.

"Most health informatics training programs focus on electronic health record training, but place little emphasis on telemedicine and remote patient monitoring skills," noted A. Hasan Sapci, M.D., assistant professor of health informatics at Adelphi's College of Nursing and Public Health.

Dr. Sapci evaluated and documented the relationship between training methods and the confidence necessary to use new technologies among undergraduate nursing students in a recent study published in the August 22, 2018, issue of the *Journal of Telemedicine and Telecare*.

His conclusions point the way forward in terms of reducing the skills gap in mobile technologies.

More than 200 nursing students participated in the study, which evaluated their confidence level with various types of remote monitoring devices before and after being given six exercises designed to hone their skills.

The results, said Dr. Sapci, were "extremely encouraging." Most participants reported that the training changed their attitudes toward remote patient monitoring, and more than 90 percent stated they would like to have similar training approaches in their future learning.

Current research into telemedicine is particularly important because the population in the United States age 65 and over is expected to soar to more than 83 million by 2050. This will cause a profound shift in how the healthcare industry addresses diseases associated with aging as well as how it provides care to this fast-growing segment of the population.

A member of several committees related to healthcare technology at the U.S. Department of Health and Human Services, Dr. Sapci has been programming clinical informatics applications and teaching clinicians how to use them for more than a decade. He has been working on the training program used for the remote monitoring devices study since 2009.

Dr. Sapci has also established two cutting-edge laboratories at Adelphi, meeting the need for more practical training around mobile technologies. The Smart Home for Home Healthcare Lab gives students hands-on experience with the types of applications that are used to monitor patients in their own homes, ranging from sensors that detect movement in a chair or bed to robotic telepresence systems that allow caregivers to have virtual face-to-face conversations with their patients.

Students in the Smart Home for Home Healthcare Lab can easily transfer information they gather to the Health Informatics Training and R&D Lab, which simulates an academic medical center. Students there learn how to process and store information gathered from patients. Its wide range of equipment—imagine a glove that a patient can slip on to evaluate their heart, or a digital camera system that can perform eye exams—means that students can develop strategies of their own.

Together, the labs provide a "unique environment where we can help students create innovative projects," explained Dr. Sapci. It's why Adelphi has a "national competitive advantage" in the growing field of telemedicine, he said, and why it's the "ideal place to train tomorrow's health informaticians and clinicians." ■

HEALTH & WELLNESS

> **"[Adelphi is an] ideal place to train tomorrow's health informaticians and clinicians."**
>
> **—A. Hasan Sapci, M.D., assistant professor, College of Nursing and Public Health**

A. Hasan Sapci, M.D., specializes in data analytics and remote patient monitoring applications. His interests include telemedicine and connected health as well as evidence-based medicine. He is a member of the American Medical Informatics Association and the American Telemedicine Association.

Beyond Belief

Comparing U.S. and Chinese nursing students' views on mental illness

Caregivers' beliefs about mental disorders—from causes of illness to potential outcomes—can play a critical role in shaping treatment. While there has been substantial research into the area of mental health literacy, "there is scant literature concerning mental health beliefs among nursing school students," said Wei Liu, Ph.D., assistant professor in the College of Nursing and Public Health.

"As front-line clinicians working in emergency room settings, we face many patients with psychiatric mental disorders," said Dr. Liu, who worked for more than a decade as an emergency nurse in China and Australia before joining Adelphi. "I am interested in nurses' attitudes towards mental illness, as I believe these attitudes and our understanding of mental illness will ultimately influence the way we deliver patient care."

Between April 2016 and April 2017, Dr. Liu enlisted two groups of fourth-year nursing students in the United States and China in a descriptive, cross-sectional survey to explore views on mental health. "I was interested in gaining a better understanding of nursing students' preparedness for the delivery of care to patients with mental illnesses upon completion of their bachelor of nursing program," she said. "In addition, I wanted to understand how differing educational systems in the U.S. and China have affected nursing students' mental health literacy level."

Dr. Liu recently presented her findings in a series of three articles.

In an article in the March 2018 issue of the *Journal of Psychiatric and Mental Health Nursing*, "Mental health literacy: A cross-cultural study of American and Chinese bachelor of nursing students," Dr. Liu discusses nursing students' knowledge about mental disorders and the effectiveness of specific interventions for managing depression and schizophrenia. She found that nursing students in both countries shared similar views on a broad range of interventions for managing disorders, though she also identified notable disparities. "The major difference was that the Chinese students showed more preference to occasional alcohol consumption [as a helpful intervention] and specialized therapies, including cognitive-behavioral therapy and electroconvulsive therapy," she said. "The U.S. students held less skepticism toward traditional and religious practices as possible treatment options."

Dr. Liu says her discoveries point to areas for improvement in nursing education in both countries. "Chinese nursing students need to be educated about safe alcohol consumption guidelines adopted by the National Health and Family Planning Commission," she said. "And U.S. nursing students need to increase their awareness of national practice guidelines for managing mental disorders, particularly with respect to the use of specialized therapies such as cognitive-behavioral therapy and electroconvulsive therapy."

Her article in the October 2018 issue of the *Archives of Psychiatric Nursing*, "Beliefs about prognosis and outcomes for people with mental disorders: A cross-cultural study of Bachelor of Nursing students from the U.S. and China," compares attitudes about prognosis and long-term outcomes for mental health patients undergoing interventions. While nursing students in both countries were generally positive about treatment, Dr. Liu found that "the Chinese students were more pessimistic about the prognosis and long-term outcomes after treatment for depression and schizophrenia."

Dr. Liu's study suggests the need to deepen students' understanding of mental illness—in particular, challenging negative assumptions through innovative educational techniques, such as inviting mental health patients to lecture and using simulated illness experiences in classroom settings. Clinical placements in community and hospital settings would give students experience in managing patients who may be acutely unwell but relatively stable. The article urges nurses and students to reflect on how their attitudes might affect their clinical practice.

In a third article, published in the March 2019 issue of *Nursing & Health Sciences*, "Recognition of, and beliefs about, causes of mental disorders: A cross-sectional study of U.S. and Chinese undergraduate nursing students," Dr. Liu examines students' recognition of mental illness and beliefs about the causes of mental disorders. "The findings highlight the need for the incorporation of mental health issues, including symptomatology of different mental disorders and their application to patient care, into various aspects of the U.S. nursing curriculum," she said. "In China, opportunities can be created for nursing students to discuss the impact of personal beliefs on care delivery and social stigma during clinical placement."

Dr. Liu is continuing to promote mental health literacy in nursing education. Her current research focuses on the impact of virtual simulation on nursing students' learning outcomes, particularly with respect to their knowledge and beliefs about mental illness. ■

HEALTH & WELLNESS

"I am interested in nurses' attitudes towards mental illness, as I believe these attitudes and our understanding of mental illness will ultimately influence the way we deliver patient care."

—Wei Liu, Ph.D.

Wei Liu, Ph.D., a registered nurse in New York and Australia, focuses her research on mental health literacy, medication management, health communication and wound care.

Damian A. Stanley, Ph.D., has written several articles on implicit race bias and social neuroscience. His other research interests and specializations include social learning and decision-making and functional MRI, which measures brain activity.

Mind Over Matter

Computational models provide a new window into autism

Long before they head off to kindergarten, most children have begun to develop what is known as theory of mind: the ability to grasp that other people have thoughts and feelings different from their own.

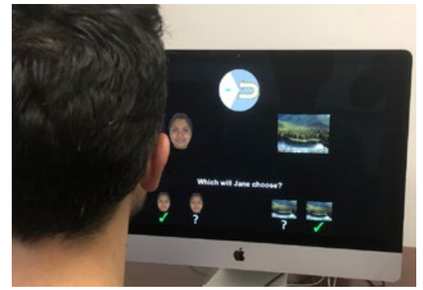
The classic test involves asking a child what they will find inside a box marked Band-Aids. When they answer "Band-Aids," the box is opened to reveal crayons. If they are asked what the next person to enter the room will think is inside the box, children under four often say "crayons." That's because without theory of mind, they assume that others have the same knowledge as they do.

Individuals on the autism spectrum may also have difficulty comprehending what others are thinking and feeling. To help understand why, Damian Stanley, Ph.D., assistant professor of psychology at Adelphi University's Gordon F. Derner School of Psychology, designed a more sophisticated test utilizing computational models to measure theory of mind impairment in adults with autism.

Dr. Stanley, who spends the summer in Pasadena as a visiting professor at the California Institute of Technology (Caltech), has long been interested in learning and decision-making. Working at Caltech gave him access to studying a population of high-functioning people with autism.

"My research is not focused on autism per se," said Dr. Stanley. "Rather, it makes use of populations with specific impairments so that we can understand how these processes are implemented in the brain and how things can go wrong. When we understand how things go wrong, we can understand how they go right."

The goal, notes Dr. Stanley, was to develop a computational model of the specific calculations the brain makes when learning about other people. His test first asked participants to play a game in which they could donate money to one of three charities or keep it for themselves. But they had to pay close attention, because sometimes the game carried out their instructions to donate or keep money, and sometimes it did the reverse for several rounds.



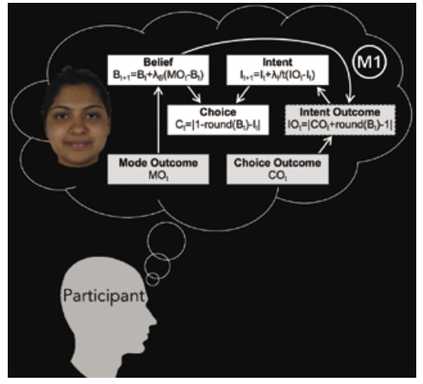


Illustration of the things test participants (mentalizers) had to keep in mind (top left), as well as the questions they had to answer (middle left) and the mathematical models that represented their thought processes (bottom left)

Next, the participants watched a woman named Grace play the same game. They had to track whether she believed the game was functioning normally or in reverse. They also had to learn which charities she wanted to receive her donations and which she did not. Critically, to correctly interpret Grace's choices and therefore learn, participants had to take into account her beliefs about whether her decisions were being reversed—that is, if she chose to donate to a charity, they had to know whether she believed the money would end up with the charity (normal) or remain with her (reversed) in order to correctly understand her motivation.

"In other tests about theory of mind, you get all the information up front," said Dr. Stanley. "But in reality, we learn more and more about people over time. This test is a more nuanced reflection of the real world."

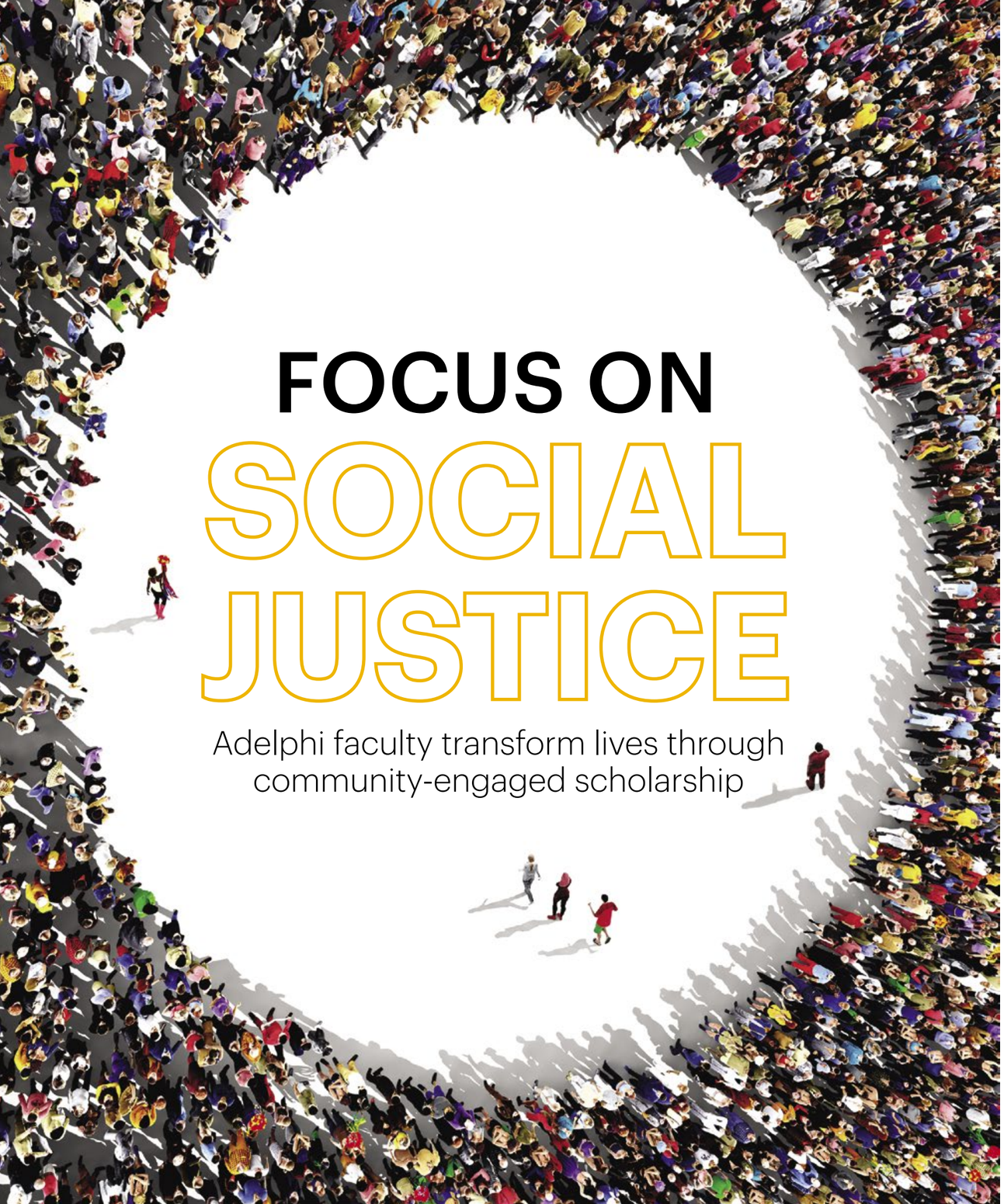
The data collected from two groups—one with members on the autism spectrum, and a control group with members who are not—was analyzed with computational modeling. Researchers found that members of the control group were able to track the woman's beliefs, as well as use that knowledge to correctly interpret her choices and learn which charities she preferred. The group with members on the spectrum were also able to track the woman's beliefs; however, they struggled to use that information to learn which charities she preferred and predict her behavior.

Curiously, not every participant on the spectrum seemed to struggle in the same way. While the current study is too small to distinguish between the different groups, Dr. Stanley explains, it provides a road map for future research. "The power of using computational models is that we'll be able to break it down into separate pieces," he said. "Some people with autism might be impaired at one part of the process, some at the other."

The results are documented in "Deconstructing Theory-of-Mind Impairment in High-Functioning Adults with Autism," published in the February 4, 2019, issue of *Current Biology*. Besides Adelphi, the team included researchers from Caltech and the University of Toronto at Scarborough.

Adelphi students are benefiting from the University's close connections to institutions conducting groundbreaking research. Dr. Stanley mentioned a new collaboration with the City University of New York's Advanced Science Research Center designed to collect brain imaging data.

"We provide our students with a more rigorous approach to understanding links between the brain and behavior," said Dr. Stanley. "They are thinking about things in grays rather than black and white, and that's certainly where we are headed in science." ■



FOCUS ON SOCIAL JUSTICE

Adelphi faculty transform lives through community-engaged scholarship

Adelphi has a long-standing commitment to civic engagement and to addressing the challenges facing society. As part of this tradition, a growing number of faculty members are striving to produce research that resonates beyond academia—community-based research that may help resolve issues and enhance quality of life for marginalized populations.

These scholars are reframing their questions to focus on the strengths—rather than the weaknesses—of the populations they study. They are spending time getting to know the people who are participating in their research, then sharing their results with community organizations that can use them to effect sustainable change.

Here is a look at five Adelphi faculty members who exemplify the University's commitment to social justice and whose work is broadening the scope of academic research.

Professor of social work Wahiba Abu-Ras, Ph.D., strives to raise awareness of issues faced by Arabs and Muslims.

Inspired by a sense of community

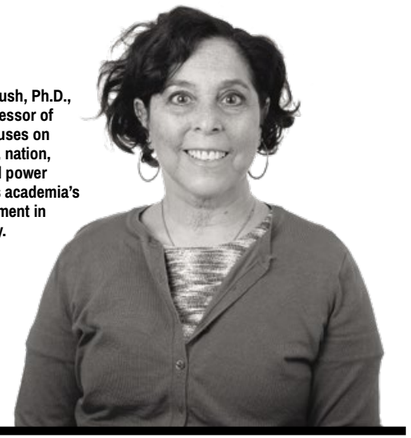
For Wahiba Abu-Ras, Ph.D., a professor in Adelphi's School of Social Work, community has always served as an inspiration for academic work. Dr. Abu-Ras' earliest research was inspired by an event that took place when she was in high school: One of her friends in Illute, the village where she grew up in northern Israel, was murdered to preserve a family's honor.

Early on, Dr. Abu-Ras decided that her responsibility was to raise awareness about the issues faced by Arab and Muslim populations. "As academics, we all came from a community, live in a community and practice in a community," she said. "These communities know more about their needs than any scientist. Our work with them is to plan, design and develop interventions that best fit their needs and that address their concerns through research."

Dr. Abu-Ras has published her findings in dozens of national and international journals. She has examined the rise in bias against Muslims after the 9/11 attacks in 2001 and again after the presidential election in 2016, resulting in the article "Muslim Americans' safety and well-being in the wake of Trump: A public health and social justice crisis" in the January 2018 issue of the *American Journal of Orthopsychiatry*. She has also taken a hard look at discrimination experienced by Muslim members of the armed forces in "Understanding resiliency through vulnerability: Cultural meaning and religious practice among Muslim military personnel," in *Psychology of Religion and Spirituality* (August 2015), and drinking among Muslim college students in "Respondent-driven sampling of alcohol use among Muslim undergraduate U.S. college students and alcohol use: a pilot study," in *Social Psychiatry and Psychiatric Epidemiology* (September 2012).

"Over the past seven years, I have focused most of my scholarship on trauma and mental health issues among Muslim and Arab Americans," Dr. Abu-Ras said. "These research topics have only received sporadic attention within the Muslim community. My research attempts to fill this gap."

Dr. Abu-Ras, who is also a visiting professor at Qatar's Doha Institute for Graduate Studies, said that her current work, a three-year study designed to identify the barriers to mental health care in Qatar, will have a direct impact on residents of the small Middle Eastern country. The research aims to provide tangible guidelines and policies for the country's mental health care providers, policymakers and administrators. Dr. Abu-Ras regularly attracts large-scale funding for her efforts, such as the $600,000 she received from the Qatar National Research Fund.



Melanie E.L. Bush, Ph.D., associate professor of sociology, focuses on issues of race, nation, coloniality and power and advocates academia's active engagement in the community.

Creating scholarship models for the next generation

Melanie E.L. Bush, Ph.D., associate professor of sociology, is another Adelphi scholar making meaningful investments in new, holistic kinds of scholarship. "There's not one community, there are many communities," noted Dr. Bush. **"The University itself is a community. If we're asking whether we at the University need to be part of the world, I would say, urgently, yes."**

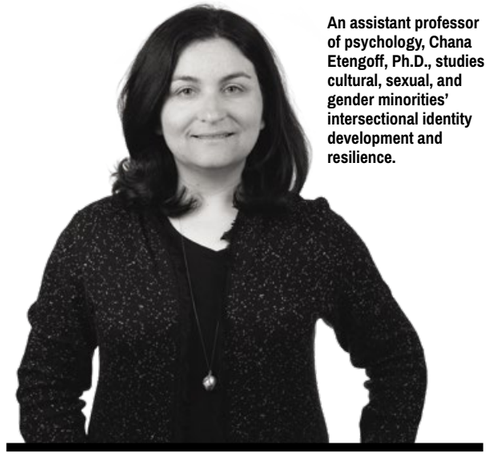
Dr. Bush's work takes her around the world, where she regularly meets with a wide range of people working

> **These communities know more about their needs than any scientist. Our work with them is to plan, design and develop interventions that best fit their needs and that address their concerns through research."**
>
> **—Wahiba Abu-Ras, Ph.D., professor of social work**

on social justice issues both inside and outside the traditional university setting. She is speaking at numerous upcoming events, including Unsettling Paradigms: The Decolonial Turn, a conference at South Africa's University of Pretoria. She organized and will moderate a panel, "The Reshaping of Social Relations through a Global Teaching Collaboration," which includes students from Adelphi and the University of South Africa, based on their discussions in 2018 on topics such as land reform and decolonizing knowledge.

Later this year, Dr. Bush will travel to Ghana for the International Studies Association Conference to speak on the panel "Critical Practices for Collectively Challenging Academic Imperialism." Then she will present on a session she organized with scholars from Mozambique, Mexico and Portugal titled "Solidarity Economy Projects in Diverse Social Contexts," which has been accepted for the upcoming International Sociological Association Forum of Sociology in Brazil.

Dr. Bush also edited *Rod Bush: Lessons from a Radical Black Scholar on Liberation, Love, and Justice* (*Human Architecture: Journal of the Sociology of Self-Knowledge*, Edited Collection Series, 2019), an anthology about her recently deceased husband and longtime collaborator. The book brings together more than 20 writers from a variety of fields, which Dr. Bush saw as a learning experience. "All of us benefit from engaging with the community, regardless of our discipline and where we choose to invest our time and energy," she said. "Our scholarship is so much more thoughtful because of that engagement. Our ideas shift when we are among people as they go about living their lives."



An assistant professor of psychology, Chana Etengoff, Ph.D., studies cultural, sexual, and gender minorities' intersectional identity development and resilience.

Taking advantage of "radical changes" in academia

Chana Etengoff, Ph.D., assistant professor of psychology, is, like Dr. Abu-Ras, focused on researching subsets of the Muslim community. She has just finished the data collection phase of what will be the largest study to date of LGBTQ Muslims, drawing from a pool of more than 600 participants worldwide. "It's amazing to be able to put together a study of this size," she said. "Those that have been published in the past have had very small sample sizes, sometimes less than 20."

Dr. Etengoff's work on the subject—which includes lectures to medical professionals at colleges and hospitals, papers presented at international conferences, and journal articles—has already garnered attention in the academic community. She was recently awarded a $2,000 Equality Knowledge Project Grant from Eastern Michigan University.

Dr. Etengoff says her work is possible because of what she calls "radical changes" in her field. **"Psychology is pretty late to come to the table," she said, pointing out that social work and other fields have been open to more intersectional research methods.** In 2017, the American Psychological Association updated its guidelines to include intersectional approaches to research after many years of discussion.

The first article emerging from Dr. Etengoff's research, "Lesbian Muslims' Family Conflicts, Depression and Online Support Experiences," will be published in the forthcoming special issue of the *Journal of Homosexuality*. "I happen to think that research is only as valuable as it is meaningful," said Dr. Etengoff, who is co-editing the issue and sought to cover a topic that would resonate with the larger LGBTQ community. "Researchers put together these large-scale quantitative studies, but they often aren't meaningful to people outside of academia. When you zoom in on something specific, it can have a much greater impact."

The majority of Dr. Etengoff's research has examined the intersection of sexuality and religion, notably "Gay men's and their religiously conservative family allies' scriptural engagement," which was published in the November 2017 issue of *Psychology of Religion and Spirituality*. Much of the earlier work on this topic focused on the challenges gay men and others faced when coming out, she notes. But this deficit model failed to tell their whole story.

"My research focuses on the resilience of the community," said Dr. Etengoff. "There were always a lot of success stories out there, but we weren't listening to them. I look at my work as amplifying what they have to say. Then we can think about what lessons we can learn from their experiences and build systems to support them."

Dr. Etengoff is now studying the transgender community, employing a narrative content analysis to explore how this historically marginalized population enacted their own transformative development through the use of online videos. Her article "Transvlogs: Online Communication Tools for Transformative Agency and Development" was just accepted for an upcoming issue of the journal *Mind, Culture, and Activity*.

> **My research focuses on the resilience of the community. There were always a lot of success stories out there, but we weren't listening to them."**
>
> **—Chana Etengoff, Ph.D., assistant professor of psychology**

Ryan Lee-James, Ph.D., is an assistant professor in the Department of Communication Sciences and Disorders and an ASHA-certified speech-language pathologist.

Using statistical analysis to illuminate real-world disparities

Ryan Lee-James, Ph.D., assistant professor in Adelphi's Department of Communication Sciences and Disorders, shares Dr. Etengoff's commitment to broadening the scope of academic research.

Dr. Lee-James is currently investigating the factors that influence the language and reading skills of African American children. "I'm trying to talk about these issues in a more positive light," she said. "We need to figure out what these young people can do rather than what they can't do."

The first step is gathering the data to provide these answers. Dr. Lee-James was among the researchers involved in a study of almost 900 African American elementary school students whose progress was tracked annually for five years. The data, published in the journal *Reading & Writing Quarterly* in January 2019 as "Reading and Language Performance of Low-Income, African American Boys in Grades 1–5," revealed no statistically significant differences in performance on language or intelligence measures between boys and girls. However, by the fourth and fifth grades, girls had outpaced boys in two measures: reading comprehension and fluency.

Dr. Lee-James is especially interested in the language skills of African American children who are bidialectal, that is, use two dialects of the same language. She addressed this issue in "Language skills of bidialectal and bilingual children: Considering a strengths-based model," published in the January–March issue of *Topics in Language Disorders*. Using a strengths-based perspective, Dr. James and her fellow researchers looked at the language skills of bidialectal and bilingual students. "For the most part, these kids are navigating two different worlds and doing it pretty successfully," she said. "Now we need to figure out how to bridge the gap between their strengths and their weaknesses."

Lauren Gonzales, Ph.D., assistant professor of psychology, explores the stigma and discrimination faced by people with serious mental illnesses.

Facilitating mental health recovery and community integration

When clinical psychologist Lauren Gonzales, Ph.D., assistant professor of psychology, discusses her research involving individuals diagnosed with "serious mental illnesses," she emphasizes that none of it would be possible without face-to-face conversations. "My research evaluates social factors affecting the recovery of people diagnosed with mental illnesses," she said. "Think of recovery as the ability to live successfully in the community and to feel a sense of agency and empowerment in their lives. That requires talking with people."

Dr. Gonzales is among the many Adelphi faculty members whose work reflects changing trends in academic research. **"Getting more involved in the community is definitely where we are headed in my field," she explained.** "And it's a natural progression for universities like Adelphi to do the same thing."

For her own work, Dr. Gonzales engages with people living with diagnoses in the community, asking them about their lives in order to get a real sense of the challenges they face. These discussions often include issues of stigma and discrimination experienced within the neighborhoods in which they reside. Although these topics can seem challenging, Dr. Gonzales reports that the response is often overwhelmingly positive.

"In my experience, people with mental illness diagnoses are very willing to talk and tell their stories," said Dr. Gonzales. "They aren't asked about themselves very often in these contexts. They aren't given a chance to tell their stories from their own perspectives."

The effort has been a rewarding one. In the past year, research conducted by Dr. Gonzales and her colleagues has been published in three peer-reviewed journals: "Can reduced homelessness help explain public safety benefits of mental health court?" in *Psychiatry, Public Policy, and Law* (May 2018), "The Role of Neighborhood Factors and Community Stigma in Predicting Community Participation Among Persons With Psychiatric Disabilities" in *Psychiatric Services* (September 2017) and "Association between housing, personality capacity factors and community participation among persons with psychiatric disabilities" in *Psychiatry Research* (December 2017).

Signs of Progress

For researchers conducting long-term studies of specific populations, changes in the community are beginning to emerge.

Dr. Abu-Ras witnessed this recently when conducting research on Palestinian parents of children with disabilities. Returning to her own village in Israel—the one that inspired her first research more than two decades earlier—she found a community completely transformed.

"I felt so proud of the changes these women made after the case of killing for family honor," she said. "I no longer see weak and vulnerable women who are abused by family cultures and traditions. I found women who stood up for their and their children's rights and who worked together for their family's well-being. I sense the advocacy in their voices and the strength they were able to build." ■

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The spirit of discovery pervades life at Adelphi. It motivates faculty members across the University, and it inspires students in every field. It drives our annual Research Day, which has grown larger in every year since its launch in 2004. This year's was 30 percent larger than last year's, with more than 300 teams of students submitting abstracts for consideration.

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The Adelphi Fund provides a foundation for all inquiry at the University, supporting our students and faculty as well as the intellectual and cultural activities that enrich their lives. **Find out how you can help support discovery at Adelphi. Visit adelphi.edu/adelphifund.**

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