



ADELPHI
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Results, Con'd

shows that the deferring coping has a stronger positive association with life satisfaction for compared to Christians (interaction term: $\beta = .59, p = .045$).

Shows that the deferring coping has a stronger negative association with depression for a trend for Muslims compared to Christians (interaction term: $\beta = -.59, p = .059$).

to ran supplementary analyses in which we ran the hierarchical model to assess the well-being from religious coping styles separately for Muslims and Christians. Findings were generally consistent.

ns, only the collaborative coping style was negatively associated with life satisfaction ($\beta = -.32, p = .052$).

the deferring coping style was negatively associated with life satisfaction ($\beta = -.56, p = .001$).

Discussion

s suggest that the effects of the religious coping styles on well-being are consistent with religious beliefs.

for Aim 1 are consistent with past research suggesting that collaborative coping is associated with well-being whereas deferring coping is associated with lower well-being.

results for Aim 2, we speculate that the well-being of Muslims in part be due to their religious beliefs. In Islam, God is not associated with fear, but rather with hope and trust.

to depend on God to solve problems. This is consistent with the findings of the present study.

Strengths and Limitations

contrast to previous studies, the present study was able to suggest that the different coping styles were associated with well-being.

ous coping style with psychological well-being. The present study is a correlational study and cannot be that Muslim individuals with greater well-being are more likely to use collaborative coping.

ng coping). participants, we did not consider the role of religious nomination.

to acknowledge the Adolphus Program.

A FOCUS ON STUDENT SCHOLARSHIP

Cultivating a culture of research and creative work

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At Adelphi University, we celebrate student participation in research and creative work. With small classes and a faculty renowned for their scholarship and creative work, our students have ample opportunity to engage in their disciplinary pursuits as creators, not just consumers, of knowledge.

This focus on research is a key element of Adelphi's commitment to student success—fostering critical thinking, creativity, and the important values of hard work and tenacity. Our annual Scholarship and Creative Works Conference (page 22), now in its 19th year, is a perfect showcase of our culture of intellectual curiosity supported by faculty mentorship.

I'm proud of the incredible breadth of our community's scholarly work, a selection of which is shared on the pages of this magazine.

You'll see how Gordon F. Derner School of Psychology faculty members are writing new chapters in the history of psychoanalysis, honoring Sigmund Freud's teachings, yet moving his theories forward with modern approaches for a new generation of practitioners (page 6).

We share the collaboration between a health and sport sciences faculty member and a graduate student to explore the power of organized sports to transform the lives of participants who have experienced trauma (page 20). There's also a look at works of art created by an Adelphi art and art history professor in remembrance of the September 11 terrorist attacks, aimed at healing his personal tragedy as well as our collective one (page 36).

You'll find out more about two research projects aimed at supporting the LGBTQ+ population (pages 16 and 35), as well as one professor's mission to address racially based inequities in speech pathology (page 28). We also illuminate a biology professor's decades-long effort to study the brain, and his research with students on how CBD and other plant extracts might combat conditions like anxiety (page 42).

And on a timely topic, we detail the research collaboration between a mathematics and computer science faculty member and a former student that proposes new technology to secure our elections (page 14).

The research brought to life in this magazine has the capacity to change our world in a great many ways—and meaningfully, Adelphi students played a part in much of it. I can't wait to learn how they carry these high-impact experiences into the future and make their own mark.

Sincerely,

Christopher Storm, PhD
Provost and Executive Vice President

Grants Support Research and Educational Programs

Grants from government agencies and private foundations play a critical role in scholarly activity at Adelphi. University faculty successfully attracted funding for a variety of projects in 2021–2022. Highlights include:

- The United States Department of Education awarded two grants totaling a combined \$10.2 million over a five-year period for the establishment of 21st Century Community Learning Centers in underserved school districts in nearby towns. Adelphi faculty members from the Ruth S. Ammon College of Education and Health Sciences collaborated with the West Hempstead Union Free School District to secure \$4.2 million to establish a center that will provide academic enrichment opportunities for students during nonschool hours. Faculty from the Gordon F. Derner School of Psychology's Derner Hempstead Child Clinic worked with the Hempstead Union Free School District to obtain a \$6 million grant for a center that will include a focus on social and emotional learning.
- The National Science Foundation awarded \$499,000 to the (STEM)2 Network, a project led by biology department faculty members Lawrence Hobbie, PhD, and Eugenia Villa-Cuesta, PhD. A multi-institution, multidisciplinary group of STEM faculty on Long Island, the network is working to transform undergraduate STEM education to provide an equitable and inclusive system for all students.
- The Substance Abuse and Mental Health Services Administration (SAMHSA) awarded two grants, each totaling \$3 million over five years, to the School of Social Work to train providers of trauma treatment for adolescents. One grant will fund the Complex Trauma Treatment Initiative designed to prepare providers to work with adolescents in the justice system, refugees and asylum seekers, and youth in underserved schools in urban and rural areas. The second grant supports the Adelphi Complex Trauma Training Consortium, a national workforce development initiative to establish sustainable local expertise in complex trauma in all 50 states.
- The Health Resources and Services Administration (HRSA) extended its support for the College of Nursing and Public Health's Nurse Faculty Loan Program with a \$423,000 grant to increase the number of qualified nursing faculty. The program provides doctoral students with loans that can be forgiven up to 85 percent when the graduate attains a full-time faculty position.
- The New York Community Trust awarded the School of Social Work three grants totaling \$1.125 million to help recruit BIPOC students. The grants will help subsidize educational costs, specialized field training, and comprehensive mentoring, advising and support services. The program is designed to prepare a workforce of social workers who are engaged with their communities.
- The National Institutes of Health awarded a competitive renewal of a \$352,000 grant to associate professor of biology Eugenia Villa-Cuesta, PhD, to support her biomedical research on the drug rapamycin as a potential treatment for succinate dehydrogenase deficiency and for her research training of undergraduate students.
- The Yale School of Medicine Child Study Center granted a subaward of \$191,165 to Reem Khamis, PhD, to support the Infant-Toddler CHILd project, a framework created to assess the mental health climate of preschool and early care settings through research in New York City. This new subaward will fund an examination of the tool's effectiveness in 100 home-based child care settings serving infants and toddlers in lower-income neighborhoods using child talk measurement (LENA Grow).

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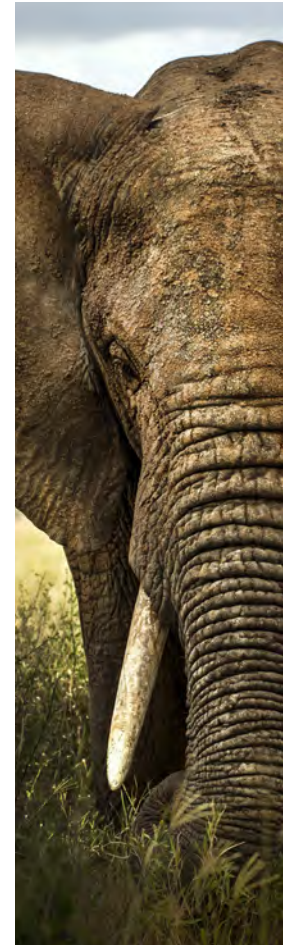
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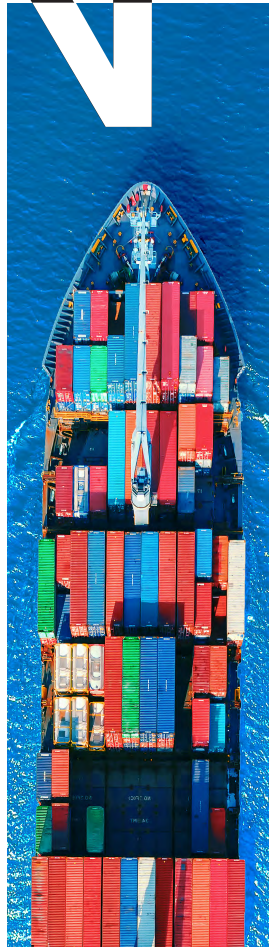
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Psychoanalysis for the 21st Century

Recent works burnish Adelphi's reputation as a world leader in psychoanalytic research

Is Sigmund Freud, the founder of psychoanalysis, still relevant today? While most psychology students agree that Freud's work on talk therapy was groundbreaking, they tend to believe that many of his theories of development are hopelessly out-of-date. That's a belief that Robert Mendelsohn, PhD, professor of psychology, wants to dispel.

"As I tell my students, Freud was ahead of his time in many ways," Dr. Mendelsohn said. "He understood some basic differences between men and women before we understood the chromosomal differences between the sexes. He also understood sexuality, sexual identity and the whole concept of binary versus nonbinary. But, at the same time, he was sexist and naive about other cultures. We

have to put some of his ideas aside even though others are useful."

In 2021, Dr. Mendelsohn published *Freudian Thought for the Contemporary Clinician: A Primer on Psychoanalytic Theory* (Routledge),¹ based on the course he teaches to first-year candidates in Adelphi's clinical psychology doctoral program. He is one of several faculty

1 Mendelsohn, Robert. *Freudian Thought for the Contemporary Clinician: A Primer on Psychoanalytic Theory*. Routledge, 2022.

members in Adelphi's Gordon F. Derner School of Psychology—ranked fourth in the world in the topic area of psychology psychoanalysis by the Center for World University Rankings—who have written or contributed to key scholarly works over the past two years. Other titles include Joel Weinberger, PhD's *The Unconscious: Theory, Research, and Clinical Implications* (Guilford Press, 2021) and Jairo N. Fuertes, PhD's *The Other Side of Psychotherapy: Understanding Clients' Experiences and Contributions in Treatment* (American Psychological Association, 2022).

What makes the Derner School unique, according to J. Christopher Muran, PhD, the school's interim dean, is its emphasis on psychodynamic therapy. "We've been a leader in psychodynamic therapy since the 1950s," he said. "And over the past four decades, we've made a significant contribution to the psychotherapy integration movement, which involves combining techniques from a variety of therapeutic models. That's very unusual for a university."

Dr. Muran collaborated with Jacques Barber, PhD, dean of the Derner School, on a revised chapter on psychodynamic therapy in *Bergin and Garfield's Handbook of Psychotherapy and Behavior Change, 7th Edition* (Wiley, 2021), widely considered the essential reference volume for psychotherapy research.

"This is a significant tribute to Dr. Barber's work," Dr. Muran said, adding that Dr. Barber was recognized with the International Society for Psychotherapy Research Distinguished Research Career Award in 2014. "Being asked to author this chapter in the last two editions is an acknowledgment of his premier status in the field."

When it was originally written in 2013, the chapter served as an in-depth discussion of the efficacy of psychodynamic therapy, a psychoanalytic approach that

places an emphasis on the relationship between the analyst and patient. Drs. Barber and Muran, along with several of their students, conducted multiple meta-analyses of existing research on the efficacy of dynamic therapy for depression, anxiety disorders and personality disorders.

The newly revised chapter updates the research their team conducted a decade ago. "It includes three new meta-analyses demonstrating that psychodynamic therapy is indeed efficacious for these disorders," Dr. Muran said. "It also reviews the empirical literature on various factors related to treatment success and various change mechanisms, such as the therapeutic alliance."

According to Dr. Muran, recent work by other Derner School professors is also expanding the field's body of knowledge. He pointed particularly to Dr. Mendelsohn's book on Freud, which illustrates the potential application of Freud's ideas to issues psychotherapists face today. Using Freud's writing from 1895 to 1923 as a framework, Dr. Mendelsohn charts Freud's creation of psychotherapy as well as the development of theories that have influenced generations of clinicians—and aided their patients. "Before Freud, neurosis was considered an incurable illness or a defect in one's character," Dr. Mendelsohn said. "He showed us that it is not only understandable, but fixable."

Although many early-stage doctoral students have read about Freud, Dr. Mendelsohn noted, it's rare that they have delved into his writings. "They're often surprised that Freud was ahead of his contemporaries when it came to gender and sexuality; he wrote extensively about topics others considered taboo. The purpose of this book—of all my work, really—is to show that Freud wasn't just a revolutionary in his time. He still is today." ■



Robert Mendelsohn, PhD, professor of psychology, focuses on the therapeutic relationship. In addition to *Freudian Thought for the Contemporary Clinician*, he is also the author of *A Three-Factor Model of Couples Therapy*, published in 2017 by Lexington Books/Rowman & Littlefield.



Jacques Barber, PhD, dean of the Gordon F. Derner School of Psychology, is recognized internationally for his research into the process and outcomes of psychotherapies for depression, panic disorder, substance dependence and personality disorders.



Christopher Muran, PhD, is interim dean of the Gordon F. Derner School of Psychology and principal investigator, Mount Sinai Beth Israel Psychotherapy Research Program. He has published more than 160 papers and 10 books, often focusing on repair of ruptures in the therapeutic alliance.

2 Barber, Jacques P, and J. Christopher Muran, Kevin S McCarthy, et al. "Research on Dynamic Therapies." *Bergin and Garfield's Handbook of Psychotherapy and Behavior Change, 7th*, edited by Michael Barkham, Wolfgang Lutz, and Louis G. Castonguay. Wiley, 2021.



Alone on the COVID-19 Front Line

Shining a light on the struggles of vulnerable healthcare workers

Home health aides (HHAs) are among the unsung heroes of America's healthcare system. By assisting patients with countless daily tasks—such as bathing, cooking, grocery shopping and taking medications—they make it possible for the elderly to remain at home and part of their community. Yet despite providing an essential social service, these workers face low wages and high stress, a situation that became much more difficult during the COVID-19 pandemic.

These pandemic-related challenges are the subject of the latest paper from Zainab Osakwe '06, PhD, assistant professor of public health at Adelphi, who has written extensively about home health aides' experiences on the job, ranging from the dependency of their patients to the emerging use of telehealth services. For this latest project, conducted in partnership with former Adelphi professor Tonya Samuel, EdD, and colleagues from Long Island University and Columbia University, Dr. Osakwe interviewed 25 aides from

around the New York metropolitan area, 12 of whom primarily spoke Spanish. Dr. Osakwe and her team sought to understand HHAs' perspective on infection control and the obstacles associated with caring for the elderly at home during the pandemic. They shared their findings in "All Alone: A qualitative study of home health aides' experiences during the COVID-19 pandemic in New York," published in the *American Journal of Infection Control* on August 12, 2021.¹

¹Osakwe, Zainab T., and Jennel C. Osborne, Tonya Samuel, et al. "All Alone: A qualitative study of home health aides' experiences during the COVID-19 pandemic in New York." *American Journal of Infection Control*, vol. 49, iss. 11, 12 August 2021, pp. 1362-1368.

Home health aides paint a picture of acute struggle, often just to secure their own basic safety. They also report another problem: isolation.

Dr. Osakwe's interviewees paint a picture of acute struggle, often just to secure their own basic safety. "Early in the pandemic, HHAs struggled to get PPE the way many other people did," she said. "Later on, however, many HHAs reported having to draw on their own resources to buy protective products, such as gloves, for themselves. This, of course, exacerbated preexisting economic stresses that many HHAs had been experiencing."

In addition to concerns about safety and resources, the HHAs consistently reported another serious problem: isolation. Because HHAs work alone in patients' homes, separate from the rest of the healthcare team, they often had limited access to physical support and information about infection control, which cultivated an atmosphere of constant fear during the pandemic.

How each of the interviewees responded to these circumstances varied based on their proficiency in English. The English-speaking aides, Dr. Osakwe reported, focused on the need for additional safety training, but the Hispanic interviewees, many of whom have limited English proficiency, emphasized problems with the communication itself.

"For the Spanish-speaking participants, concerns were primarily linked to the limited communication with the English-

speaking healthcare team," she said. "This demographic profile represents a key segment of the home healthcare workforce, so their needs require urgent attention. Furthermore, as the aging population in the United States becomes more diverse, strategies to support Spanish-speaking HHAs will help in the provision of care and the promotion of equity."

Dr. Osakwe makes clear, however, that home health agencies did work very hard to keep their teams safe—and some found novel ways to do so. "Agencies put COVID-19 screening protocols in place," she explained, "and the home health agencies that participated in our study integrated daily screening protocols to the HHA cellphones. This was a very innovative approach to screening community-based personnel. We found that HHAs really appreciated being able to use their cellphones to screen for COVID-19 symptoms."

Now Dr. Osakwe is working to use her findings to enhance care plans and communication tools. Among other suggestions, she proposes that home health agencies improve communication with aides by offering a choice of preferred language. "Communicating with Spanish-speaking HHAs wouldn't just decrease feelings of isolation among a stressed workforce," she argued, "it could materially improve the quality of



Zainab Totah Osakwe '06, PhD, is an assistant professor of nursing and a nurse practitioner whose research focuses on the quality and outcomes of home-based healthcare provided to homebound older adults, particularly those living with dementia.

care by facilitating effective infection control practices."

But helping HHAs grasp important communications is just the beginning for Dr. Osakwe, who hopes to make sure HHAs are heard just as clearly in return. "As we develop these plans and tools, it's so important to integrate and amplify the voices of both English- and Spanish-speaking HHAs." ■



So What Should I Do Now?

An Adelphi novelist uses her retirement to probe the complications of money and boredom

For Martha Cooley, award-winning author, essayist, translator and professor emerita of English, retirement has been a fruitful subject of intellectual exploration. In 2021, Cooley left Adelphi after 15 years of teaching and moved to Castiglione del Terziere, Italy.

"It's really a dislocating of self," she said. "You're removing yourself from a professional life you've had for decades and, in my case, moving halfway around the world." As Cooley settles into retirement and what she calls its "possible ranges of significance,"

she's found herself as curious as she is uncertain. That tension has wound its way into her recent writing projects: a novel, *Buy Me Love*, and an essay, "On the Uses of Boredom: Philosophical, Scientific, Literary."

Buy Me Love, published by Red Hen Press in 2021,¹ is Cooley's third novel, following *The Archivist*, a national bestseller also published in a dozen foreign markets, and *Thirty-Three Swoons*. The book's protagonist is Ellen Portinari, a 52-year-old freelance editor living in Brooklyn who learns she's bought a winning \$100 million

lottery ticket. Ellen is less jubilant about the discovery than readers might expect. "I wasn't interested in writing about the material gains of a jackpot win," Cooley said. "I wanted to lay out questions that would activate Ellen's need to decide what matters to her. The ticket acts as a door opening to something that she felt was previously unavailable to her." Given 30 days to redeem the ticket, Ellen struggles to reckon with the implications of her big win. Her thoughts divert quickly to how the money might help her brother, a genius composer and alcoholic whose girlfriend died in a

¹ Cooley, Martha. *Buy Me Love*. Red Hen Press, 2021.



“You’re removing yourself from a professional life you’ve had for decades and, in my case, moving halfway around the world.”

—Martha Cooley

terrorist act overseas. She also becomes involved with a local man and his son, and her path crosses with that of a street artist named Blair, whose life operates on a similar axis of precarity. As the clock ticks, Ellen seeks to reconcile thrill, anxiety and ambivalence.

“The image that came to me early on,” Cooley said, “was a swing seat of happiness, constantly rocking back and forth. I was fixated on this idea of something utterly unexpected happening, a curveball that would rearrange Ellen’s understanding of herself and open up new possibilities.”

In “On the Uses of Boredom: Philosophical, Scientific, Literary,” which appeared on LitHub on January 13, 2021, Cooley writes of another swinging pendulum of experience. The essay opens with a years-old memory: slipping and falling off a slick stone ramp. While Cooley escaped with only cuts, bruises and a chipped tooth, the fall stayed with her both as a strange suspension of

time and as a memory of a near-brush with death. That “fleeting-yet-endless sensation” raised questions about the experience of boredom.

In her essay, Cooley situates her meditations on boredom alongside the writings of prominent thinkers, from Seneca to Jean-Paul Sartre, Søren Kierkegaard and David Foster Wallace. “Boredom is laced with dread,” Cooley writes, even though “our brains [also] need boredom, as it happens.” She recalled one creative writing class session at Adelphi, where she asked students to stare at an abstract painting of the Brooklyn Bridge for five minutes. The students confessed afterward that the exercise made them feel tense and uneasy, which Cooley saw as a common symptom of boredom, particularly during the COVID-19 pandemic.

“For those of us who had the luxury of staying home, we’ve had to reassess our notions of boredom. What does it mean when we’re bored or ‘doing

Martha Cooley is an author, essayist, translator and professor emerita of English. In addition to her three novels, her works include the memoir *Guesswork: A Reckoning With Loss* (Catapult, 2017) and the O. Henry Prize-winning short story “Mercedes Benz.”

nothing”? How does that intersect with our anxieties?” She pointed out that boredom also performs the critical duty of allowing our brains to file important mental paperwork.

“Across human cultures, there have always been spaces for resting, retreating, reconsolidating your identity,” Cooley noted. Just like Ellen in *Buy Me Love*, we can only outrun the basic questions of our existence for so long. Boredom alerts us to this fact. “You can try to tamp down boredom by consuming things and people and experiences,” she said, “but ultimately you’ll have to confront who you really are, what you really want and from where you’re deriving meaning.” ■



The Science of Healthy Zoo Habitats

A multidisciplinary team's research could inform the way zoos and other groups design new homes for wildlife

The past 50 years have been a time of profound change for U.S. zoos, as they began evolving from the menageries of old into hubs for conservation, science and education. This transformation gained momentum in the early 1970s with the passage of the Endangered Species Act and the introduction of accreditation standards by what is now the Association of Zoos and Aquariums. It continues today.



Many modern zoos are radically rethinking how they care for wildlife—an effort in which Natalia Prado, PhD, assistant professor of animal physiology at Adelphi, plays an integral role. Over the past 15 years, she and colleagues in the field have conducted exhaustive research on nearly every zoo elephant facility in the United States, resulting in guidance zoos can use to optimize the welfare of both herds and individual elephants.

Recently, Dr. Prado collaborated with researchers from the Oregon Zoo and the Smithsonian's National Zoo & Conservation Biology Institute on a four-year study of five Asian elephants during their move to a redesigned, expanded habitat. The findings were published as "Supporting Zoo Asian Elephant (*Elephas maximus*) Welfare and Herd Dynamics with a More Complex and Expanded Habitat," the cover story for the September 2021 issue of the scientific journal *Animals*.¹

According to Dr. Prado, the multidisciplinary team that worked on the study—comprising zoo experts, biologists, veterinarians and physiologists—made it unusually rich. "A study like this couldn't be possible with just one person working in isolation," she said. "It took a multitude of people to look at the issue and bring their own perspectives to it. That's what I really like about this field."

Dr. Prado and her fellow researchers carefully tracked the way elephants' behavior shifted as they transitioned to their new space, which was designed to focus on the species' physical, physiological, psychological and social needs. In an effort to encourage natural foraging behavior, the zoo placed feeding stations throughout the habitat, including feeders programmed to release food at unpredictable intervals, and some that required the elephants to reach overhead or bend down. "Disbursement of food with less temporal and spatial predictability increased foraging opportunities, which is important for psychological well-being of this species," the authors observed.

They also used GPS technology to measure the elephants' activity in the new habitat, revealing an average walking distance of close to 10 miles per day—higher even than that of some wild elephants. Smithsonian scientists studying wild elephants in Myanmar found the animals to walk fewer than four miles per day.

When it came time to evaluate the elephants' overall well-being, Dr. Prado drew on research from 2012, when she participated in a larger-scale study of about 200 elephants across the United States to identify



Natalia Prado, PhD, assistant professor of animal physiology, has conducted exhaustive research on nearly every zoo elephant facility in the United States, resulting in guidance zoos can use to optimize the welfare of both herds and individual elephants.

biomarkers—such as specific hormones—that can be indicators of an elephant's psychological state.

Some of the Oregon Zoo elephants showed little outward reaction to the changes in their environment, although researchers noted short-term increases in the "stress hormone" cortisol shortly after the transition. By contrast, other elephants showed changes in their behavior but not their hormone levels. The diversity in reactions was telling. "Elephants are individuals with their own temperaments, and their own place in the social hierarchy," Dr. Prado said. "One might be excited to explore the new space right away, while another might take months to walk through a new door."

This research will be invaluable to other zoos that are considering updating their facilities. "It tells us a lot about what is important when caring for a herd with so many different personalities, ages and reproductive statuses," Dr. Prado noted. "We can take the anecdotal information we get from the keepers and make it more broadly applicable. Other zoos that are thinking about undergoing similar changes will now have guidelines for how they might approach it and what kind of responses they can expect from the animals."

Dr. Prado believes zoos can remain a vital tool in conserving elephants and other wildlife around the world. "Zoos allow us to learn about animals in ways we aren't able to do in the wild: up close and over a long period of time," she said. These lessons could have growing relevance for conservation efforts in range countries, as wildlife increasingly comes under varying levels of human care. ■

1 Glaeser, Sharon S., and David Shepherdson, Karen Lewis, Natalia Prado, et al. "Supporting Zoo Asian Elephant (*Elephas maximus*) Welfare and Herd Dynamics with a More Complex and Expanded Habitat." *Animals*, vol. 11, iss. 9, 31 August 2021.



“Blockchain uses all kinds of cryptography to prove that messages have not been tampered with. It is 100 percent secure.”



Kees Leune, PhD, assistant professor of mathematics and computer science and information security officer, conducts research grounded in conceptual modeling and knowledge representation, especially as applied to defensive cybersecurity.

Could Blockchain Revolutionize Voting?

A new dual-blockchain architecture promises to enhance election transparency, security and equity

For a democracy to function, public faith in elections is critical. Voters must believe that all votes are counted fairly, yielding a legitimate victor. But the aftermath of the 2020 presidential election shows that many Americans question the security of our voting systems.

Kees Leune, PhD, assistant professor of mathematics and computer science at Adelphi, believes that doubts about election security can be attributed in part to the limitations of commonly used voting machines. “When you put things in computers, transparency is harder because people don’t understand—or trust—computers,” he said.

To address this skepticism, Dr. Leune partnered with Honors College alumnus Jai Punjwani ’18, now a software engineer at Bloomberg, to develop new technology that could make electronic voting both more transparent and more secure. The secret? Blockchain technology. The two shared their research in the article “Enhancing Electronic Voting With A Dual-Blockchain Architecture,” which appeared in the cryptocurrency journal *Ledger* in February 2021.¹

According to the authors, blockchain is ideal for electronic voting systems because it offers security without a central authority. “You can think of blockchain as a large ledger, a book of transactions that cannot be manipulated,” Dr. Leune explained.

“Once something is written down on a blockchain, any tampering with that data will fail, which makes it an immutable electronic ledger. Blockchain uses all kinds of cryptography to prove that messages have not been tampered with. It is 100 percent secure.”

Because many skeptics of election integrity are suspicious of the organizations and institutions that run and verify elections, blockchain’s second improvement on existing technology is crucial: Blockchain does not have to be centrally managed. “There is no central agency that checks all the data on the blockchain,” Dr. Leune said. “In our system, the process of validating the results can be made public and shared with independent auditors.” In theory, then, each citizen could individually verify the results of the election. The system also offers independent auditors the ability to validate results without compromising voter secrecy, accomplished through the use of two discrete blockchain ledgers. “One blockchain records the fact that you have voted. The second blockchain records the vote itself. Those are kept separate, so it would be impossible to see who voted for whom.”


Although independent auditing can validate the results after the election has concluded, Dr. Leune and Punjwani’s “consensus algorithm” prevents fraud from occurring in the first place. “The consensus algorithm is the process

by which all the machines involved determine that each part of the voting process is done properly,” Dr. Leune said. “When I cast a ballot, the consensus algorithm will make sure I have filled it out correctly. For instance, did I select too many candidates? Only if all criteria are met will the algorithm allow a vote to be recorded on the second blockchain. And if I try to vote a second time in a different location, the consensus algorithm will see the entry on the first blockchain that says I have already voted.”

As promising as a blockchain-based voting system appears, however, Dr. Leune cautioned that no technological innovation can serve as a panacea. “Any system exclusively on an electronic record is likely to fail,” he stressed. “There should always be a paper trail somewhere so that results can be verified.” Even so, he hopes to improve upon his prototype with further research and innovations, in part by revisiting its assumptions.

“Jai and I assumed that we can always unambiguously identify the person who is trying to vote, but obviously that’s not always the case at polling places,” he said. “We also assumed this technology could only be used in machines at polling places, but we’d like to be able to improve accessibility. Someday, perhaps anyone with a computer will be able to vote anywhere in the world.” ■

¹ Leune, Kees, and Jai Punjwani. “Enhancing Electronic Voting With A Dual-Blockchain Architecture.” *Ledger*, vol. 6, 10 February 2021.



How Can We Protect At-Risk LGBTQ+ Youth?

Adelphi social work professor advocates for better practices and policies after shocking statistics on suicide come to light

In 2019, Geoffrey Ream, PhD, professor of social work at Adelphi, published “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), which explores variability in circumstances around LGBTQ+ youth suicides by identity group. He drew on years of data released by the CDC’s National Violent Death Reporting System (NVDRS), which revealed the sobering reality that 24 percent of 12- to 14-year-

olds who died by suicide nationwide were LGBTQ+.

Since then, Dr. Ream and his colleague Andrew Peters, director of Adelphi’s Manhattan Programs for the School of Social Work, have worked to translate these findings into social work practice and policy recommendations. The resulting article, “Working With Suicidal and Homeless LGBTQ+ Youth in the Context of Family Rejection,” appeared in the *Journal of Health Service Psychology* in February 2021.¹

Family rejection—which includes expulsion, violence, name-calling, nonphysical punishment and ignoring—is a particularly acute risk factor for LGBTQ+ youth suicide. When working with difficult families, Dr. Ream and Peters write, “clinicians should probe for what parents know about LGBTQ+ people, correct prejudices and misinformation, and contextualize ... often they will need to be flexible in order to meet the family ‘where they are.’” Some families will be open to making small changes, such as agreeing to refer to transgender youth

¹ Ream, G., and Peters, A. “Working With Suicidal and Homeless LGBTQ+ Youth in the Context of Family Rejection.” *Journal of Health Service Psychology*, vol. 47, February 2021, pp. 41-50.

A call for more resources— and new support systems strong enough to pass from one generation to the next.

by their chosen name, but others may remain intransigent. In those cases, Peters notes, a social worker can pursue other avenues.

“Children really need supportive, affirming adults in their lives who genuinely care about them,” Peters said. “A social worker or mental health counselor can certainly be one of those people, and they can also help the youth make other important connections: an older sibling, aunt or uncle, teacher or coach. LGBTQ+ youth community centers also offer opportunities for mentoring, recreation and peer support.”

Even so, family rejection can easily lead to homelessness. Peters recalled, “I’ve had clients whose families changed the locks on their homes, leaving their son or daughter to fend for themselves. Some teens end up in homeless shelters and/or foster care. Often, there aren’t realistic options for family unification.”

Once they become homeless, LGBTQ+ youth are at the mercy of what Dr. Ream and Peters call a “patchwork quilt of services.” LGBTQ+-friendly clinicians, the child welfare system and transitional housing programs, already scarce commodities, become much harder to access over the age of 18. “Any transition, including the eventual one to

independent living, also comes with a risk that they will lose access to the case managers and clinicians who knew their situation,” the authors write. “Disruption in clinical services is risky for someone coping with suicidality.”

According to Peters, disruption can be mitigated simply by increasing resources. “We need more beds in youth homeless shelters and more transitional living programs (those for young people who need longer-term housing),” he said. “We need more case managers to help young people navigate the complex network of public and private community-based organizations that provide many terrific services, from basic needs like food to GED and college portal programs.” Ultimately, however, the most effective short-term solution is the simplest, Dr. Ream explains. “A homeless young person is often best served by being able to go back home, and a suicidal young person is often best served by the family being engaged in trying to get them help.”

While Dr. Ream readily concedes that the current system is far from ideal, he does have one pragmatic policy suggestion: “Take the services and infrastructures we already have and make sure they have the resources they need.” The focus, he believes, should be on creating support systems that are strong enough to pass



Geoffrey Ream, PhD, professor of social work, researches family rejection, homelessness and suicide among lesbian, gay, bisexual and transgender youth and advocates for long-term solution building in social services.

from one generation to the next. “It’s possible to get a lot of attention to a problem for a time or a season,” he said, “but it’s hard to keep the public’s attention on a problem long enough to meaningfully address it.” The head-turning NVDRS data, he maintains, brings us one step closer toward preserving that attention. ■

The Silent Revolution in International Trade

Behind the unsung innovations driving global commerce



If you see fruit or shirts for sale at your local big-box store, there's a good chance they've been imported. Shoppers' interest in foreign goods is nothing new in the history of global trade, but there is one relatively recent development at play: Many imported goods are now cheaper than the domestic alternatives.

The economic system that enables this improbable competitive advantage is astonishingly complex. But underpinning the international trade of cheap goods is one simple invention: the shipping container. So argues Juan Jaramillo, PhD, associate professor of decision sciences and marketing at Adelphi, who co-edited the essay collection *The Container: A Box That Revolutionized the Transport of Goods* (Sello Editorial Universidad de Medellín)¹ alongside colleagues in his native Colombia. "Without the shipping container, global commerce would not exist at the levels we see today," he said.

Until the second half of the 20th century, shipping methods and container sizes varied based on national and regional preferences. In those days, if a Chilean

exporter wanted to sell apples in America, the container it shipped their produce in would very likely have been either too big or too small for American trucks or trains. As a result, they would have had to pay—and wait—for their shipment to be unloaded at an American dock before being promptly reloaded into an American shipping container. This extra work wouldn't just make the apples prohibitively expensive; it likely would have led to their spoilage long before reaching shelves.

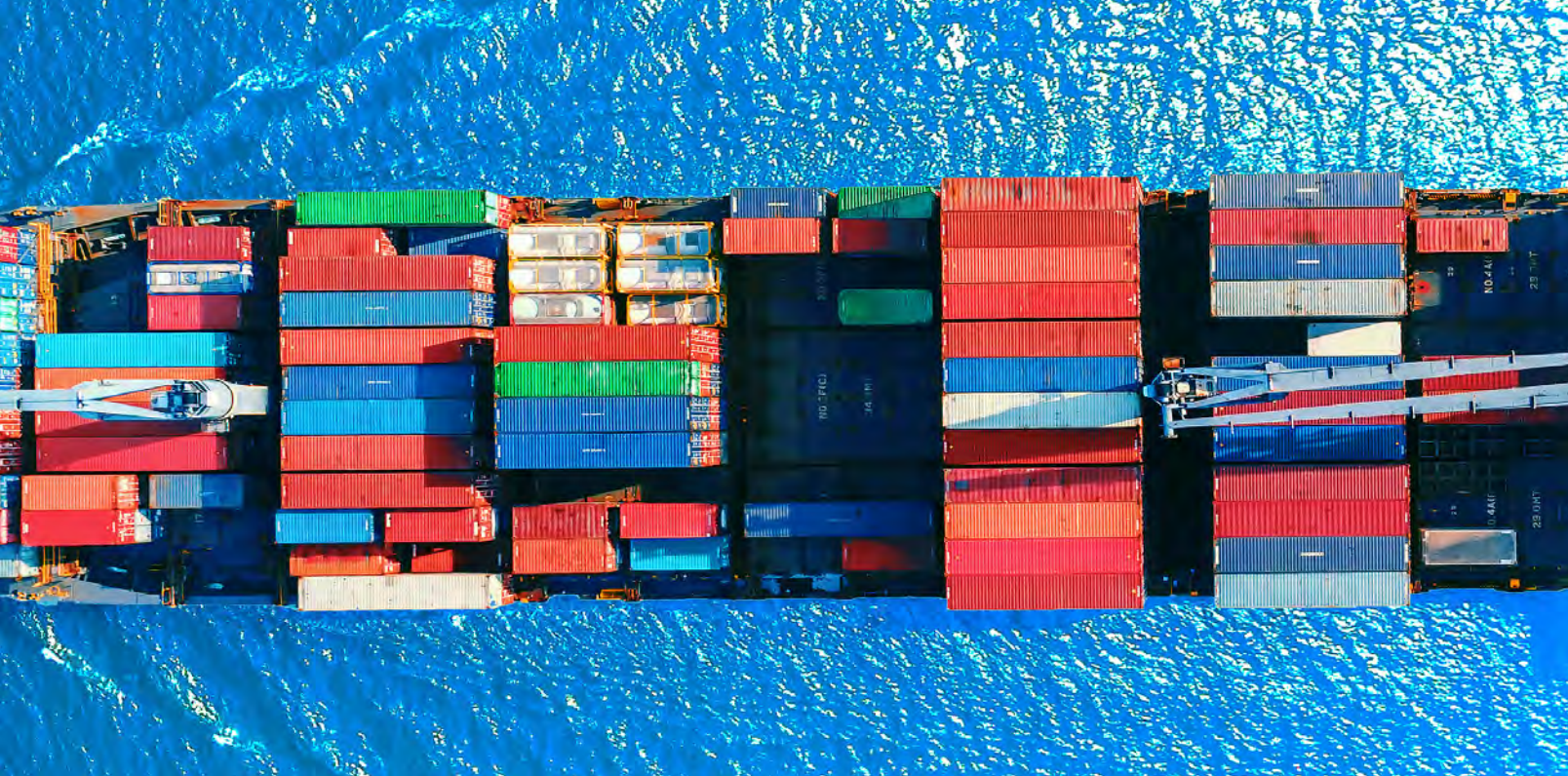
In 1956, Malcolm McLean, a shipowner, made his business more efficient by standardizing a container for international trade: the intermodal shipping container. "Intermodal transportation makes it possible to move from one transportation mode to another without repacking the contents," Dr. Jaramillo explained. "Since containers are standard, any container fits in any truck, railroad car or ship. The modularity speeds up the process and lowers the cost of moving goods globally."

As the advantage of standardization became clear, more exporters around

the world adopted intermodal shipping containers until it became difficult to do business without them. Today, the International Organization for Standardization (ISO) has set official specifications for every container in use: "... built with rust-retardant Corten steel, approximately 8 feet 6 inches tall, almost 8 feet wide, and either 20 or 40 feet long," according to Dr. Jaramillo. "They must have standard casting on their corners so that they can be secured by standard twist locks and fit in any transportation mode." Because these qualities make it possible to stack containers in columns 10 units high, a single large ship can move more than 8,000 containers at once. With ships capable of moving so much merchandise without the hassle of reloading, the price of imported goods has plummeted.

As Dr. Jaramillo continues to stress the value of international collaboration in his classroom at Adelphi, he is now focusing his attention on what he believes will be the next revolution in international trade: machine learning's transformation of business analytics. In his forthcoming book—another cross-

¹ Ceballos, Silvia, and Erica Guisao, Juan Jaramillo, and Santiago Londoño. *El contenedor: una caja que revolucionó el transporte de mercancía*. Sello Editorial Universidad de Medellín, 2020



With ships capable of moving so much merchandise without the hassle of reloading, the price of imported goods has plummeted.

border project, this time with colleagues at Woxsen University in India—*Machine Learning for Business Analytics: Real-Time Data Analysis for Decision-Making* (Taylor & Francis, 2022),² Dr. Jaramillo explores the emerging power of data in shaping business practices. “Machine learning is the application of algorithms with learning capabilities to identify existing patterns in data, which facilitates the decision-making process,” he said. “Businesses are increasingly implementing machine learning applications to take advantage of collected data. Through analytics, they can understand their customers better and create more personalized services. They can also better understand their own personnel, which will allow them to design better career paths.”

Because machine learning is poised to become fully integrated into global business operations, yielding a different economic experience for each person, Dr. Jaramillo ended on a note of caution.

“We are reaching the point at which algorithms make business decisions, not people,” he said. “It is crucial that

leaders ensure algorithms only make fair decisions. Given the scale of machine learning’s application, any mistake made by an algorithm will have repercussions that affect many people.” ■



Juan R. Jaramillo, PhD, associate professor of decision sciences and marketing, conducts research into the ability of artificial intelligence and machine learning to improve the efficiency and effectiveness of business.

² Hemachandran K, and Sayantan Khanra, Raul V. Rodriguez, Juan Jaramillo, editors. *Machine Learning for Business Analytics: Real-Time Data Analysis for Decision-Making*. Taylor & Francis, 2022.



Meredith Whitley, PhD, associate professor of health and sport sciences, conducts research into the impact of sport and sport for development (SfD) programs on the lives of youth from under-resourced communities.

A Better Future for Young Athletes

Proposed structural changes would help youth sports programs meet participants' developmental needs

Meredith Whitley, PhD, associate professor of health and sport sciences at Adelphi University, has spent years researching sport for development (SfD) programs designed to help young people in under-resourced communities. Yet, over the past decade, as she observes in one recent paper, the youth sport model has taken a professionalized turn, emphasizing skill and performance over broader developmental benefits. Dr. Whitley believes it's time for the field to shift its focus back toward young people's holistic well-being. In a string of recent papers and presentations, she outlines steps programs can take to ensure they are promoting inclusion and belonging, fostering community connections, and prioritizing youths' mental, emotional and social health.

In "Narratives of trauma and resilience from Street Soccer players" (*Qualitative Research in Sport, Exercise and Health*, February 8, 2021)¹, Dr. Whitley and Adelphi graduate student Sara McLaughlin

1 Whitley, Meredith A., and Jordan A. Donnelly, Daryl T. Cowan, and Sara McLaughlin. "Narratives of trauma and resilience from Street Soccer players." *Qualitative Research in Sport, Exercise and Health*, vol. 14, iss. 1, 08 Feb 2021, pp. 101-118.

studied eight young athletes enrolled in the group Street Soccer USA. Researchers from the University of the West of Scotland tracked eight others from Street Soccer Scotland. The players all belonged to populations (such as homeless, immigrant and refugee) with high rates of trauma exposure.

Dr. Whitley and her colleagues followed the players' participation in the Homeless World Cup, an international tournament dedicated to raising awareness about homelessness. Because the programs embraced trauma-informed practices that promote resilience and healing—such as providing a stable, inclusive environment and encouraging emotional self-regulation—many players showed growth in positively adapting to their circumstances, the authors found, with some even “able to cultivate and act on their dreams for the future.” McLaughlin, now a manager at Laureus Sport for Good Foundation USA, noted, “This paper has the potential to guide direct-service programs to better support the needs of their participants.”

While serving as a member of the President's Council on Sports, Fitness & Nutrition Science Board, Dr. Whitley was lead author on “Reenvisioning

Postpandemic Youth Sport to Meet Young People's Mental, Emotional, and Social Needs” (*Translational Journal of the American College of Sports Medicine*, Fall 2021)² and “Reimagining the Youth Sport System Across the United States” (*Journal of Physical Education, Recreation & Dance*, October 25, 2021).³ Both articles offer recommendations for correcting inequities exacerbated by the COVID-19 pandemic, with a goal of reestablishing young people “as the central focus, beneficiary, and authority within the integrated youth sport system.”

One key recommendation is a pivot to “systems thinking,” a framework that recognizes the influence of multiple interlocking social and political systems on participants' well-being. This approach promises to keep programs “locally driven, contextually relevant and culturally informed, with youth fully engaged in the design and delivery of their own youth sport experiences.” Empowering youth to take control of their sports programs, the authors write, “supports a sense of autonomy (i.e., the ability to make decisions for oneself), which then contributes to positive identity development, self-advocacy, and agency.”

Dr. Whitley took cues from economists and entrepreneurs to propose another round of organizational solutions. In “Using Behavioral Economics to Promote Positive Youth Development through Sport” (*Journal of Sport Psychology in Action*, February 11, 2021),⁴ she addresses a widespread problem in the SfD field: Although many youth sports programs actively teach skills like leadership in an effort to promote behavioral growth, research has shown that these outcomes rarely last. The article lays out nine interconnected tools, commonly used in behavioral economics, that can be adopted by sports programs to drive long-term positive development.

In “Place-Based Sport for Development Accelerators: A Viable Route to Sustainable Programming?” (*Managing Sport and Leisure*, September 29, 2020),⁵ Dr. Whitley critiques the top-down model used by many nonprofit youth sports organizations, in which programs are run by people with little or no connection to the community. Instead, she suggests looking outside of the SfD field for inspiration.

“In the tech world, incubators and accelerators support new ideas,” she said. “Why can't we do that for communities? That way people could develop new ideas and new programs and get the resources they need, making programs much more likely to remain effective and sustainable in the long term.” The more support community leaders receive, she writes, the better prepared they will be to “meaningfully address local issues and enact transformational social change.” ■

2 Whitley, Meredith A., and Alan L. Smith, Travis E. Dorsch, et al. “Reenvisioning Postpandemic Youth Sport to Meet Young People's Mental, Emotional, and Social Needs.” *Translational Journal of the American College of Sports Medicine*, vol. 6, iss. 4, Fall 2021, pp. 1-7.

3 Whitley, Meredith A., and Alan L. Smith, Travis E. Dorsch, et al. “Reimagining the Youth Sport System Across the United States.” *Journal of Physical Education, Recreation & Dance*, vol. 92, iss. 8, 2021, pp. 6-14.

4 Whitley, Meredith A. “Using Behavioral Economics to Promote Positive Youth Development through Sport.” *Journal of Sport Psychology in Action*, published online 11 February 2021.

5 Whitley, Meredith A., and Jon Welty Peachy. “Place-Based Sport for Development Accelerators: A Viable Route to Sustainable Programming?” *Managing Sport and Leisure*, published online 29 September 2020.



Research Day 2022



The projects came from every academic corner of the University, reflecting the strength of Adelphi's programs in its Core Four—arts and humanities, STEM and social sciences, the business and education professions, and health and wellness.

Adelphi's annual **Scholarship and Creative Works Conference**, better known as Research Day, returned to campus for the first time in two years on April 26. More than 280 undergraduate and graduate students presented their projects, ranging from research in every academic discipline to game development exhibitions,

artwork, and musical and dance performances. For the first time, the presentations were organized into themes, including health, community and global issues, social justice, sustainability, and technology. The idea was to encourage interdisciplinary exposure and bring scholars from different fields together.

Research Day is more than a showcase for student work. It's an opportunity for students to experience what it's like to participate in a professional research conference. Presenters must go through the same application process as they would at a professional conference,



(L) Keynote speaker Raven Baxter, PhD, a microbiologist and science educator working to amplify the voices of people of color in STEM. (C) Intellectual give and take is a key feature of Research Day. (R) More than 280 students presented projects this year.

developing an abstract and title for their work with the help of their advisers and submitting their proposal to faculty reviewers.

It's a day with many highlights, including presentations this year on disparities in pregnancy outcomes among Caribbean populations in Brooklyn, cryptocurrency and cybersecurity behavior, alternatives to opioids for pain management, growth kinetics of a single bacterium to predict antibiotic resistance, and even the frequencies of the tenor bells of Westminster Abbey. The event concluded with a keynote address by Raven Baxter, PhD,

a microbiologist and science educator who hosts a website and video series that amplify the voices of people of color in STEM.

Future Research Days should be even more robust with the opening of an **Office of Undergraduate Research and Creative Works** in Fall 2022. This office will work to facilitate undergraduate research opportunities and assist faculty and mentors in promoting in-depth inquiry and creative works. Led by its inaugural director, associate professor of biology Eugenia Villa-Cuesta, PhD, the office will be sustained by the Libraries. ■



THE GREAT PANDEMIC EDUCATION EXPERIMENT

ADELPHI FACULTY DEVELOP PEDAGOGICAL SOLUTIONS
TO MEET THE CHALLENGES OF COVID-19

When COVID-19 shut down classrooms in March 2020, schools and universities were forced to adapt to online education on the fly. No road map for this transition existed; instead, each educator had to employ a trial-and-error approach, working to find the practices that best served their students and curricula.

At Adelphi, faculty advanced the University's long-standing commitment to research and public service by blazing new trails in remote teaching and learning. Across departments, schools and fields, they turned unprecedented challenges into opportunities for innovation, devising novel teaching strategies, analyzing their results and sharing their findings with the academic community. Here is what they discovered.

Living history journals inspire communal healing

Roni Berger, PhD, professor in Adelphi's School of Social Work, was in the middle of teaching a doctoral course when the pandemic exploded. "I realized this was an ideal time to teach qualitative research, which is all about capturing people's lived experiences," she recalled.

Dr. Berger invited her students to keep regular, reflective journals—a common method of qualitative inquiry—for the rest of the semester. The students shared their journals with one another and performed a content analysis, which Dr. Berger published in collaboration with Kari Tabag, MSW '97, adjunct professor and doctoral student of social work, and Alissa Mallow, MSW '83, DSW '00, assistant director of field education in the School of Social Work at that time, as well as doctoral students Chireau Toree White, Cheryl Fiore, Adam Schachar and Estee Hirsch, as "Teaching and Learning in a Time of Corona: A Social Work Experience," originally published

in *Clinical Social Work Journal* on April 3, 2021.¹

Shared experiences emerged in the journals: feelings of isolation, health stress, worries about family and screen fatigue—all consistent symptoms of exposure to the same collective trauma. Yet, the authors reported, the entries showed that students were "moving from an intense experience to more acceptance of a 'new normal' and, in some cases, to manifesting resilience."

In their paper, Dr. Berger and her co-authors argued that students who receive peer support will be better positioned to understand, process and validate their own emotional reactions. Tabag, who participated in the journal-sharing process, agrees. "We didn't feel so isolated after reading about each others' experiences," she said.

Adapting social work courses to reflect the profession's principles

Dr. Berger partnered with Marilyn Paul, MSW '95, PhD '07, clinical associate professor of social work at Adelphi, to examine remote social work education from another angle.

In their efforts to create online courses, the pair found that the tools and technologies available tended to impose the kind of pedagogical rigidity they had always rejected. "For example, the external technologist helping us bring our courses online wanted us to grade everything the students did and follow a 'cookbook' formula," Dr. Berger explained.

She and Dr. Paul worked with the technologist to arrive at a compromise: a feature in the online teaching software that allows social work instructors to personalize courses around a prescribed template. In "Pedagogy vs. Technology:

Challenges in Developing Online Courses in Social Work Education" (*Journal of Teaching Social Work*, June 22, 2021),² they outlined several suggestions for more effective collaboration between instructors and technologists. "Courses should be developed in a manner that allows easy and constant revisions," they concluded, "and technology trainers should instruct faculty on the use of software and platforms."

Virtual simulations prepare nursing students for the age of telehealth

In early 2020, Marissa Abram '08, PhD '17, assistant professor in the College of Nursing and Public Health, had been planning to conduct a classroom simulation that would teach her students to care for psychiatric patients with comorbidities. While the pandemic meant her class couldn't simulate the experience in person, remote learning presented an unexpected opportunity to simulate telehealth.

Dr. Abram collaborated with College of Nursing and Public Health colleagues Adrial Lobelo, DNP, clinical assistant professor, and Maryann Forbes, PhD '99, associate dean for academic affairs, as well as MS in Nursing Education alumna Geralyn Caliendo '84, MS '20, and Vincent Guilamo-Ramos, dean of the Duke University School of Nursing, on a pilot study that became "Telehealth Simulation of Psychiatric and Chronic Disease Comorbidity: Response to the COVID-19 National Epidemic" (*Clinical Simulation in Nursing*, April 8, 2021).³

"In this simulation, we had the patient decompensate—that is, become suicidal—so the student had to come up with a crisis intervention over telehealth," Dr. Abram explained. "Students build confidence when they know they can't hurt anyone in a simulation, so it creates

1 Berger, Roni, and A. Mallow, K. Tabag, et al. "Teaching and Learning in a Time of Corona: A Social Work Experience." *Clinical Social Work Journal*, vol. 50, 2022, pp. 43-54.

2 Berger, Roni, and Marilyn S. Paul. "Pedagogy vs. Technology: Challenges in Developing Online Courses in Social Work Education." *Journal of Teaching in Social Work*, vol. 41, iss. 3, 22 June 2021, pp. 275-289.

3 Abram, Marissa D., and Vincent Guilamo-Ramos, Adrial Lobelo, Maryann Forbes, and Geralyn Caliendo. "Telehealth Simulation of Psychiatric and Chronic Disease Comorbidity: Response to the COVID-19 National Epidemic." *Clinical Simulation in Nursing*, vol. 54, May 2021, pp. 86-96.



Roni Berger, PhD, professor in the School of Social Work, is a licensed clinical social worker whose research focuses on trauma and post-traumatic growth in a cross-cultural context as well as evidence-based practice.



Marissa Abram '08, PhD '17, assistant professor of nursing and public health, is a psychiatric mental health nurse practitioner. Her research focuses on substance abuse disorders.



Melissa Randazzo, PhD, assistant professor of communication sciences and disorders, is director of Adelphi's Neurocognition of Communication Disorders Lab.



Kevin Mercier, EdD, associate professor of health and sport sciences, focuses his research on physical education and student attitudes toward the subject.



Reem Khamis, PhD, professor of communication sciences and disorders, focuses her research on language development, processing and clinical services in specific sociolinguistic situations.

a psychologically safe experience for them to improve their skills."

Afterward, students completed a survey about their perspectives on delivering effective care via telehealth. According to the authors, most "expressed increased openness to, interest in, and confidence in using telemedicine for the management of psychiatric patients." With healthcare "now and for the foreseeable future being delivered via telehealth mechanisms," they wrote, "our study shows that telemedicine simulations can improve nursing students' comfort with and future use of telemedicine for treating psychiatric patients."

Project-based learning promises to enhance long-term student engagement

Like Dr. Abram, Assistant Professor Melissa Randazzo, PhD, and professor Reem Khamis, PhD, both of Adelphi's communication sciences and disorders department, were curious about the new possibilities afforded by remote learning—particularly the relationship between different online pedagogies and student engagement. Their study was published as "Project-Based Learning and Traditional Online Teaching of Research Methods During COVID-19: An Investigation of Research Self-Efficacy and Student Satisfaction" (*Frontiers in Education*, May 28, 2021).⁴

The pair compared two asynchronous graduate courses designed to teach the application of evidence-based practices in the health professions. In the first course, students learned via traditional methods: slide-based lectures, written discussion forums and a final presentation. In the second course, they generated their own

protocols, conducted experiments and analyzed data.

Drs. Khamis and Randazzo found that the second, project-based class demonstrated higher engagement with the research literature and course content. "Those students were more engaged and now are more likely to pursue other research opportunities," Dr. Randazzo noted. However, she and Dr. Khamis also discovered that prerecorded lectures "provided an added benefit in research self-efficacy as a measure of confidence." "As instructors transition to online teaching or revise current courses in the post-COVID instructional landscape," they wrote, a combination of both methodologies can be successfully applied to advance classroom goals.

A structural framework for remote physical education

According to Kevin Mercier, EdD, associate professor of health and sport sciences, physical education (PE) teachers have historically received less support than their colleagues in other fields. When the pandemic began to erode that support even further, he decided to research its effect on PE instruction and student outcomes.

In collaboration with colleagues from universities across the country, Dr. Mercier surveyed thousands of PE teachers nationwide about their experiences. Their findings were published as "Physical Education Teachers' Experiences With Remote Instruction During the Initial Phase of the COVID-19 Pandemic" (*Journal of Teaching in Physical Education*, March 18, 2021).⁵ "It became clear that teachers weren't prepared to teach in a new modality," Dr.

continued on page 43

4 Randazzo, Melissa, and Ryan Priefer, and Reem Khamis-Dakwar. "Project-Based Learning and Traditional Online Teaching of Research Methods During COVID-19: An Investigation of Research Self-Efficacy and Student Satisfaction." *Frontiers in Education*, vol. 6, article 662850, May 2021.

5 Mercier, Kevin, and Erin Centeio, Alex Garn, et al. "Physical Education Teachers' Experiences With Remote Instruction During the Initial Phase of the COVID-19 Pandemic." *Journal of Teaching in Physical Education*, vol. 40, iss. 4, 21 June 2021, pp. 337-342.

Making Research Central to Undergraduate Education

A study outlines ways to encourage student inquiry

A strong undergraduate research culture offers many benefits, from building community and advancing faculty research to providing students with a competitive advantage in graduate school or the job market. As part of Adelphi's personalized approach to learning, the University is committed to offering undergraduate students a range of opportunities to conduct research alongside distinguished faculty, culminating in the annual Scholarship and Creative Works Conference.

Dana Battaglia, PhD, associate professor of communication sciences and disorders, shares that commitment. "I've always been passionate about engaging students in research," she said. But while participating in Adelphi's Viret Family Faculty Leadership Fellowship in 2018, a project-based program designed to help faculty hone their leadership skills, she noticed gaps in the University's ability to facilitate structured research opportunities. "Over time, I realized that there were no explicit communications in place about the opportunities available to Adelphi students," she explained. "The goal of my leadership project was to see if, and how, other departments were engaging students in research."

In collaboration with colleague Patrick R. Walden, PhD, of St. John's University, Dr. Battaglia published the results of her project as "Undergraduate Research Programs: Challenges and Opportunities" (*Perspectives on Undergraduate Research and Mentoring*, 2020).¹

After interviewing campus leaders about their departments' undergraduate research process, Dr. Battaglia organized her data into two overarching themes: strengths (scholarship, mentorship,

community building, competitiveness of students postgraduation) and obstacles (department-wide process, faculty obligation, scale of program, resources).

One barrier repeatedly cropped up: the absence of a University-wide undergraduate research office. This decentralization meant that students were being exposed to research "at different levels of depth and breadth," according to Dr. Battaglia. Some students undertook honors thesis projects and major-specific research tracks, while others assisted faculty with a single, isolated element of research like data organization. Across the board, students were struggling to obtain funding from their departments. "Accessing resources can be both confusing and exhausting, and deter good students from conducting great research," she noted.

Armed with these insights, Dr. Battaglia presented a series of recommendations to Adelphi's Executive Leadership. In order to maximize access, she suggested, students should be introduced to research options as early as first-year welcome events. Other ideas included contracts between students and faculty mentors to delineate expectations, a new mentorship scheme that would gradually shift the burden of mentorship from faculty to senior students, regular departmental meetings for students and faculty to celebrate their achievements, and increased funding and financial compensation for mentors. These best practices, the article notes, are vital for "developing an undergraduate research experience that is accessible, equitable and productive for both students and faculty ... [resulting in] a potentially transformative experience for all stakeholders."



Dana Battaglia, PhD, associate professor of communication sciences and disorders, focuses her research on Scholarship of Teaching and Learning (SoTL) as well as language and vocabulary development for people on the autism spectrum.

These best practices, the article notes, are vital for "developing an undergraduate research experience that is accessible, equitable and productive for both students and faculty."

—Dana Battaglia, PhD

Now Dr. Battaglia's work is bearing fruit. Adelphi's first Office of Undergraduate Research and Creative Works is set to open in Fall 2022, which she calls a "wonderful advancement" for the University. She hopes her project will serve as a model for other universities looking for a way to enhance their own research culture. ■

1 Battaglia, Dana, and Patrick R. Walden, "Undergraduate Research Programs: Challenges and Opportunities." *Perspectives on Undergraduate Research and Mentoring*, iss. 9.1, 2020.



It's Time to Talk About Race in Speech Pathology

One Adelphi professor's
fight to bring change to
her field

The American Speech-Language-Hearing Association (ASHA) has one core value: Effective communication with others is a human right. To secure that right for all Americans, the organization offers material support to speech-language pathologists, audiologists and the thousands of other professionals who work to diagnose and treat disorders that hinder communication. Yet, according to Reem Khamis, PhD, professor of communication sciences and disorders at Adelphi, ASHA's ideas about what behaviors count as disordered reflect not a commitment to human rights, but to our country's history of exclusion.

Prejudiced notions of disorder, Dr. Khamis argues, are leading to the improper care in speech, language and hearing services (SLHS). "As a field, we are overdiagnosing and underdiagnosing specific BIPOC groups," she said, referring to Black, Indigenous and People of Color. "Children who speak African American English are overdiagnosed for language impairment because clinicians have limited knowledge of that linguistic system, and the norms incorporated into our standardized tests are based on the expectations of Standard English, which is really white English. Similarly, there is a tendency to underdiagnose Spanish-speaking children due to the limited knowledge of second-language acquisition."

To examine the causes and effects of these and other discriminatory practices, Dr. Khamis collaborated with colleagues around the country, forming the Speech, Language and Hearing Scientists Equity Action Collection (EAC), to produce "Making Race Visible in the Speech, Language, and Hearing Sciences: A Critical Discourse Analysis" (*American Journal of Speech-Language Pathology*, March 2022).¹ The paper explores how two key professional standards documents—the Standards for Certification and the Essential Functions rubric—contribute to the discursive

construction of the ideal speech-language pathologist and audiologist.

"We believed that critical discourse analysis was the best method of addressing our social justice concerns," she said. "Through an examination of what is specifically written and what is not written, we can learn about the underlying subtle perspectives, attitudes, values and ideologies related to ethnic and racial inequities in our discipline."

The team's conclusions were sobering: "The main finding of the study is that race and racism were excluded from the written document in ways consistent with color-blind racism," Dr. Khamis said. In other words, by seeking to be race neutral, the SLHS field ultimately perpetuates racist systems. She partially attributes this phenomenon to the racial makeup of the field, as speech pathology and audiology comprise one of America's 10 whitest professions.

"Not addressing race overtly ultimately limits the access of BIPOC individuals to the discipline and makes it difficult for them to meet academic and clinical standards," she noted. "We must therefore address race head-on and systematically."

To help the field better serve marginalized people, Dr. Khamis drew on her experience working with Arab American populations to develop a new pedagogical approach, published as "A Comprehensive Antiracist Framework for SLHS Education: A Sample Curriculum Related to Arab American Populations" (*Teaching and Learning in Communication Sciences & Disorders*, 2021).² In this paper, she calls for a collective effort to address racism in higher education by way of intentional, anti-racist acts.

"My sample curriculum is unique in that it offers a comprehensive anti-racist education that extends beyond



Reem Khamis, PhD, professor of communication sciences and disorders, focuses her research on language development, processing and clinical services for individuals in societies and diverse communities where two varieties of the same language are used. In 2020, the Council of Academic Programs in Communication Sciences and Disorders awarded Dr. Khamis its Excellence in Diversity Award.

the classroom to include learning opportunities in research and community work," she explained. "Offering authentic community engagement opportunities will help address the isolation of SLHS BIPOC students and connect them with their community to foster a sense of empowerment and belonging."

Dr. Khamis is mindful that effective collaboration with communities can be difficult to establish, so she offers two pieces of guidance to those seeking to implement a similar curriculum. "One, do not approach community members and organizations from a superior position," she said. "Two, many communities feel mistrust toward higher education institutions because, historically, these institutions—and researchers in general—have been complicit in the oppression of BIPOC communities."

Despite the challenges involved, she believes the need could not be more urgent. "Transformation of the SLHS field is not only necessary to address the needs of BIPOC students, but for the survival of the profession," she said. "The field not only should not be maintained as it is—it cannot be maintained as it is."

1 Yu, Betty, and RaMonda Horton, Benjamin Munson, Reem Khamis-Dakwar, et al. "Making Race Visible in the Speech, Language, and Hearing Sciences: A Critical Discourse Analysis" (*American Journal of Speech-Language Pathology*, vol. 31, iss. 2, 10 March 2022, pp. 578-600.

2 Khamis-Dakwar, Reem. "A Comprehensive Antiracist Framework for SLHS Education: A Sample Curriculum Related to Arab American Populations." *Teaching and Learning in Communication Sciences & Disorders*, vol. 5, iss. 3, 2021.



In College, One Is Still the Loneliest Number

Study examines the connection between attachment anxiety and loneliness

Are first-year college students with attachment anxiety—defined as concern about the stability or security of the primary relationships in their life—more prone to loneliness? And, if so, are there any factors that can mitigate these feelings? These were questions that Christine So, a psychology doctoral student at Adelphi University, wanted to answer.

As part of a project in her statistics class, So began evaluating data from a longitudinal study developed by Katherine Fiori, PhD, professor and chair of the Department of Psychology at Adelphi's Gordon F. Derner School of Psychology, to explore the link between attachment anxiety and loneliness among first-year students. So's work was strong enough that her professor urged her to publish it. Dr. Fiori, who had collaborated

with So on multiple research projects over the past few years, came on board as a co-author, and "Attachment anxiety and loneliness during the first-year of college: Self-esteem and social support as mediators" was published in *Personality and Individual Differences* (March 2022).¹ Using a sample of 96 female first-year college students—from data initially gathered a decade ago by Dr. Fiori—the study explored the

¹ So, Christine, and Katherine Fiori. "Self-esteem and social support as mediators." *Personality and Individual Differences*, vol. 187, Article 111405, March 2022.

roles of self-esteem and social support in mediating the association between attachment anxiety and loneliness.

The pair's findings corroborated recent research and confirmed their expectations: Attachment anxiety is positively associated with loneliness during the first year of college. But in a novel discovery, So found that certain factors were likely to explain why these anxiously attached students felt lonely—namely, cognitive distortions about the self (self-esteem) and others (social support).

"As a first-year college student, there are so many things to navigate," So said. "If you have the perception that you aren't receiving enough support, or the right kind of support, that can lead to feelings of loneliness and isolation." Dr. Fiori agrees. "Another reason why anxious people might feel lonely is because they feel less positive about themselves, which is a cognitive bias at work."

To combat perceptions of absent support, the authors suggest that first-year students visit on-campus therapists to discuss their attachment style and feelings of loneliness and to develop healthy regulation strategies.

Dr. Fiori used the same data for an article she co-authored with Megan Parmenter, a former doctoral student and current adjunct professor of psychology at Adelphi, titled "The Positive Side of Negative Interactions: Anxious and Avoidant Attachment as Moderators" (*Journal of Social, Behavioral, & Health Sciences*, January 18, 2021).² The article evaluates "whether attachment anxiety and avoidance acted as moderators of the association between positive and negative social exchanges ... and changes in life satisfaction across the first year of college."

Dr. Fiori and Parmenter relied on the positive and negative social exchanges

scale (PANSE), which measures the perceived outcomes of social interactions, to test their hypotheses. Among a sample of 108 first-year Adelphi students, they found, contrary to their hypotheses, that negative social exchanges such as unwanted advice or insensitive behavior were associated with increases in life satisfaction for students with high levels of attachment avoidance or attachment anxiety. Positive exchanges, such as helpful suggestions or doing a favor, were associated with *increases* in life satisfaction for participants low on attachment avoidance, but with *decreases* in life satisfaction among those high on attachment avoidance.

"It does sound counterintuitive," Dr. Fiori allowed. In the paper, she and Parmenter offer a possible explanation: "It may be that negative exchanges provide an opportunity for anxiously attached individuals to establish greater intimacy and obtain some degree of responsiveness from their exchange partner." Furthermore, because avoidant individuals tend to have positive views of themselves and negative views of others, these individuals may actually "thrive on negative social exchanges, without experiencing the benefits of positive social exchanges."

But for students who aren't experiencing many social exchanges at all, loneliness is a known risk factor for depression and suicidal behavior. Dr. Fiori believes that identifying loneliness' precursors, such as perceived lack of social support, can aid the development of interventions for first-year students. So sees an opportunity for further study despite the COVID-19 pandemic. While students have received most of their social support online over the past two years, "there is research showing that offline social support is still an important predictor of well-being," she said. "Attachment style and everything we've been studying remains very relevant." ■

2 Parmenter, Megan, and Katherine Fiori. "The Positive Side of Negative Interactions: Anxious and Avoidant Attachment as Moderators," *Journal of Social, Behavioral, & Health Sciences*, vol. 15, iss. 1, 18 January 2021, pp. 1-30.

“Another reason why anxious people might feel lonely is because they feel less positive about themselves, which is a cognitive bias at work.”

—Katherine Fiori, PhD



Katherine Fiori, PhD, professor and chair of the Department of Psychology, is interested in the mental and physical health of adults across the lifespan, especially as a function of social relationships and social networks. Her research focuses on changes in social networks across important life transitions.



Christine So, a doctoral student in psychology at Adelphi whose research focuses on social relationships of young and older adults, has worked with Dr. Fiori on multiple research projects.

Chemistry Students as Part of the Solution

A collaboration between two faculty members and 10 undergraduates provides valuable new information about HVI reagents

Assistant professor of chemistry Daniel L. Silverio, PhD, and associate professor of chemistry Ivan Hyatt, PhD, were intrigued by the challenge of enhancing the solubility and reactivity of hypervalent iodine (HVI) reagents, environmentally friendly compounds that have been of limited use to industry due to their poor solubility. As testing the ability of different chemical compounds to dissolve in solvents requires significant amounts of lab time, the two recruited their undergraduate students as research partners.

The project had two challenges. “One, we needed to make these more soluble reagents, and two, we needed to get a baseline solubility of the common

reagents that are used today,” Dr. Silverio said. “Although researchers talk about solubility all the time, no one cites actual numbers.” Very little data measuring the relative solubility of HVI reagents exists, so the research team had to start from scratch.

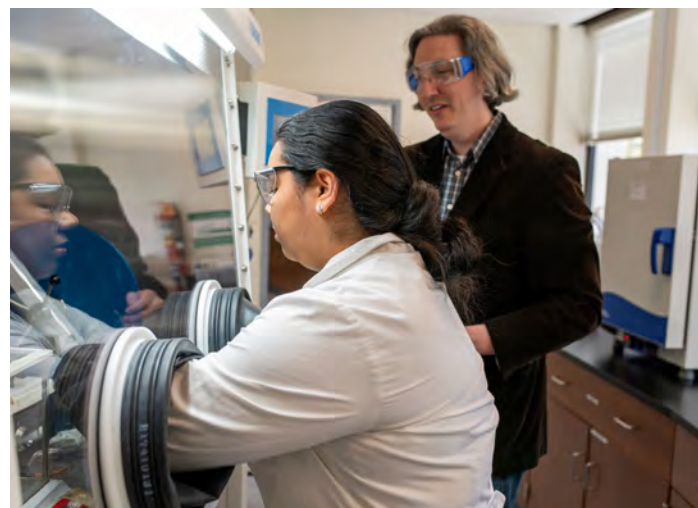
In Dr. Hyatt’s lab, students developed techniques for synthesizing the compounds needed for their research. Dr. Silverio’s team worked on analyzing the solubility of the compounds.

Together, they found that compounds containing longer chains of carbon atoms were “more soluble in nonpolar solvents like ether and hexane” than those with shorter chains. The resulting

article, “Ligand exchange of aryl iodine dicarboxylates to form reagents with differing solubilities” (*Arkivoc*, April 7, 2021),¹ draws the conclusion that “novel HVI compounds can be used in solvents that otherwise would be unsuitable to traditional reactions with HVI reagents.” Drs. Hyatt and Silverio share authorship with 10 of the undergraduate students who conducted much of the research.

According to Dr. Hyatt, the project required students to learn research techniques that are rarely utilized in undergraduate labs. Students were carefully trained on different methods of producing the samples, for instance, which allowed them to discover that the ligand exchange method provided a high

1 Seecharan, Vanie, and Lyse Armand, Jennifer Noorollah, Nirvanie Singh, Andrew Zhang, Kevin P. Freddo, Nicholas Spatola, Sailesh Prasad, Azka Chaudhry, Su Wint War, I. F. Dempsey Hyatt, and Daniel L. Silverio. “Ligand exchange of aryl iodine dicarboxylates to form reagents with differing solubilities.” *Arkivoc*, part iv, 7 April 2021, pp. 79-85.





Daniel L. Silverio, PhD, assistant professor of chemistry, investigates new methods for the synthesis of organic molecules and heterocycles as well as new pedagogical approaches to teaching organic chemistry. (Pictured with Su Wint War, one of the 10 student co-authors of the journal article)



Ivan Hyatt, PhD, associate professor of chemistry, conducts research into the use of hypervalent iodine in fields including the synthesis of biologically active molecules, fundamental physical organic chemistry, carbon-carbon coupling methods, and development of fluorescent sensing materials.

yield and low purity, while the oxidation method produced a low yield and high purity. This proved to be critical for the accurate assessment of the compounds' solubility.

"Our students were doing a spectroscopic analysis on some of these compounds, which are closer to industrial techniques for analysis," Dr. Hyatt said. "It's not what undergraduate students would normally be doing in a lab."

Senior Christina Callov was one of the students in Dr. Hyatt's group. She was excited to be part of such a rigorous research project and was especially pleased with the training she and other students received and the results that training led to. "Every reaction I ran to

produce HVI was successful," she said. "When doing research, not every reaction works, so it was really nice to have such success with synthesizing these compounds."

Vanie Secharan, a junior and member of Dr. Silverio's team, was lead author on the article. Before joining the project, she was torn between pursuing graduate school, medical school or both. "During the course of this project, I learned that I love working in a lab, problem-solving and thinking about new experiments," she said. "Through this research, I was able to find a new passion for chemistry, which has motivated me to pursue a graduate degree."

While cataloging the relative solubility of HVI reagents will be useful for other

researchers, Drs. Hyatt and Silverio believe it will also have important applications outside the lab. "This definitely isn't one of those projects where you have some interesting results, but there are no practical uses," said Dr. Silverio. "This is something that people are going to be able to use immediately, especially for industrial chemists who will finally have some data to work with."

With results in hand, they are now studying reagents that could be even more soluble, such as liquid HVI compounds that could allow industrial chemists to run HVI reactions without the use of a solvent. "It turns out that it's difficult to test the solubility of liquids," said Dr. Silverio. "But we've come up with new methods that are giving us pretty reliable data." ■



Cristina Zaccarini, PhD, is an associate professor of history. A former member of Adelphi's Diversity, Equity and Inclusion Committee, she focuses her research on women and culture, spiritualism and spirituality in the 19th century, U.S.-China relations, and the role of mindfulness in the classroom.

History Students as Producers of History

Adelphi students find their voice in the national conversation on criminal justice

Two years ago, Cristina Zaccarini, PhD, associate professor of history, took a new approach to a long-standing problem: how to communicate the urgency of enduring struggles to students. Rather than limit her curriculum to materials that probe historical events, which can minimize the relationship between past and present, she gave her first-year students the opportunity to engage one-to-one with people whose lives have been shaped by landmark events. In the resulting course, Mindfulness and the Study of History, students learned how America's penal system is the product of a long history of oppression—and how judgmental habits of mind are used to uphold it.

Dr. Zaccarini began by teaching the principles of mindfulness alongside an overview of American exclusion of minority populations dating back to the 1860s. "Mindfulness is being aware of our thoughts, feelings and the present moment," she said. "It's also when we ask ourselves, 'Am I judging?' This helps us become more accepting of ourselves and recognize and resist the ways we judge others." This acceptance, she argues, is essential in the fight for a just penal system. "We must personally

overcome the prevailing narrative that says incarcerated people get what they deserve, and instead consider how factors such as economic and educational equity could have made a difference."

To show her students the power of mindfulness in even the most challenging of circumstances, Dr. Zaccarini, with support from Adelphi's Innovation Center, organized a collaboration with Network Support Services (NSS), a Bronx-based organization that teaches mindfulness as part of the rehabilitation and reentry programs it provides incarcerated people and those on parole in New York state. With the help of NSS outreach director NahShon Jackson, students in the class reached out anonymously to NSS program participants, then conducted 45-minute interviews on Zoom or over the phone. Dr. Zaccarini, who wrote about the class in a chapter in *Handbook of Research on Practices for Advancing Diversity and Inclusion in Higher Education*,¹ said the interviews had a tremendous impact on her students. "These returning citizens demonstrated that people are able to move forward using productive tools," she said. "It encouraged my students

to stop living in the past and worrying about the future, and instead focus on the present. These interactions also helped correct the misconception that the incarcerated are fundamentally bad people. Students learned that the individuals who had been rehabilitated by NSS were eager to turn their lives around and uplift others."

That impact is clearly visible in a documentary about the class by the award-winning filmmaker Art Jones of Great Jones Productions. Shot on campus, *Prison Reform and Mindfulness 101* includes moving testimony by students as well as alumni of the NSS program. Armed with new modes of thinking that counteracted stereotypes, Dr. Zaccarini's students came to see themselves as producers of history with the power to make a difference by helping released men successfully reintegrate into society by securing much-needed housing and employment.

"My students developed a connection to the world outside their orbit," Dr. Zaccarini concluded. "They felt they could really make a difference in one of society's most urgent problems." ■

¹ Zaccarini, Maria Cristina. "First-Year College Students Connect with Citizens Returning from Incarceration Through Mindfulness: Diverse Voices and the Production of History." *Handbook of Research on Practices for Advancing Diversity and Inclusion in Higher Education*, edited by Eleni Meletiadou, IGI Global, 2022.

Helping Social Workers Build an LGBTQ+ Inclusive Practice

Policy brief addresses—and fills—gaps in social work education

Beth Counselman Carpenter, PhD '14, associate professor of social work, has long championed LGBTQ+ affirmative education. Recently, however, a concerning trend emerged: Many of her students—social services professionals pursuing their MSW—were unaware of key LGBTQ+ related law and policy developments.

“The longer I’ve practiced, the more I’ve seen the need for policy to be taught and incorporated into practice, particularly for those working with LGBTQ+ folks,” she said. “Our students weren’t realizing how much things like the worldwide transgender bathroom debate were directly affecting their clients.”

Along with Alex Redcay, PhD, of Millersville University, she published “Public Accommodations for LGBTQ Individuals: Current Policies, Pending Debates” in the *Journal of Human Rights and Social Work* (October 29, 2021).¹ The article reviews recent rulings in public accommodations, highlighting four landmark cases with significant implications for the health and well-being of LGBTQ+ youth.

The authors outline important terms and legal principles relating to LGBTQ+ rights, then conclude with recommendations for social work practice and education. Dr. Counselman Carpenter believes the piece offers valuable guidance for practitioners seeking to develop an inclusive practice. “If you’re supporting youth who want to use the bathroom that aligns with their gender identity,” she explained, “you need to know how to find the legal avenues to access that allow you to advocate for them.”

Dr. Counselman Carpenter says a social worker’s obligations extend far beyond the day-to-day management of clients’ cases. “It is an ethical necessity to understand the trajectory of civil rights and advocate for appropriate policies,” which can involve extensive research, collaboration with law and policy experts, writing to local representatives, and educating local businesses.

For those who might question such a broad scope, she points to one case mentioned in the article, *G. G. v. Gloucester County School Board, Virginia*, in which a teenager sued his school board for denying access to the bathroom that matched his gender. The legal battle triggered the student’s vasovagal syncope syndrome, a stress-induced condition that causes fainting. “Those situations can have a serious physical impact on youth and families,” she said. “Our job as social workers is to find ways of alleviating that stress, even if we have to operate on a structural level.”

While the social work profession has made strides in its LGBTQ+ allyship over the past decade, Dr. Counselman Carpenter sees the work as largely unfinished. Barriers to accessing healthcare and inclusive medical treatment still persist nationwide. LGBTQ+ youth experience homelessness and suicide at a disproportionately high rate. “We can best help social workers support their clients by educating them,” she said. “We have to integrate all of this into the social work curriculum, and not just as a diversity elective. Only then will practitioners really understand the influence of public policy on the entire life span of an LGBTQ+ person.” ■



Beth Counselman Carpenter, PhD '14, is an associate professor in the School of Social Work whose research includes a focus on LGBTQ+ affirmative education and healthcare and post-traumatic growth in the LGBTQ+ community and other marginalized populations.

“
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—Beth Counselman Carpenter, PhD

¹ Redcay, Alex, Elisabeth Counselman-Carpenter, and Gretchen Wade. “Public Accommodations for LGBTQ Individuals: Current Policies, Pending Debates.” *Journal of Human Rights and Social Work*, 29 October 2021.



The World Trade Center as a Cloud (VII), pressed lined pulp on cotton handmade paper, 40" x 60", 2015

Opposite page:
Branded Firefighter (go cup), burned and collaged photograph, 24" x 30", 2021



Christopher Saucedo is a professor of art and art history. Over the past 30-plus years, his sculptures and works on paper have been shown in more than 100 solo and group exhibitions throughout the United States and abroad.



Memorializing Tragedy Through Art

On the 20th anniversary of the 9/11 attacks, an artist revisits personal loss and a national tragedy

As a child in 1969, Christopher Saucedo, professor of art and art history at Adelphi, visited the World Trade Center construction site with his family before either tower had gone up. Three decades later, his brother Gregory, a New York City firefighter, was lost on the same ground in the 9/11 terrorist attacks. In the tradition of artists who have grappled with extraordinary pain, Saucedo relied on art-making not only to reckon with his personal grief, but also to help us all heal our collective pain.

The two series of works he created, *The World Trade Center as a Cloud* and *Branded Firefighter*, were first shown at the New Orleans Museum of Art in 2011. In 2016, the National September 11 Memorial & Museum invited Saucedo to show enlarged versions of this series

at a special exhibition, *Rendering the Unthinkable: Artists Respond to 9/11*.

Five years later, coinciding with the 20th anniversary of the attacks, Saucedo added a third piece to the series, modifying an actual elevator weight salvaged from the Twin Towers cleanup site. The full collection was exhibited as *Requiem MMI* at the Arthur Roger Gallery in New Orleans in summer 2021.

Though Saucedo, a sculptor, typically uses physical materials such as metal, wood and stone in his art, he felt this body of work required an ethereal voice. For his *World Trade Center as a Cloud* series, he cast enormous sheets of deep blue paper, each layered with delicate geometric shapes that conjure the now-gone architecture in a nearly

recognizable but intentionally intangible manner. *Branded Firefighter* repeatedly presents a stoic photograph of Gregory in uniform, into which icons of water vessels have been burned.

In an artist's statement for *The World Trade Center as a Cloud*, Saucedo wrote, "I needed to make an artwork of the World Trade Center but understood it couldn't be physical; too much steel and concrete had already been negotiated." Other sources of tension had to be resolved, too. "I wanted the work to exist outside of time; it had to be both before and after September 11, 2001. ... I needed it to remind me of the event that changed everything and still not make me sad. Mostly I wanted to see that blue sky and hopefully hear the voice of a cherished friend, if only as a distant echo." ■

“If I don’t practice this descriptive imagining, then there is no way to reach out to that little boy, to know a different narrative than the ones imposed upon him, defining and limiting how he understands himself.”

—Marcos Gonzalez, PhD, *Pedro’s Theory*



Marcos Gonzalez, PhD, is an essayist and assistant professor of English. His essays, which often focus on queer identity and racial politics, have appeared in *Literary Hub*, *Electric Literature*, *Inside Higher Ed*, *Ploughshares*, *Catapult*, *The New Inquiry* and elsewhere.

No Promised Land for the “Pedros” of America

Faculty memoir excavates the trauma of racism

Pedro's Theory: Reimagining the Promised Land (Melville House, 2021),¹ a memoir by assistant professor of English Marcos Gonzalez, PhD, begins with a warning: “The world will come between you.”

While the next sentence identifies “you” as the narrator and his father, a multiplicity of yous—some representing different versions of Dr. Gonzalez himself, some representing who he might have been—populate the book. One Pedro is divested of his native language at an English-speaking school. Another Pedro disappears in the desert. One Pedro is a cousin, while another is Pedro on Main Street. All are divided by the world they inhabit.

For Dr. Gonzalez, *Pedro's Theory*—which received raves from *The New York Times*, *Kirkus*, *The Advocate*, *Latino Book Review* and other leading publications—is a critical project as much as it is a personal one. In chronicling his coming of age as a queer Latino in white America, he dissects the myth of the American Dream and confronts the damage he suffered growing up in an inhospitable land.

Dr. Gonzalez, who was raised in a rural, predominantly white town in New Jersey by an undocumented Mexican father and Puerto Rican mother, began experiencing symptoms of this fractured identity at a young age. He remembers shying away from other Latinos who worked on farms or lived in trailer parks as a child, having been conditioned to aspire to middle-class life. The “Pedro” device personifies this tension—and transforms a degrading, working-class stereotype into a communal rallying cry.

“I was both similar and dissimilar to the other Latino people in my community,” he said. “When I started planning this book, I was trying to think of what connected me to these people, to my father, to my cousins, even to Latinos I had never even met. We’re all ‘Pedros,’ but we’re also disconnected from each other by barriers like language, sexuality and class. ‘Pedro’ was me reclaiming this stereotype of Latino people placed upon me, emphasizing that we exist and can achieve solidarity despite—or even because of—our differences.”

The book’s seeds were sown during Dr. Gonzalez’s years in graduate school. As part of his dissertation work, he experimented with fusing a variety of forms, including autobiography, literary criticism and cultural analysis, then refracting them through the lenses of queer identity and racial politics.

“I had done so much scholarly inquiry into these topics, and now I wanted to bring all of these lingering strains together and map them onto my own life,” he said. Yet unlike most memoirs, the project required distance rather than proximity.

“If you ask someone to write about their own life, they’ll use the first-person perspective, which makes the writing very close and intimate,” he explained. “I wanted to approach it from a different, more removed angle. How do I defamiliarize myself from myself? That was the only way I felt I could understand how other people were viewing me and how I was viewing myself.”

This practice of narrative distance—known as autotheory, a genre that began with Audre Lorde, Gloria Anzaldúa and other feminists of color—doesn’t operate out of self-judgment, Dr. Gonzalez stressed; it is built on generosity. *Pedro's Theory* is part of an intellectual tradition that celebrates the lived experiences of marginalized people and rejects what he refers to as the “myth of Western humanism.”

“For centuries, we’ve had this notion that when academics produce theory, it somehow will be removed from who they are,” he said. Autotheory, however, asks us to think more critically about the structural foundations of our thinking. “What happens when we start identifying whiteness in how we speak, think and write? All of us have to account for the origins of our ideas.”

Pedro's Theory invites the reader to accompany Dr. Gonzalez as he journeys through the trauma of racism, classism and homophobia, working to unlearn ingrained assumptions and heal old wounds by creating new stories.

“If I don’t practice this descriptive imagining,” he writes, “then there is no way to reach out to that little boy, to know a different narrative than the ones imposed upon him, defining and limiting how he understands himself.” ■

¹ Gonzalez, Marcos. *Pedro's Theory: Reimagining the Promised Land*. Melville House, 2021.



Infant Care Innovation Improves Outcomes for Preterm Infants

A new feeding practice could become the standard of care in other neonatal ICUs

If you visit an American neonatal intensive care unit (NICU), you will likely see a ward governed by strict routine. Nurses look after preterm babies (born at less than 37 weeks gestation) by ministering care at prescribed intervals. Even the feedings will be given, like clockwork, every three hours exactly.

However, according to Ani Jacob, DNP, clinical assistant professor in the College of Nursing and Public Health, this

approach to preterm infant care does not reflect the latest research. Feeding preterm infants on a rigid schedule inevitably means babies must sometimes feed when they aren't ready and therefore experience stress, which initial research indicates is associated with negative stress-related symptoms.

To see just how much the prevailing feeding practice was adversely affecting babies, a healthcare team including

Dr. Jacob implemented a new practice at a hospital in Manhasset, New York. "Instead of feeding preterm infants at scheduled times or prescribed intervals, it's important to feed them based on the signs and cues the infants show that indicate they're hungry and ready to feed," she said. She shared the benefits of this approach in an evidence-based practice project of cue-based feeding in the hospital's NICU, published as "Implementation of Cue-Based Feeding

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Too often in this field, we continue to provide care one way because that’s the way we were taught and know, instead of evidence-based care for better outcomes. That’s a big problem.”

—Ani Jacob, DNP

Ani Jacob, DNP, is a clinical assistant professor in the College of Nursing and Public Health and a nurse scientist in the department of nursing research and evidence-based practice at Northwell Health, New Hyde Park, New York.



to Improve Preterm Infant Feeding Outcomes and Promote Parents’ Involvement” (*Journal of Obstetric, Gynecologic & Neonatal Nursing*, May 2021).¹

Preterm infants, Dr. Jacob explained, exhibit several cues that indicate they want to be fed. Some are visual: “First, the baby must be awake. Second, they should turn their head when you touch their cheek. And, third, if you put a nipple near the baby’s mouth, they should open their mouth to suck.” But vital signs are equally crucial cues, and ignoring them can have serious health consequences for a preterm infant. “If you feed babies when they aren’t ready,” she emphasized, “they may become stressed. Stress can elevate their heart rate, increase their rate of respirations and affect their level of oxygen saturation. If we continue to feed despite these stress signals, the baby may need to be rescued, which often involves more invasive—and more costly—procedures.”

When Dr. Jacob and her team implemented a cue-based feeding approach in the hospital’s NICU as part of their project, they found positive results across the board. “After changing our feeding practice, the babies exhibited fewer stress symptoms when feeding. The babies’ length of stay in the NICU also decreased because the reduction in stress led to better outcomes. So, while improving the level of care we delivered, we simultaneously lowered the average total cost of NICU care.”

The shift also led to another improvement that surprised Dr. Jacob and her team: Parents started to feel more comfortable caring for their babies. “Usually, parents are afraid of feeding preterm babies because these infants are so small and usually have compromised respiratory systems,” she said. “We taught parents to look for cues of feeding readiness by giving them handouts and encouraging them to identify when they

think their baby is ready to eat. At the end of the project implementation, they were more comfortable caring for preterm babies because they felt they could interpret their baby’s cues at home.”

Now that their hospital has adopted cue-based feeding, Dr. Jacob and her team hope that the practice will become the standard of care in NICUs elsewhere. More importantly, though, the project imparted a broader lesson she believes all healthcare workers would do well to heed.

“Too often in this field, we continue to provide care one way because that’s the way we were taught and know, instead of evidence-based care for better outcomes,” she concluded. “That’s a big problem. Instead, we should be looking for the best evidence that is out there, and then change our practice as we’ve done with cue-based feeding.” ■

1 Thomas, Tesi, and Rebecca Goodman, Ani Jacob, and Deborah Grabher. “Implementation of Cue-Based Feeding to Improve Preterm Infant Feeding Outcomes and Promote Parents’ Involvement.” *Journal of Obstetric, Gynecologic & Neonatal Nursing*, vol. 50, iss. 3, 1 May 2021, pp. 328-339.



Rewiring the Anxious Brain

Research shows that CBD and other plant extracts could revolutionize psychological treatments

Benjamin Weeks, PhD, is a professor of biology whose research focuses on the effects of xenobiotics on the cellular mechanisms of development and disease.

For Benjamin Weeks, PhD, professor of biology at Adelphi, CBD is more than a trendy new product. Along with an assortment of other plant-based substances, he believes it could radically transform the way we approach—and manage—anxiety disorders, resulting in better long-term outcomes.

Dr. Weeks has spent the past four decades investigating what he calls “the molecular switches that signal cells to take on new functions.” One branch of that work has involved neurotrophins, which are molecules that signal cells to develop neurites. Neurite outgrowth is associated with neuroplasticity, the brain’s ability to learn by reorganizing

itself and forming new neural connections.

In his search for new neurotrophins, Dr. Weeks decided to look for phytochemicals, nutrients in plants that provide health benefits, that may serve the same function. He identified several plant molecules that are neurotrophic as well as anxiolytic, meaning that they have been proven to reduce anxiety—a breakthrough find.

The anxiolytic medications prescribed today have a temporary effect on brain chemistry; symptoms of anxiety typically return when patients stop taking their medication. Phytochemicals that stimulate neuroplasticity have the

potential to not just temporarily alter the brain’s chemistry, but to permanently rewire its circuitry.

Dr. Weeks documented these conclusions in a chapter titled “Physiological and Cellular Targets of Neurotrophic Anxiolytic Phytochemicals in Food and Dietary Supplements” in the book *Functional Foods: Phytochemicals and Health Promoting Potential* (IntechOpen, November 2021).¹ Written with three Adelphi undergraduate students, the chapter explores the neurotogenic activity of plant-based anxiolytic nutraceuticals in the treatment of anxiety disorders. A number of “plant and plant extracts proven to reduce anxiety in humans in clinical trials are

1 Weeks, Benjamin S., and Samuel D. Weeks, Amanda Kim, et al. “Physiological and Cellular Targets of Neurotrophic Anxiolytic Phytochemicals in Food and Dietary Supplements.” *Functional Foods: Phytochemicals and Health Promoting Potential*, edited by Muhammad Sajid Arshad, IntechOpen, 2021.

also able to act like neurotrophins,” they found. “Neuroplasticity offers an opportunity to use food phytochemicals along with drugs or in their place to learn to establish more appropriate responses to perceived threats by reworking neural connections.” This targeted use of neuroplastic drugs and foods “would be a tremendous advancement in the treatment of anxiety.”

Amanda Kim '14, MS '16, at the time a graduate student in Adelphi's biology department, studied valerian root and other phytochemicals as part of the project. “I was most interested by the relationship between dietary supplements and neurite outgrowth,” she said. “I spent many hours in the lab performing experiments and maintaining the cells needed for the research.”

Over the years, Dr. Weeks has included both undergraduate and graduate students in his research. Many of them, like Kim, have co-authored articles on topics that have been cited hundreds of times in scholarly journals. “Seeing my students published is important to me,” he said. “I believe that taking students from hypothesis to investigation to publication is one definition of academic excellence.”

According to Dr. Weeks, his team's work with cannabidiol, more commonly known as CBD, has generated a good deal of curiosity. He has presented his research at an international conference on neuroscience and psychiatry in Europe. “I had backed into a field that was exploding,” he said. “I found an audience

that was very interested in the idea that anxiolytic neurotrophins can help rewire the brain.” A member of the American Society for Neurosciences, he also hopes to present at one of its annual meetings.

Along with a colleague from One Innovations Labs in Coral Gables, Florida, Dr. Weeks co-authored another study on the topic, “Measuring Cannabidiol Bioactivity: Neuronal Cell Survival and Neurite Outgrowth” (*Cannabis Science and Technology*, October 2021),² which examines methods for assessing the neurotrophic bioactivity of CBD formulations.

With demonstrated benefits in treating pain, seizure, schizophrenia, addiction, anxiety and Parkinson's disease, CBD is an especially promising plant-based substance. But the way CBD is prepared is important in the context of human health applications. When CBD is prepared by continuous lipid extraction and combined with vitamin C, Dr. Weeks and his co-author found, its bioactivity and neuroplastic effects are greatly improved.

Dr. Weeks is confident his findings can improve the treatment of other medical issues. A person's decision to end an addictive behavior, for instance, requires a change in a neural pathway. Neuroplasticity can help facilitate this change. In addition, plant-based substances could even make a difference in wound care, he reports. He already has two students investigating whether CBD can stimulate the cell migration necessary for wound healing. ■

2 Weeks, Benjamin S., and Pedro P. Perez. “Measuring Cannabidiol Bioactivity: Neuronal Cell Survival and Neurite Outgrowth.” *Cannabis Science and Technology*, vol. 4, iss. 8, October 2021, pp. 46-56.



Benjamin Weeks, PhD, in his laboratory with master's student Ruiqin Fu and lab technician Roberto Gomez (at microscope)

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Mercier said. “In fact, they were often left to fend for themselves.”

In a follow-up survey, Dr. Mercier and his colleagues asked teachers what might help them teach PE more effectively. They found that teachers were assigning work but lacked confidence in their ability to keep students engaged and physically active, especially those who lacked a reliable internet connection.

In “The Success and Struggles of Physical Education Teachers While Teaching Online During the COVID-19 Pandemic” (*Journal of Teaching in Physical Education*, June 21, 2021),⁶ the team provided recommendations for quality PE programming in four key areas: policy and environment, curriculum, appropriate instruction, and student assessment. “The lessons learned from these experiences teaching online will not only prepare the educational system, including PE, for future pandemics and global crises alike,” they wrote, “but will also have long-term implications for the future of remote instruction.”

A blueprint for the future

Although most institutions have begun to transition back to in-person learning, remote instruction will no doubt remain a vital resource. Thanks to advances in research over the past two years, remote instruction has become far more responsive to the needs of both students and instructors since the earliest days of COVID-19.

Like many of her colleagues at Adelphi, Dr. Berger has come to appreciate the benefits of remote instruction and its promise of providing access to a high-quality, transformative education for all students. “I've tried to make the best of what online teaching offers, and I love it now,” she said. ■

6 Centeio, Erin, and Kevin Mercier, Alex Garn, et al. “The Success and Struggles of Physical Education Teachers While Teaching Online During the COVID-19 Pandemic.” *Journal of Teaching in Physical Education*, vol. 40, iss. 4, 21 June 2021, pp. 667-673.



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