

MARQUETTE UNIVERSITY KUNGLER COLLEGE OF ARTS AND SCIENCES MAGAZINE 2019

Scholarship Unbound Digital tools are helping the college's scholars reveal their subjects in new ways - and make insights available anywhere instantly.

PARTNERING TO CREATE A NATIONAL HUB FOR DATA SCIENCE INNOVATION. p. 14

COMING FACE-TO-FACE WITH ACTIVISTS WHO HELPED SHAPE HISTORY. p. 22

IMMERSIONS IN LANGUAGE AND CULTURE HELP ROTC CADETS GROW. p. 26

t is bittersweet for me to share that I will leave Marquette at the end of this semester to become provost at the Colorado School of Mines. It has been my pleasure to serve as dean of the most academically diverse college on campus. We have implemented many important programs and initiatives during the past six years, and I know more exciting developments lie ahead, given the strength of the college's outstanding faculty, staff and students.

Dr. Heather Hathaway will serve as acting dean

while the search for a permanent dean is conducted. Dr. Hathaway has served in a variety of administrative roles: associate dean for academic affairs, co-director of the University Honors Program, vice chair of the Board of Graduate Studies, and director of undergraduate and graduate

studies in English. I am confident she will keep the college moving forward in innovative ways.

As the stories in this issue demonstrate, the college continues to stand at the forefront in providing a transformative Jesuit education by developing our students' intellects to the fullest measure of their talents.

66 The college continues to stand at the forefront in providing a transformative Jesuit education by developing our students' intellects to the fullest measure of their talents. 99

This issue of the Klingler College of Arts and Sciences gazine is dedicated to the memory of Joseph DiGiovanni, our '87, 1965-2019. For the past four years, as a senior communication specialist at Marquette, Joe combined his insatiable curiosity, gift for storytelling and passion for Marquette to shine a light on what is best about the college and the university. We will miss him dearly

To read more about Joe, visit bit.ly/JoeTribute.

FROM THE DEAN

Dr. Richard C. Holz **Dean, Klingler College of Arts and Sciences**

> **DID YOU KNOW?** The college awarded 601 degrees in 2017-2018: 485 bachelor's, 72 master's and 44 Ph.D.s.

Our cover story shows how digital scholarship reshapes the way knowledge is created and shared. Virtual reality technology used to reconstruct the Prado Museum's Queen Isabel room from the 1870s allows students and other visitors to step into a 3D visualization and experience the room in all its glory.

College faculty, students and alumni break down barriers to advance our understanding of the world around us. The Marguette Democracy Project hosts human rights champions at the heart of international crises to help students develop tools to fight for justice. Project GO takes our students on a transformational international journey, immersing them in another culture. Dr. Arthur Bowman serves as a vivid example of our alumni using their Catholic, Jesuit education, grounded in the arts and sciences, to BeThe Difference.

The stories we tell in this issue reflect the centrality of an Arts and Sciences education to those living out the Jesuit ideal of "going forth and setting the world on fire!" Thank you for all that you do for Marquette.

quiter C. Har



TABLE OF CONTENTS

FEATURES

their own callings.

02

09

14

16

20

22

26

We appreciate your feedback on A&S Marquette magazine. Please send all comments to the editorial director at stephen.filmanowicz@ marquette.edu

Edito Stephen Filmanowicz

Art director Sharon Grace

Editorial team Sarah Koziol Jennifer Russell Kaley Rohlinger (intern)

Photographers John Nienhuis, dean photos; John Sibilski

pages 14-18 and photo of David Archambault, page 25; Adam DeTour, page 21; Joseph Brown, pages 22-25

> Illustrator Chiara Zarmati pages 5,10,13



GLOBAL CADETS Immersions in foreign languages and communities help ROTC students understand and appreciate international cultures.

MARQUETTE UNIVERSITY KLINGLER COLLEGE OF ARTS AND SCIENCES MAGAZINE 2019

INSIDE ARTS AND SCIENCES

COLLEGE HAPPENINGS Better tools for behavioral disabilities, understanding the A&S advantage, using peace and justice in public schools, and growing race, ethnic and indigenous studies.

RESEARCH A bio sciences breakthrough with implications as far as Mars, deans making discoveries in research and scholarship, why war crimes go unpunished — and shouldn't, and sub-zero cosmic science at the South Pole.

BIG NEWS IN BIG DATA A historic partnership puts Marguette and Milwaukee on data science's leading edge

STEPPING FORWARD INTO THE PAST Step into a virtual re-creation of a lost Spanish art gallery, one of many ways A&S scholars are digitally reimagining their work.

A JOURNEY OF MORE THAN MILES Leaving behind the Jim Crow South, Dr. Arthur Bowman found Marguette and forged a lifetime bond.

ACTIVISM UP CLOSE Brought face-to-face with fearless human rights champions, students discover



BETTER TOOLS FOR BEHAVIORAL DISABILITIES

NEW GRADUATE PROGRAM IN PSYCHOLOGY CRAFTS TOOLS FOR OVERCOMING LEARNING DEFICITS AND PROBLEM BEHAVIORS.

> BY ANNA MILLER, ARTS '17

A child with severe autism bangs her head on the floor and hits her brother. Her parents are at a loss — telling her to stop does not work and comforting her when she hurts



herself exacerbates the behavior. In another family, parents cry because they wish their child could have a conversation with them about their day. Enter Dr. Jeffery Tiger, Dr. Tiffany Kodak and their students from the new Behavior Analysis graduate program in Marquette's Department of Psychology. "We take the approach that most of the people who are referred to us are trying to

communicate something," says Tiger. "The key is giving them the tools — simple vocal language or sign language to do so."

Tiger and Kodak, both associate professors of psychology, joined Marguette last fall from a similar program at the University of Wisconsin-Milwaukee. Waiting for them were 19 freshly enrolled master's and doctoral students, ready to be mentored and integrated in client analysis and treatment. This winter, the program moved into its own building at the far east end of campus - N. 6th and W. Clybourn streets. With classrooms, offices and clinic space, the facility is an ideal spot for Tiger and Kodak to advance the study and practice of this subfield of psychology that teases out and addresses the environmental factors influencing skill deficits and behavior problems in those with intellectual and developmental disabilities.

For the girl struggling with autism, Tiger and his students will work intensely over three to six months to identify the triggers of her problem behaviors, which could be her inability to communicate a desire to play or her phobia of toothbrushing.

Within that time frame, the team will also help her build communication skills to prevent the problem behavior from recurring. In the case of the child who does not

converse with others, Kodak and her team will identify missing communication skills and practice these skills until the child is able to initiate and sustain a conversation.

Both program leaders have made significant — and complementary — advances in their field, with Tiger focusing on understanding and managing problem behaviors and Kodak developing innovative interventions for teaching language skills that facilitate the child learning other skills. The director of the program. Tiger serves as associate editor of the *Journal of* Applied Behavior Analysis and Kodak is on the editorial boards of that journal and two others. Dr. Douglas Woods, professor of psychology and dean of the Graduate School, is a noted behavior analyst himself and adds to the program's expertise.

Working under Kodak, doctoral student Mary Halbur feels fortunate for the program's balanced blend of one-on-one client treatment and small, discussion-based classes. As she strives to develop interventions for children with disabilities, she reports. "I'm getting the ideal preparation to answer my own research guestions and work with my own clients."

Learn more at marguette.edu/grad/programs-behavior-analysis.

CHALLENGE ACCEPTED

TEAM TO CREATE COMMUNITY CLINIC

Dr. Amy Van Hecke, professor of psychology, led the university-community team that received Marquette's President's Challenge, a \$250,000 award in partnership with Johnson Controls to change the trajectory of lives in Milwaukee.

The award will make possible the creation of Next Step Clinic, a mental health clinic providing children and families with trauma-informed treatment. The

location is Metcalfe Park, one of Milwaukee's lowestincome neighborhoods.

Marguette President Michael R. Lovell announced the news in January at his annual Presidential Address. He praised the project's potential impact and level of collaboration, which involves partners such as the Next Door Foundation and the Milwaukee Coalition for Children's Mental Health and faculty experts such as Dr. Igbal Ahamed from Mathematics, Statistics and Computer Science; Dr. Alexandre Martins from Theology; and Dr. Stephen Saunders

from Psychology, plus colleagues from Education, Health Sciences and Nursing.

In addition to addressing acute needs of families currently waiting a year or more for diagnoses and treatment, the clinic will serve as a training site for Marquette students. Says Van Hecke, "The more professionals we have that have this training and know how to work with these children and families, the easier it will be for people to get the services they need." Learn more by watching the video at bit.ly/nextstepclinic.

CLASSICAL VIRTUE

AN ANCIENT HISTORY SCHOLAR AND CAMPUS LEADER ORIGINALLY FROM BRAZIL WAS THE COLLEGE'S 2018 OUTSTANDING SENIOR.

Eva Schons Rodrigues, Arts '18, was a long way from home when she toured Marguette's campus as a curious, outgoing, trilingual 18-year-old from Brazil, but she immediately felt like she fit in. With Jesuit values passed down to her



Schons Rodrigues received her Outstanding Senior honor and a diploma frame about a month before graduation.

from her grandmother — who grew up learning from Jesuit priests in the Brazilian mission town of São Luiz Gonzaga — Schons Rodrigues recognized herself in the students she met in Milwaukee. She found their spirit "contagious" as they followed their intellectual interests to explore academically diverse courses.

Enrolling at Marquette, she selected international affairs, history and classics as her majors and gender and sexualities studies as her minor. In her own words, she became "one of those people dving to get involved in everything." making the most of experiences and connections across the Arts and Sciences spectrum

mentor freshman year.

last spring.



until she truly embodied the Outstanding Senior award she received from the Klingler College

Professorial mentors proved crucial in her development, starting with Dr. Jennifer Finn, assistant professor of history, who sparked her interest in ancient history with just one class.

> "I want to be you. How do I get that job?" Schons Rodrigues asked her professor. Nurturing influences included her advisers and several more professors, including Dr. Stephen Beall, associate professor of classics, who "went out of his way in creating an ancient Greek independent study course for me," says Schons Rodrigues.

Outstanding academic performance and extensive service activities — including peer mentorship of middle-school girls for the national organization Women and Youth Supporting Each Other — helped her earn distinction as the college's 2018 Outstanding Senior, an award presented annually since the 1960s. Her undergraduate academic deep dive and experiences outside the classroom (residence hall adviser, writing tutor, Alpha Phi sorority member) gave Schons Rodrigues "the confidence to be a leader" and momentum coming out of Marguette. She is now working toward a master's in classical languages at the University of Chicago and applying to doctoral programs, making real the ambitions she shared with her Marguette

OUTSTANDING SENIORS: WHERE ARE **THEY NOW?**

A JOURNALIST AND JESUIT, 1991's HONOREE STILL EARNS ATTENTION MORE THAN A QUARTER CENTURY ON.

When he graduated from Marguette, Rev. Jim McDermott, S.J., Arts '91, was planning to DE be an English professor. Instead, he worked on the Pine Ridge Indian

reservation, became a journalist and an editor, earned a master's degree and became a screenwriter. Somewhere along his hectic journey, Father McDermott also became a Jesuit. "In some ways the biggest challenge l've faced since graduation has been accepting the strange zigzaggery of my life," he says.

Now based in Los Angeles as a member of the Jesuit community at Lovola Marymount University, Father McDermott can often be found on Twitter, with Superman as his profile picture and his feed filled with comedy and pop culture. As a Los Angeles correspondent for the Jesuit weekly, America Magazine, Father McDermott shifts from arts to politics to faith and explores the overlap between them. "My desire to be a writer," he says, "has really come from the desire to share what I've seen and learned. the brokenness, beauty and hilarity of our humanity."

Leah Harris, Comm '18

THINK DIFFERENTLY

KLINGLER COLLEGE LUMINARIES DISMANTLE THE MYTHS THAT CAN OBSCURE THE VALUE OF THE ARTS AND SCIENCES.

BY LAURA MERISALO

As the daughter of two alumni, moving from her hometown of Falls Church, Virginia, to attend Marguette University in 1974 was an easy decision for Judy (Giffhorn)



O'Hagan, Arts '77. Less sure of her collegiate academic path, however, she pursued what she loved — languages.

"My parents didn't pressure me to pick a major right away and encouraged me to follow my passion," says O'Hagan. "I'm not sure that would be the case today, as there is so much pressure to pick majors that translate immediately to jobs."

Top Majors

Psychology (322)

Biological Sciences (252)

Criminology/Law Studies (218)

Political Science (205)

Top M.A. Programs

Computing (58)

History (19)

Top Ph.D. Programs

Religious Studies (49)

Biological Sciences (45)

Chemistry (41)

Philosophy (38)

Computational Sciences (35)

(Numbers) indicate

Compiled by Enrique Torruco, Comm '15, Grad '17

fall 2018 enrollment

As a freshman, O'Hagan enrolled in the College of Liberal Arts. She took courses in logic, communication, philosophy, literature and foreign languages before declaring a major in French. Following

graduation, she went on to spend 38 years in human resources in the pharmaceutical industry. ending her career as the top human resources officer for a French biopharmaceutical organization.

O'Hagan agrees that a business degree could have produced a similar outcome. But she believes that her liberal arts background differentiated her from her peers and helped her climb from an entry-level position to vice president of human resources. "You can be successful in business



without a business degree," she says. "I would not have developed the problem-solving, written and verbal communication skills, and overall intellectual curiosity that helped me be a successful leader without liberal arts."

Dr. Andrew Kunz, professor

of physics, says students today feel pressure from society, especially their parents, to select more specialized majors. "It's easier to look at nursing or engineering, know exactly what the outcome will be in four years, and feel assured a job will be there for your child," says Kunz, who is also

associate dean for admissions, retention and experiential learning. "People see certain degrees and think, 'What is my child going to do with that?' despite the Klingler College of Arts and Sciences' high rate of meaningful employment for graduates."

Kevin Wasco, M.D., Arts '90, was set on a future career in medicine when he enrolled at Marguette, and the Klingler College seemed a natural place to gain needed scientific knowledge. But it was his exposure to the whole spectrum of arts and sciences subjects that made this path so ideal for him. He attributes much of his success as a physician not only to biology and chemistry, but also to philosophy, ethics and even a theology class on contemporary atheism.

> "I draw on my liberal arts background daily for patient communication, to think through high-risk situations, make decisions quickly and be an effective leader in a hospital system."

Wasco's daughter is now a freshman at Marquette. Like him, she has an affinity for health care. Wasco hopes she'll pursue the arts and sciences pre-med track, because it's critical to where medicine — and the world — are headed. "An ethics background will be essential to navigating artificial intelligence in health care and making informed decisions that keep patients safe."

The perspectives and skills that O'Hagan and Wasco rely on remain at the core of the Klingler College's curriculum. As a freshman, Zachary Wallace, Arts '16, enrolled in another college, but a freshman-year interdisciplinary political science course changed the trajectory of his Marquette experience and, subsequently, his future. "In that course, I was challenged to approach national and local issues differently — to question decisions, think through multiple scenarios and discuss the ramifications of choices," says Wallace. "The college



has a strong ability to develop critical-thinking skills."

Wallace followed his developing interests to the Klingler College and four years later graduated with a triple major in political science, economics, and urban affairs. He also served as president of Marquette University Student Government his senior year and is pursuing a master's in public administration at Northern Illinois University. "My undergraduate career shaped my perspective of the world and my role in it. I was, and am, empowered to leave the world a better place," says Wallace.

Anticipating the future guides Kunz's approach to teaching, as in the case of a course on space travel being team-taught by Kunz and faculty members from history and physical therapy. "I'm training my students for jobs that don't even exist yet. Those who have a well-rounded viewpoint and possess criticalthinking skills will be most prepared," he says. "The ability to think, and to skillfully adapt to change, is a skill that can carry you your whole life."

THE HUMANITIES PH.D. YOUR TICKET TO AN **INTERESTING** LIFE

Showcasing the rich but sometimes overlooked world beyond the tenure track, the Graduate School and the Center for the Advancement of the Humanities are hosting a series of career diversity events. One last fall, produced with the consortium Humanities Without Walls, featured speakers with interesting graduate-studyto-career journeys, including Dr. Matthew Costello, Grad '11, '16, senior historian for the White House Historical Association, and J Tyler Friedman, associate curator for the Museum of Wisconsin Art and a current doctoral student in philosophy at Marguette. A February roundtable shared insights from faculty members such as Dr. Angelique Harris. director of the Gender and Sexualities Studies program. And a weeklong career development boot camp in May will help graduate students begin charting diverse career journeys of their own.

Ann Christenson, CJPA '90

Έ

RESTORING COMMUNITY IN SCHOOLS

CHOOSING THE PEACEFUL PATH

A MARQUETTE PEACE PROGRAM HELPS MILWAUKEE TEENS MANAGE CONFLICTS THAT DERAIL HIGH SCHOOL CAREERS.

BY MELANIE LAWDER, сомм '14

As Milwaukee Public Schools administrators promote the use of restorative practices to mend relationships and build healthier school communities, a grant awarded by Milwaukee Succeeds to Marquette's Department of Psychology will allow faculty members to evaluate those restorative practices. It will also provide resources to expand the program to more schools.

"This project provides an opportunity to partner with MPS to learn more about ways to support students' well-being," says Dr. Astrida Kaugars, associate professor of psychology, a co-investigator on the project with Dr. John Grych, professor of psychology. Eight participating schools offer a yearlong course reaching a total of 290 students and incorporating features such as one-onone restorative conversations and community-building practices. The researchers will use observations, questionnaires and focus groups to gather information and further the goal of expanding the program to more schools in the district.

Leah Harris, Comm '18

When Tamyah Jackson, a sophomore at Banner Preparatory School in Milwaukee, feels conflict bubbling with a peer, she leans on lessons she learned in Peace Works, a program of Marguette University's Center for Peacemaking. "Walk out. Take a deep breath," Jackson explains. "Fighting is not the answer." It's a message of nonviolence that Peace Works has promoted

since its founding in 1997 by then Marguette theology professor Dr. Michael Duffey. The program now operates in seven Catholic and public secondary schools in the city, cultivating skills in conflict resolution, peer mediation, social-emotional learning and other peace-building strategies. At Banner Prep — one of three behavioral reassignment schools affiliated with the Milwaukee Public Schools system that participates in Peace Works - the program is helping students who may have been expelled or removed from their traditional school for a serious disciplinary infraction. Peace Works partners

with schools, providing the curriculum and allocating program staff and resources to

help teach students about gratitude, responsibility and empathy, along with other social and emotional development skills. The end goal is to effect change in students, schools — and ultimately Milwaukee communities - by teaching youth methods to cope with their emotions productively and resolve conflict nonviolently. It's hard to imagine objectives aligning any better with the Klingler College's Center for Peacemaking as it pursues Marguette's mission to Be The Difference and finds contemporary relevance in Catholic and Jesuit traditions of social justice, service and peace promotion.

Outcomes of Peace Works-enrolled students at the behavioral reassignment

A **Outcomes of Peace Works**enrolled students at the behavioral reassignment schools are especially promising ... with recent data showing most students developing more positive views of peaceful solutions to conflicts

S

schools are especially promising, says program coordinator Lynn O'Brien, with recent data showing most students developing more positive views of peaceful solutions to conflicts after completing the curriculum. Their suspension and attendance records are also improving. Patrick Kennelly, Arts '07, Grad '13, director of the Center for Peacemaking, sees Peace Works playing a vital role with youth "in a city where violence and trauma are major obstacles to creating a culture of health." The program also gives six to eight Marquette students the opportunity to help teach the Peace Works curriculum each year. Says Kennelly, "It's helping on many different levels and, at the end of the day, it's a laboratory of what collaboration can look like."

EMPOWERING INTERNSHIPS:

FOUR QUESTIONS WITH COLLEGE INTERNSHIP COORDINATOR SARAH CURRY.

Coordinating internships is Sarah Curry's main responsibility in the



Klingler College of Arts and Sciences, but you won't hear her mention "placing" interns in their positions. Curry, Grad '16, considers herself a bridge between students, employers and faculty - a term that reflects her philosophy of empowering students in the process. When she's not meeting one-on-one with undergraduates, she can be found teaching an internship class or workshop, or conducting employer outreach. Here is some of what you need to know.

What's the first thing you tell students about participating in internships?

A message I give to students is that an internship can help you in career exploration. Even if you don't know what you want to do or what industry you want to work in, an internship can get the ball rolling toward finding out who you are and the type of work environment you prefer.

What strengths do Arts and Sciences students bring to their workplaces?

Arts and Sciences students really get that broader liberal artsbased curriculum in their education. It gives them strengths like critical thinking, problem-solving, creativity and communication skills — those transferable skills that employers constantly say they're looking for.

What advice would you give to employers looking to develop an internship position?

Employers have to be thoughtful about how much time they can dedicate to mentoring and supervising a student, and how many educational projects they can provide, because it really is supposed to be a learning experience. I also recommend considering more than just one major. For employers creating an internship, I encourage focusing on the skills and the traits they want an individual to have, rather than just the student's major.

What is the best thing you hear from students?

My favorite part of the job is hearing from students after they graduate about their progression from intern to professional, and how the internship was foundational for that progression. It's the best part of the journey to watch.

Kaley Rohlinger, Communication student

The internship office welcomes new partnerships with alumni and employers interested in hosting students in internships. Contact Curry at sarah.curry@ marguette.edu or 414.288.4434. And visit marguette.edu/arts-sciences/internship.

SCHOLARSHIP INITIATIVE

KEEP THE PROMISE ALIVE.

Scholarship gifts carry the promise of a transformational Marguette education for generations to come. Through scholarship, students learn to be problem solvers, fearless leaders and willing servants, ready to Be The Difference for others. Your gift, in the spirit of St. Ignatius, can inspire them to "go forth and set the world on fire."

To make a gift in support of scholarship aid, contact Molly Eldridge at 414.288.4497 or mary.eldridge@marquette.edu.



MARQUETTE UNIVERSITY

TALENT INFUSION

HISTORY-MAKING DUO

Marguette University Student Government President Meredith Gillespie, a senior majoring

in international affairs,

A NEW COHORT OF FACULTY MEMBERS GROWS THE COLLEGE'S EXPERTISE IN RACE. ETHNICITY AND INDIGENOUS STUDIES — AND THEY'LL SOON HAVE COMPANY.

BY PAULA WHEELER



66

bow we can share that eventually.

DR. SERGIO GONZÁLEZ

 $\mathbf{\mathfrak{O}}$

Dr. Sergio González (above left) may be Marguette University's first Latinx Studies professor, but he's no lone soldier. Hired with a cohort of scholars recruited to help develop a comprehensive new Race, Ethnic and Indigenous Studies program (REIS), González says the prospect of instant camaraderie was a major draw.

"Often universities hire an individual or two, and you can feel like you're out in the woods doing some of this work," says the assistant professor of history and expert in Midwestern Latinx

communities. "It's been great to have colleagues to talk with about how it's going and the important work we are doing and how we can share that work eventually." The "cluster

hire" approach of bringing in diverse

scholars who study and teach about race, ethnicity and intersectionality — the ways in which systems of power and institutions impact marginalized populations — "infuses the curriculum guickly and creates a better environment for (the scholars) as new people to our campus," says Dr. Heather Hathaway, acting dean of the Klingler College of Arts and Sciences, which is collaborating on the initiative with other colleges at Marguette and the Office of the Provost.

Joining Marguette last fall, González's five-person cohort includes three new assistant professors of philosophy: Dr. Kimberly Harris, Dr. Stephanie Rivera Berruz and Dr. Desiree Valentine, Comm '10 (pictured above, left to right). Collectively, their specialties embrace Africana philosophy, feminist philosophy, critical philosophy of race, queer theory and Latin American philosophy. Through an extension of the same program, the hiring of another five faculty members in Arts and Sciences is underway for the 2019–2020 academic year,

with the colleges of Communication and Education It's been great to have colleagues to also filling new talk with about how it's going and faculty positions. Helping students the important work we are doing and

grapple constructively with the challenges of living, learning and working in a diversifying society is not only

practical, but it also honors Marguette's Jesuit ideals, says Dr. Grant Silva, assistant professor of philosophy and interim REIS program coordinator.

Supporting new faculty members honors those ideals too. "Cluster hires, generally speaking, have higher rates of retention, especially for folks from non-represented groups in academia," says Rivera Berruz. "Navigating institutions in the midst of transition is easier with that structure in place to support you."



A college dean's job is a consuming one, as is a university researcher's. So, what's it like to wear both hats at once?



Psychology professor Dr. Douglas Woods is dean of Marquette University's Graduate School while continuing to study non-drug treatments for people on the obsessive-compulsive disorder spectrum, including Tourette syndrome. Woods' research focuses on behavior therapy

for people who engage in repetitive behaviors such as pulling their hair or picking at their skin. A current project incorporates wearable device technology and an app that detects when patients' movements suggest they're about to engage in a problem activity such as pulling hair. The movement triggers an app on a smartphone reminding the patient to divert from the harmful act to something else.

Wrapping up six years as dean of the Klingler College of Arts and Sciences this semester, Dr. Richard C. Holz remained a research chemist the whole time. Supported by a \$525,000 National Science Foundation grant, Holz and Dr. Brian Bennett, chair and professor of physics, have researched how to use an enzyme, nitrile hydratase, to convert nitrile chemicals into substances like polyacrylamide, used to make carpets, clothes and other products. The enzyme works at room temperature and pressure, making the process greener than traditional methods that require organic chemicals, Holz explains. A team of graduate and undergraduate students helps conduct this research.

Valuing his colleague's dual roles, Bennett says, "It's sometimes easy for administrators to lose sight of how difficult it is to find

French and Arabic, was searching for a place to belong when she came to campus three years ago. Her ties to student government date back to high school, so as a freshman, she ran for McCormick Hall senator and never looked back. Now. Gillespie and her vice president Valerie

Del Campo, a senior majoring in communication, are making history as the first all-female top executives in student government annals. She describes the presidential experience as humbling and empowering, and she hopes to establish a legacy of advocacy when she leaves. Gillespie says, "It gives us a chance to redefine both ourselves as leaders and MUSG as an organization that represents all students."

DOUBLE-DUTY DEANS

BALANCING A VARIETY OF DUTIES. DEANS FROM THE COLLEGE REACH DEEP TO ADVANCE SCIENCE AND SCHOLARSHIP.

BY ERIK GUNN

the time to carry out research and mentoring with all the other commitments faculty have."

For his part, Woods sees the dean's job and research role sharing goals - providing leadership, improving lives and solving problems. "I really love my research. It would be very hard to give up," he says. "When you're a leader and still practice in a discipline, it gives you a good understanding of what the people you are leading are experiencing, because you experience them too."

ASSOCIATE DEANS: RICH IN RESEARCH TOO

٠	Dr. James South, professor of philosophy and associate dean for faculty,
	conducts diverse scholarship in the humanities on topics ranging from
	early Renaissance philosophy to contemporary popular culture and
	television. He is co-editor of the recent book Westworld and Philosophy

- Dr. Heather Hathaway, acting dean, has a book due out this year; it uses literature written by interned Japanese Americans while they were confined during World War II to explore how the cultures of resistance differed from one camp to another.
- Dr. Andrew Kunz, professor of physics and associate dean for admissions, retention and experiential learning, advances research revolving around magnetization in nanostructures for information sensing and storage.
- Dr. Edward Blumenthal, associate professor of biological sciences and associate dean for research and graduate affairs, conducts genetic, molecular and physiological studies of a mutated gene that leads certain fruit flies to die in their first week of adult life, and researches urine production in the same species.

INSIDE ARTS AND SCIENCES RESEARCH

WHY WAR CRIMES GO UNPUNISHED

IN A NEW BOOK, A PROFESSOR EXAMINES THE DIFFICULTY — AND IMPORTANCE — OF ACHIEVING ACCOUNTABILITY.

BY ERIK GUNN



Can someone who commits a war crime really be blamed?

"Of course" seems like the obvious answer, but governments often don't act like that's the case, and even philosophers differ. In a new book she has co-authored — *War Crimes: Causes, Excuses, and Blame*, published by Oxford University Press — Dr. Jessica Wolfendale, professor of philosophy,

argues forcefully that real consequences should follow when someone commits a war crime.

"It seems sort of obvious to say that war crime perpetrators are blameworthy, but the reality is that they're very rarely held accountable," says Wolfendale, who developed these arguments at book length with Dr. Matthew Talbert, senior researcher at Lund University, Sweden, and associate professor of philosophy at West Virginia University, where she was on the faculty before joining Marquette in the fall.

In the 1968 My Lai massacre of villagers during the Vietnam War, Army Lt. William Calley was court-martialed and sentenced to prison but pardoned after three years. And when President It seems sort of obvious to say that war crime perpetrators are blamewortby, but the reality is that they're very rarely beld accountable.

DR. JESSICA WOLFENDALE





Barack Obama reviewed a Senate report on a Bush-era Iraq War torture program, he condemned the program but took no further action, saying that "we need to look forward as opposed to looking backwards."

The book first examines the causes of war crimes, then considers responsibility for them, Wolfendale explains. When combatants who commit war crimes see themselves acting out of necessity and for a good cause, some moral philosophers argue they cannot be fairly blamed for their acts. Others suggest that the excruciating pressure of combat mitigates blame for such crimes.

Wolfendale and Talbert reject both arguments. Whatever their reasons, people who commit war crimes are blameworthy for their "objectionable attitudes," Wolfendale says. "It's important here to emphasize the victim's perspective The torturer, despite his belief that torture is justified, is communicating to the victim that 'your welfare doesn't matter — I see you as someone I can treat in this way."

Prevention strategies include improved training for combatants, but also expanding the rights for military personnel to disobey orders in the face of pressure to commit war crimes, Wolfendale says. But she adds, it's still critical to assess blame frankly and follow through with meaningful consequences. "Prevention is only going to get you so far if nobody is actually held accountable."

REMEMBERING A BELOVED COLLEAGUE WITH A SYMPOSIUM

Dr. Raj Rathore, professor of chemistry, was the type of person



to spend seven days a week at work. He was creative, generous and trustworthy, says Dr. Qadir Timerghazin, associate professor of chemistry, a mentee and friend of Rathore, who passed away in February 2018, shortly after contracting a respiratory disease. In October, colleagues organized a memorial

symposium in Rathore's honor that brought together leading chemistry researchers from across the country. Molecules, materials and medicines, Rathore's primary research interests, were at the center of the discussion. It was a fitting way to remember a great intellect, a passionate researcher, a diligent colleague and a loyal friend to many appreciative Marquette colleagues.

Leah Harris, Comm '18

CHEMISTRY FOR HEALTH

Dr. William Donaldson is used to building molecules, not medical advancements.

Yet his most recent project falls under the latter category. The organic chemistry professor, working with Drs. Daniel Sem, Grad '13, Law '15, of Concordia University Wisconsin and Karyn Frick of the University of Wisconsin–Milwaukee, developed a "stripped down" form of estrogen that improved memory in mice with postmenopausal dementia.

The compound could lead to new memory-loss treatments for women, without the increased risk of breast cancer caused by other estrogen replacements.

The project turned personal for Donaldson when his wife was diagnosed with breast cancer. "That hit home," he says, "that potentially we were working on something that could have real human health applications."

Now, with Donaldson's wife cancer free, the researchers have formed their own startup company,

Estrigenix Therapeutics Inc., and had their work published in the *Journal* of *Medical Chemistry*. While human clinical trials are still "quite a way down the line," according to Donaldson, the team's work is off to a promising start.



Claire Nowak, Comm '16

SOLVING SPACE MYSTERIES AT THE SOUTH POLE

Dr. Karen Andeen likes to describe her job as space forensics; she studies remnants of violent cosmic events, like stars exploding and galaxies crashing into each other, to understand why and how they happened. "We try to piece back together the crime scene," says Andeen. With a new \$125,000 grant from the National Science Foundation, the assistant professor of physics

is working with the IceCube Neutrino Observatory in the South Pole to analyze six years' worth of data on cosmic rays captured by the observatory's optical module detectors. Part of the original team to build and deploy those detectors deep in the South Pole's icy crust in 2011, Andeen also recently worked with Marquette undergraduates to build prototypes of detector panels that were deployed at the pole earlier this year. Future students will be using these panels to collect new data.

Andeen's grant will fund one year of research: This fall, all American institutions involved with IceCube applied jointly for a large grant to continue their current research programs. In the future, they plan to update the current detectors and expand the overall detection zone from 1 cubic kilometer to 10 cubic kilometers, which would vastly improve the site's already unparalleled ability to detect subatomic particles from outer space. "We're basically trying to take over Antarctica," Andeen jokes.

Martina Ibáñez-Baldor, Comm '15

PLUMBING THE PENSION CRISIS

Dr. Michael McCarthy, assistant professor of social and cultural sciences, garnered two recognitions from the American

Sociological Association for his book, *Dismantling Solidarity: Capitalist Politics and American Pensions Since the New Deal*. The first was the Paul Sweezy Marxist Sociology Book Award,

given to the author of the best book in the area of Marxist theory and research published in the last two years. The other was an honorable mention for the Distinguished Book Award in the Labor and Labor Movements category.

Just as impressive, this is McCarthy's first book. *Dismantling Solidarity* explores the influence capitalism has on American pensions — in McCarthy's words, "how the fate of all working people came to be so intimately tied to the ups and downs of speculative financial markets." McCarthy is honored by the awards. He hopes that the book will also contribute to discussions that could help reverse the current retirement crisis.

Claire Nowak, Comm '16



NITROGEN'S **NEW HORIZONS**

A SURPRISE DISCOVERY OF A CATALYST'S MECHANISM OPENS DOORS FOR PLANTS — AND SPACE MISSIONS — TO SUPPLY THEIR OWN NITROGEN NEEDS.

BY PAULA WHEELER

Standing outside his office, Dr. Edwin Antony was admiring a colorful poster of the enzyme nitrogenase. Antony knew little about this particular cellular catalyst: his expertise was in DNA repair and recombination, not nitrogen fixation. He pondered, "Why does this enzyme have two similar functional sides?"

Antony's innocent question sparked his collaborative research that ultimately debunked the conventional wisdom about nitrogenase, showing that its two sides don't do the same chemistry simultaneously. Rather, they alternate, "sort of in a see-saw pattern," says Antony, an assistant professor of biological sciences who joined Marguette in 2015.

Understanding nitrogenase's mechanism of action — a continuing focus of Antony's research through support from a Department

> A Antony's innocent question sparked bis collaborative research that ultimatelv debunked the conventional wisdom about nitrogenase.

> > S

of Energy grant — has significant practical applications, both on the ground and far up in the sky. It lays a foundation for plants to fix their own nitrogen from atmospheric sources, reducing the need for fertilizer and the energy used to manufacture it. It could even help astronauts lengthen space exploration, as they deploy nitrogenase in microorganisms to convert waste products and carbon dioxide into fuel or even food in atmospheres like Mars'. Antony says.



In addition to research involving nitrogenase with implications possibly extending as far as space travel, Dr. Edwin Antony has other projects advancing rapidly, including the following:

• The National Science Foundation has awarded a team led by Antony \$250,000 for the purchase of a Total Internal Reflection Fluorescence Microscope at Marquette. It will provide key advantages in conducting research involving the visualization of singleprotein DNA molecules.

• In February, Antony was awarded a \$1.25 million grant from the National Institutes of Health to conduct research identifying the mechanisms of proteins involved in DNA repair, defects that are associated with cellular mutations linked to cancer and associated disorders. Results could potentially influence the future of cancer treatments.

Antony credits the nitrogenase discovery to his outsider's perspective and insatiable curiosity, the latter a trait that has fueled his fruitful research on DNA repair and recombination. His latest published articles also correct long-held beliefs, this time about the way replication protein A, or RPA, binds to single-stranded DNA. In designing a way to illuminate and better observe the dynamics of the multiple RPA domains that bind with DNA, he and his colleagues found that the domains long thought to be the weakest, actually form the tightest bonds.

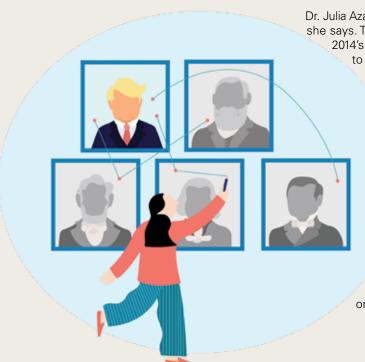
This knowledge enables the tailoring of targeted cancer therapies designed to displace the protective RPA from the DNA of cancer cells, so the chemo agents can do their damage. "Now we can screen for compounds that selectively block whatever domain we want to target," says Antony. In partnership with the Medical College of Wisconsin, funded by the National Institutes of Health, his team is doing just that.

Christian Bendayán. Cuando va cayendo el sol, 2000. Oil on canvas, 170 × 130 cm. Private collection. Image used with permissio



EXPLAINING THE SWAMP

MINING PAST ERAS FOR INSIGHTS, DR. JULIA AZARI HAS BECOME A GO-TO VOICE ON TODAY'S FRACTIOUS POLITICS



NEW HONOR, NEW AUDIENCE

Peruvian artist Christian Bendayán's imaginative paintings inspired Dr. Tara Daly, assistant professor of languages, literatures and cultures, to write an academic article that won an unexpected honor. The paper, "Christian Bendayán: Queering the Archive from Iguitos, Peru," in the journal Feminist Studies explores Bendaván's use of provocative images and popular culture to critique issues such as colonization and heteronormativity in the Amazon. Since Daly has been published primarily in Latin American journals, she calls the Claire Goldberg Moses Award from U.S.-based Feminist Studies an "honor and surprise." Daly says, "I am so glad to have been able to get Bendayán's work circulating within new critical circles because he is a phenomenal artist with a timely vision."

Leah Harris, Comm '18



BY MARTINA IBÁÑEZ-BALDOR, COMM '15

Dr. Julia Azari's start in the world of political commentary "kind of just happened," she says. The associate professor of political science started blogging during 2014's polar vortex, when it was too cold to do anything else. It also happened to be the dawn of a new era of political divisiveness. She joined the political science blog The Mischiefs of Faction, an independent blog located at Vox.com, and soon became a regular political contributor for the ABC-owned poll analysis blog FiveThirtyEight.

> With 13,700 followers on Twitter and as a pundit in prominent media outlets such as The Washington Post and NPR, Azari has become a go-to source on party politics and presidential rhetoric. During the recent midterm election, she offered insights into the tendency of a president's party to lose seats in Congress during midterm elections, citing rare instances in which seats in both houses were actually gained.

In one of *FiveThirtyEight's* most shared articles, Azari compares similarities between President Donald Trump and 19th-century presidents who had a more limited role in leading the executive branch while having a large public role influencing mores and opinion. Azari's ability to bring a unique historical perspective into modern political discussions has helped her become one of the more in-demand political commentators today.

BIG NEWS IN BIG DATA

Marquette, UW–Milwaukee and Northwestern Mutual join forces at the leading edge of data science, as it explodes in importance.

Data science at Marquette has been on a fast track in recent years — debuting one of the first undergraduate data science majors in the country in 2016 and launching the Center for Cyber Security Awareness and Cyber Defense in 2017, which has been designated a Center of Academic Excellence in Cyber Defense education by two federal agencies.

Then last summer came the blockbuster announcement of Marquette, the University of Wisconsin–Milwaukee and Northwestern Mutual partnering to create the \$40 million Northwestern Mutual Data Science Institute. The announcement is a game-changer that will boost data science study and research at both institutions, support core innovation strategies at the *Fortune* 500 financial services company and advance Milwaukee as a center of data science innovation.

Over the next five years, Northwestern Mutual and its foundation will contribute \$7.5 million to each partner university to fund expanded curricular offerings and additional data science faculty, including a new endowed professorship at each university. The gift represents the largest philanthropic contribution ever made to the Klingler College of Arts and Sciences. Providing further leverage, Marguette and UW–Milwaukee will each invest an additional \$12 million to expand faculty lines, extend the scope of data science education and increase research opportunities. To support this growth, Marguette will seek increased support from government agencies, private corporations and foundations.

Students and faculty in the college won't have to wait to feel the partnership's effects. Some current data science courses have been designated as Northwestern Mutual Data Science Institute courses. Similarly designated new courses will be added during the next academic year, with hopes that these campus-based offerings will also take advantage of Cream City Labs (shown here), a new innovation center in Northwestern Mutual's downtown campus.

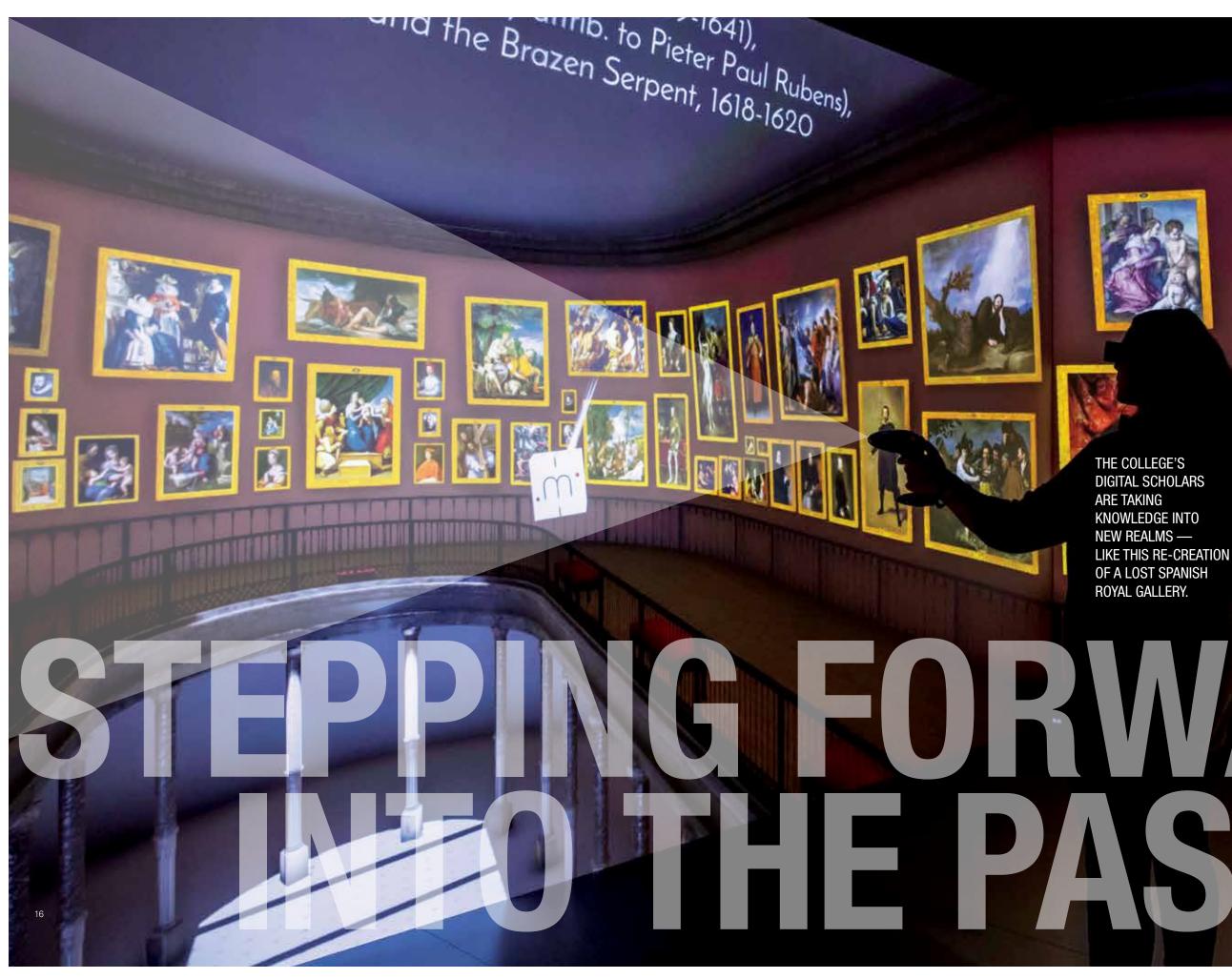
The university also is making courses more accessible to noncomputer science majors, including those from engineering, business, nursing and the humanities. "We're trying to broaden the use of data and the analysis of the data to make better decisions," says Dr. Thomas Kaczmarek, adjunct assistant professor of mathematics, statistics and computer science, director of computing and Marguette's project lead. This tracks the larger trend of companies and institutions across a range of fields gaining an advantage by using algorithms, advanced statistical methods and other tools of data science to wring value from large data sets, solve problems, set strategies and create new products.

As an industry leader in financial services, Northwestern Mutual sees the institute strengthening the regional technology talent pipeline on which it depends. Marquette shares this bullish vision, says Kaczmarek, and will use "the experience of partnering in the data science institute and working with industry partners to make sure that our curriculum is tuned to the professional needs of people who move into that environment." The partners will also collaborate on mentoring and internship programs, and seed K–12 STEM learning opportunities and precollege programming.

Collectively, these efforts will help put Milwaukee on the map for data science leadership. "Regions thrive when organizations creatively address common challenges from different perspectives," says Marquette President Michael R. Lovell. "Northwestern Mutual, UW–Milwaukee and Marquette are creating an exceptional, unprecedented partnership to further the economic renaissance underway in southeast Wisconsin." Leah Harris. Comm '18

















By Lauren Sieben



In 2014 Dr. Eugenia Afinoguénova took her class to view Salvador Dalí's The Madonna of *Port Lligat* at the newly opened Marquette Visualization Laboratory (MARVL)

he experience was eye-opening — not just for Afinoguénova's students, who moved in and around a 3D version of Dalí's surrealist depiction of the Virgin Mary, but also for Afinoguénova, who left the lab wondering if she had found a new way to take her research to the next level.

"When you see something visualized in 3D, it gives you ideas that otherwise you would not have," Afinoguénova says (pictured left). Her students, for example, noticed the light coming in from both sides of the painting a detail that would be easy to miss if

Afinoguénova was already

they had been viewing the original hung up on a wall. "This is what made the light go on in my brain," Afinoguénova says.

deep into her work on a book, since published, about the history of the Prado Museum in Madrid. While combing through

the art museum's archives, she discovered a photograph taken around 1875 that offered a rare glimpse into the Prado's Sala de la Reina Isabel - a room that was once the crown jewel of the museum, created for Queen Isabel II and home to the Prado's most prized pieces. But in 1893, the room was reformed, and many paintings were relocated or moved out of the museum.

The old photo showed only a portion of the room in its original state. But fresh off her visit to Dalí's Madonna at MARVL, Afinoguénova wondered if she could use virtual reality to re-create the old photo and show what it was missing.



The result is a virtual reality reconstruction of the Sala de la Reina Isabel that Afinoguénova created in collaboration with MARVL. The virtual gallery features the paintings that were visible in the photograph, and Afinoguénova fills in the missing sections using secondary sources to help reveal what the black-andwhite photo didn't show. Today, students and faculty can peruse a life-size, 3D re-creation of the gallery at MARVL, zooming in to examine each work of art in detail, down to the texture of the picture frame.

The experience isn't constrained to campus: Users anywhere can partake in the same 3D experience using virtual reality headsets that connect to a VRenabled website. The project team also created a web-based version of the gallery that's accessible by computer or phone.

the page and into the digital realm. Libraries are also playing an important project for Knox's course on the Black Death. role in facilitating digital scholarship at Marquette, the Raynor Memorial Libraries offer digital scholarship consultations on tools including 3D printing, e-publishing and data visualization. Outside of the academy, institutions like the New York Public Library are digitizing their collections, which is not only helpful to scholars but also brings documents from dusty basement archives into the public domain.

At Marguette, students are also taking the lead on digital projects. As the 50th anniversary of Milwaukee's open housing marches neared in 2017, Dr. James Marten, professor and chair of history, recruited two student interns to dig through university archives and learn about the political climate on campus in the late 1960s.

Lillian McGuire, previously known as Dolan McGuire, Arts '18, then a senior, and Angela Scavone, a junior majoring in secondary education

and history, spent the fall 2017 semester working on Protest@MU, a digital project that documents the history of dissent on campus. A web-based timeline plots protests from 1964 to 1971, and an interactive map offers an hour-by-hour view of the response of Marguette students to the 1970 shootings at Kent State University. It's one of several digital projects students have tackled under experiences to interactive maps and timelines, Marten's guidance.

McGuire also worked on a digital project for the epidemic-focused Black Death course taught by Dr. Lezlie Knox, associate professor of history. Using Google Tour Builder, McGuire brought public records and newspaper archives to life to illustrate the response to New York City's polio epidemic in 1916. Both the protest project and the polio project way that text cannot."

example of how digital tools are helping scholars view the humanities in a new light, moving their research off

Afinoguénova's

project is one

For scholars accustomed to working on research projects as a mostly solitary pursuit, digital projects also bring new opportunities to collaborate, along with some challenges. "It was a huge learning curve," Afinoguénova says. "It's a completely different process in terms of timing, communication ... even how you think." Ultimately, the interdisciplinary collaboration makes for a more interesting final project, Afinoguénova says. Her related book, The Prado: Spanish Culture and Leisure, 1819-1939, received the 2019 Eleanor Tufts Award, leading to her delivering a lecture introducing her book in Spanish translation to an audience of over 300 people at the Prado Museum.

Although digital humanities projects come in a wide range of formats, from 3D VR the projects are united by their ability to democratize scholarship and open access to documents that would otherwise be relegated to archives, Marten says. "Rather than simply being 'cool' projects, they actually add to our understanding of an event or an idea," Marten says. "They are able to present evidence in a

gave McGuire a new understanding of the study of history, she says.

"It personalized and localized history in ways that traditional academic research doesn't do very well," says McGuire. "When you work with digital media you really are reminded constantly of the fact that you're studying real people and the real events that actually happened to them." Katherine Stein, a senior majoring in English and history, developed a digital scholarship Using a WordPress website, she examined the roles various epidemics play in children's literature. Instead of following the more linear format of a traditional paper, Stein says the site allowed her to "broaden the scope of my research and tackle a whole bunch of disparate points in a more comprehensive way." An interactive timeline visually expressed the chronology of different diseases, authors and publication years, giving more context to her findings. Not only did the medium make the research more digestible and interactive, but it continues to make it more accessible. The site has received nearly 5,800 views from 69 different countries. And Stein has since applied the technology in other courses.

Tour faculty and student digital scholarship

• Virtually tour the Prado's Sala de la Reina Isabel at prado.nfshost.com.



 Find Protest@MU at protestatmu wordpress.com.



• Explore depictions of the epidemics in children's literature at epidemicsinliterature.wordpress.com



· Find a mapped guide of the response to New York City's polio epidemic in 1916 at epublications.marguette.edu/ dslgallerv/3.

A JOURNEY OF MORE THAN MILES

By Jeff Bentoff

Wanting out of the Jim Crow South. Dr. Arthur Bowman made a fateful decision. "I chose Marguette. Marquette chose me." When Dr. Arthur J. Bowman, Jr., Arts '63, then a young man, left the small industrial town of Bessemer, Alabama, and headed north to attend Marquette University, his journey was one of more than miles. He was leaping into another world.

The year was 1958, and Bowman had grown up in the Jim Crow South. He was ready to leave that tough, racially charged environment. "The schools in Alabama were segregated at that time," Bowman says. "I wanted to get out of that environment. I wanted to come north instead of applying to a traditional black school in the South. I was not a saint by any means, but I was very, very committed to Catholicism, and I wanted to go to a Catholic school. That's why I chose Marguette."

Earning a degree from Marguette in 1963 with a major in biology and minor in chemistry, Bowman eventually became an orthopedic surgeon. At 78, he is still practicing today in the Boston area. Generations back, Bowman's family worked as sharecroppers in a rural area near Selma, Alabama. His grandfathers and father moved to Bessemer to work in the steel industry, where a regular income didn't require good weather for crops.

Bowman graduated from Holy Family High School in nearby Birmingham. The students were black; the nuns and priests teaching them were white. "When I got ready to apply to colleges, Sister Veronica, who was the principal and my 12th- when serving on the National Alumni Board, grade teacher, said that she wanted me to apply to Marguette, Holy Cross and Notre Dame," Bowman remembers. "She didn't want me to go to the state school, because I might lose my soul if I went and two young children "just to be in the city." to the state school," he says with a chuckle.

Bowman was familiar with Notre Dame and Holy Cross because of their football teams. He said he didn't know much about Marguette, but "the city of Milwaukee interested me. At that time, they had Alabama in the late 1930s and early 1940s to teach the Milwaukee Braves, and they had won a national championship, the World Series. Milwaukee for some reason fascinated me. I chose Marguette. Marguette chose me."

Bowman experienced culture shock moving to a part of the country without explicit color barriers. "It took some getting used to, because I had never really socialized with white people. And here I was, thrown in this environment where there were only 13 black students on Marquette's campus. To be thrown into that kind of environment was a little bit strange for me."

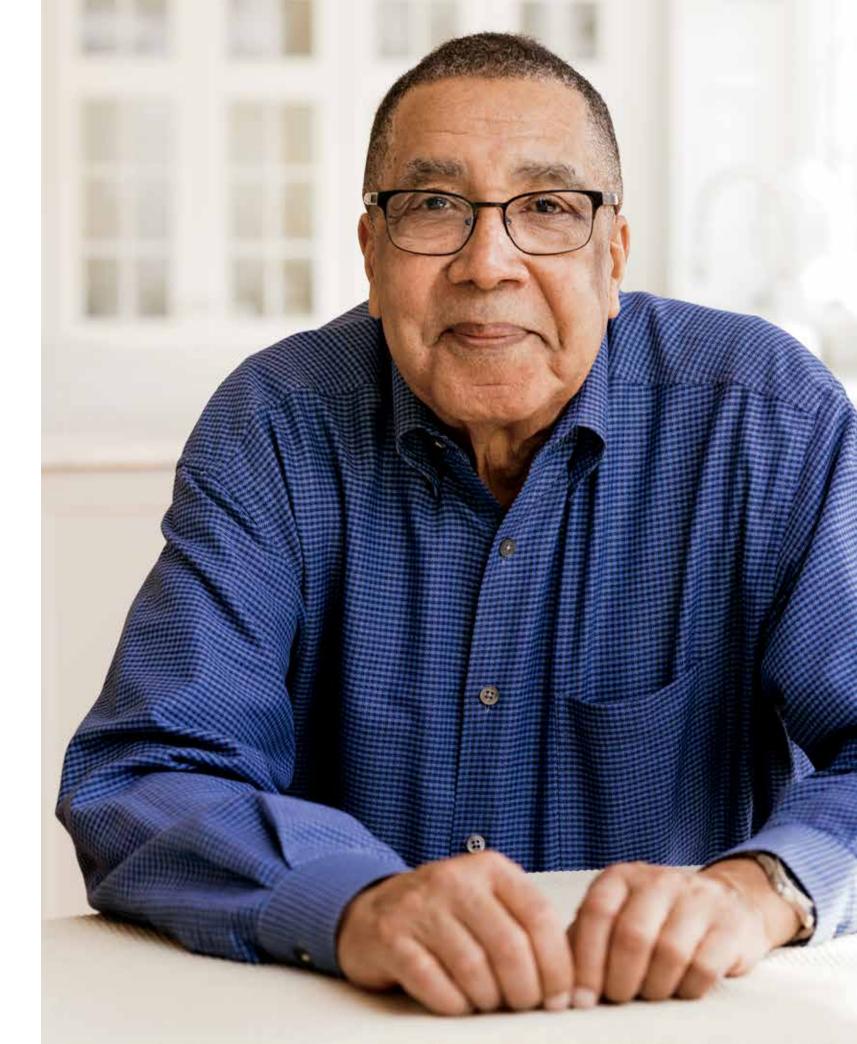
Still, he felt accepted by his white classmates and felt very little racial prejudice, although many hadn't had social interactions with African Americans. "It was an easy adjustment because everybody was so nice," he says. "They were just different. They were good people. Some of my closest friends are those students that I met at Marguette, and they remain so. It was a wonderful experience in that way."

When not able to get home for Thanksgiving, he was invited to classmates' homes in Wisconsin towns such as Watertown and Stevens Point and in Illinois too. "They were very generous," he recalls. Bowman said the biggest challenge he faced at Marguette stemmed from the lack of advanced courses available to him at his high school. This shortcoming left him at a disadvantage in subjects like mathematics and physics. "The nuns did a great job with us at Holy Family High School. but still, a lot of the students I encountered at Marquette had gone to good, good high schools, Jesuit high schools. They had an educational advantage over me, but with a little hard work and some struggle, I was able to get through."

After Marguette, Bowman earned a degree from Meharry Medical College in Nashville and realized his dream of becoming a physician in 1967, then moved to the Boston area for a residency in orthopedic surgery. He currently practices at South Shore Hospital, specializing in joint replacement and trauma care. He and his wife, Debra, have five adult children.

Bowman visited Marguette at least twice yearly recruiting students from the Northeast. In 1977, when Marquette won the NCAA men's basketball championship, he drove to Milwaukee with his wife "I left Milwaukee with a very, very positive attitude. and I still love the place," he says.

Bowman will always be grateful for his Catholic faith and the priests and nuns who came to young African American children. "And I'm also very grateful to Marguette because Marguette gave me an opportunity, and I wouldn't be here without having had that opportunity because the doors for advanced education in Alabama were pretty much closed to black people. And unless I had had the influences that I just mentioned, I wouldn't be here right now."



Bringing four history-making but very real human rights champions to campus for in-depth visits, an honors course helps students awaken their own inner activists.

By Allison Dikanovic, Arts '17

Nick Truog, Arts '17, recalls checking his old Android phone as a high school student in 2011 to keep up with the unfolding protests in Egypt. He remembers reading about the anonymous Facebook group that sparked the demonstrations against government abuses and the real reason behind the whole endeavor. corruption that would soon be referred to as the Egyptian revolution. He remembers feeling inspired by what felt like a new wave of global activism, the world changing before his eyes.

He laughs as he also recalls the time nearly six years later, during his final semester at Marguette, when he sat in the backseat of his professor's car with Wael Ghonim, the man who started that Facebook group that started a revolution. They were on their way to the Milwaukee Public Market to get some falafel.

Ghonim visited Marquette in the spring of 2017 as part of the Marquette Democracy Project, a collaborative program that has brought international democracy activists to campus for several days to engage with students in a variety of settings, as part of the international affairs capstone class.

Interactions like the one in the professor's car as Ghonim and Truog took the scenic route along the Milwaukee lakefront — were not part of the

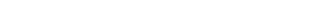
program's design per se, but they were perhaps

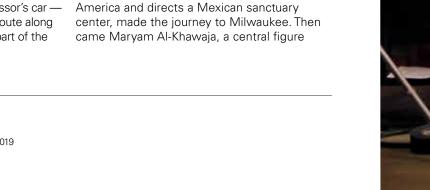
"When somebody becomes not some distant figure on a pedestal or at a podium, but someone you can share a meal and just chat with, maybe it's easier to reach into yourself and find a little bit of that person," says Dr. Barrett McCormick, professor of political science and a Democracy Project cofounder with departmental colleague Dr. Jessica Rich, assistant professor of political science.

Thanks to the Democracy Project, Marguette guickly became a place where students could encounter activists who had earned international renown for fearlessly resisting oppression and seeking justice. In addition to Ghonim, three other activists visited campus that semester, and one more just visited in February.

First, Friar Tomás González Castillo, who advocates for migrants as they make the treacherous journey northward from Central









Friar Tomás González Castillo, a leading advocate for Central American migrants, visited campus in 2017. A video interview is one of many ways activists interact with students.



in the democratic protests that took place at Bahrain's Pearl Roundabout monument in 2011 and a prominent champion of human rights and in the semester was Clare Byarugaba, an LGBT activist from Uganda who has led resistance to anti-homosexuality legislation and dangerous discrimination in the country, while mobilizing supportive allies all over the world.

This winter. Dave Archambault II (Lakota name: Tokala Ohitika, Brave Fox) former tribal chairman of the Standing Rock Sioux Tribe during the Dakota Access Pipeline protests, visited campus as a continuation of the project.

HOW DID MARQUETTE GET THESE WORLD-RENOWNED ACTIVISTS TO COME TO CAMPUS AND STAY FOR MULTIPLE DAYS?

The story includes inspiration, partnerships and probably "10,000 phone calls," but it starts planning - researching scheduled activists, with political scientists Rich and McCormick, in the fall of 2016, growing increasingly concerned with certain conditions they were observing. Here and abroad, they and others were seeing people feeling less committed to democratic norms and less confident in democratic institutions as those institutions struggle to address social problems. "My professional sense tells me that democracy is more at risk in the United States than it has been at any time since maybe the Civil War," McCormick explains.

That fall, the professors attended a talk on campus by Carl Gershman, president of the National Endowment for Democracy, and saw how he energized students in attendance. Imagining what they could do to keep that spirit alive, they hit on the idea of putting actual faces and names to the political theories and social movements that international affairs students spend semesters studying and incorporating in their papers. Thinking a capstone course

— the cumulative academic experience for students in many majors in the college —

was a good setting to test their idea, Rich got her teaching load rearranged so she could co-teach the next international affairs capstone course political reforms in the Middle East. Visiting later with McCormick. They also secured funding from the Department of Political Science, the Klingler College of Arts and Sciences and the Office of International Education.

Rich then started calling "anyone who I could think of who might have a connection to an activist, or just a wise person with advice to give." After hours of talking to friends of friends of friends, and cold calling, she found four activists from diverse places who were not only willing to come, but also charismatic. Through them, she found her fifth activist, Archambault, to continue the program this semester.

To increase engagement, Rich and McCormick made students responsible for much of the preparing interview questions for them and creating briefings to share with their peers before the visits. Once on campus, each of the activists spoke to the capstone class, delivered a public lecture and participated in a video interview. For each lecture, McCormick said he always had to scramble to find extra chairs because attendance was better than anticipated.

There were some incredible moments, like when Friar Castillo talked about the resilience he witnessed in those migrating through Mexico in the face of unbelievable challenges, or when Byarugaba talked about how she was as part of its Catholic, Jesuit mission publicly outed as a lesbian following the passing is a chief reason McCormick likes of an anti-homosexuality bill in Uganda vet still managed to organize for the annulment of that law while in hiding and facing threats to her life. defending democracy and pursuing But even better were the conversations that flowed between activists and students over dinner afterward at McCormick's home.

An international affairs major and a student in on defending these kinds of values a digital media class from the Diederich College and doing these kinds of things." of Communication that filmed and produced the video interviews, Catherine Bell, Arts '18, asked for a leadership role in the project as soon as she learned about it. "I hadn't had an opportunity to bridge my interests in digital media and international affairs like that before. It's what I always wanted to do," she says. She loved getting to know each of the activist's distinct personalities — for example, how Al-Khawaja's bold presence impacted a room, recalling, "She didn't seem to have any fear in her at all."

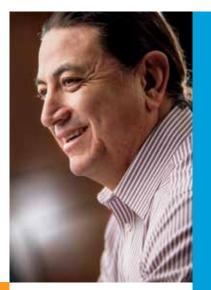
The program worked, Bell says, because it brought new issues and perspectives into the "Marguette bubble" where they were "harder to ignore." She feels more committed to defend human rights and more aware of the role of the U.S. in humanitarian struggles all over the world, referencing arms deals as a way that the U.S. contributes to some abuses the activists experienced.

In addition to gaining a renewed appreciation for and sense of urgency in protecting democratic institutions, Truog will never forget that day when he grabbed lunch with Ghonim. "These activists, once you sit down and get to know them, are just people. The project was so powerful because you realize that you can do what they did," says Truog, who now works for the Democratic Party of Wisconsin.

In identifying with the visiting activists and awakening their own inner activists, Truog and fellow students realized dreams their professors had for them. "I wanted students to more concretely see what activism actually looks like, to show that it's not some mysterious process," says Rich. "They did that." Now the academic pair are considering ways to bring the concept to other courses. Marquette's commitment to social justice

ACTIVISM UP CLOSE

working at the university. He sees an inextricable connection between justice. "This is what we have to do to keep Marquette, Marquette," McCormick says. "We have to work



David Archambault II (above), former tribal chairman of the Standing Rock Sioux Tribe, visited campus in February and discussed lessons from his role in the 2016 Dakota Access Pipeline protest.



Clare Byarugaba, larger photo, whose advocacy helped roll back Uganda's anti-homosexuality law, opened up during her campus interview. Inset is Friar Castillo. Find all interviews at mudemocracyproject.com.



For students from the college, ROTC is a gateway to immersion in foreign lands, languages and cultures, plus an understanding of the lives of people overseas that can help them become more effective global leaders.



By Guy Fiorita Additional reporting by Kaley Rohlinger, Communication student

Photography supplied by students.

When Margaret Plaza signed up to spend much of last summer studying at the University of Nizwa in Oman, her plan was simple: learn the language, experience the culture and return to Marquette to continue her studies in biomedical sciences.

It didn't work out that way. Spending her days immersed in the study of Arabic, first at Marguette and then in Oman, she fell in love with the language and couldn't see herself giving it up. "The first thing I did when I got back was switch majors," says Plaza, a Marguette sophomore and member of the campusbased Golden Eagle Battalion of Army ROTC. "I now want to go into military intelligence, and changing my major to international affairs with a minor in Arabic will help me be successful."

Plaza's life-changing experience was part of an ROTC program called Project GO, a Department of



a school.

Defense initiative aimed at improving the language skills, regional expertise and intercultural communication skills of future military officers. The program not only serves as a gateway for Marguette cadets and midshipmen; the university also serves as gateway to the program, taking in up to 18 students per year from schools around the United States and preparing them for their time in Oman with a weeklong intensive introduction led by professors from Marguette's Department of Languages, Literatures and Cultures. The Office of International Education, led by its director Dr. Terrence Miller, administers the program at Marquette.

And Project GO is not the only program that gives Golden Eagle cadets the chance to experience other cultures. Jeff Cooley, a senior majoring in criminology. took advantage of another ROTC offering, the Cultural Understanding and Leadership Program or CULP, to spend three weeks last summer in Senegal, helping local communities on a variety of public assistance projects and joining — even leading — Senegalese cadets on training missions. All told, five Marguette students, including two from the Klingler College, had ROTC experiences last summer in four countries

- Argentina, Mongolia, Oman and Senegal.

Before they are accepted, each Project GO applicant takes the Intercultural Development Inventory assessment, a key test of their readiness for what may lie ahead for them, says Dr. Enaya Othman, assistant professor of languages, literatures and cultures, and Project GO's academic director at Marguette. "We need to determine if they have a desire and ability to recognize cultural differences and understand why they exist through understanding of the culture," she says.

With students supplying the empathy and Project GO bringing them into enveloping contact with a foreign country, the program permanently changes students, says Othman. And a key step in preparing them for that transformation is the responsibility of the Arabic program — getting the cadets up to speed through a five-day intensive Arabic language course. Combined with their study in Oman, that's enough for cadets to return with a "mid-to-high intermediate proficiency, depending on the level they had when they began the study abroad program," she says.

That's a message that resonates with cadets ... as students at a Catholic, Jesuit university whose mission calls them to use their lives and their military service, whenever possible, to seek peaceful solutions and to improve the lives of others.

After that introduction and flights occupying the better part of 24 hours, Plaza arrived at the University of Nizwa near the Al-Hajar Mountains in northern Oman, where she studied Arabic every weekday from 9 to 5. For cadets who will become officers stationed in the Middle East, these language skills will be profound difference-makers, says Lt. Col. Ioannis Kiriazis, professor of military science and chair of Marguette's Army ROTC. "As I often explain to our cadets, learning a foreign language is like looking through the eyes to the soul of a different culture. Common understanding of a language is one of the most effective ways to build effective communication, and through time, can really be a contributing factor to building trust."

On weekends, Plaza had time to explore Oman and immerse herself in the culture. "We broke down a lot of stereotypes on both sides. We all learned that you have to first meet individuals to justify any judgement of them."

For Cooley, CULP put less emphasis on language but offered especially rich opportunities to engage with Senegalese people and customs, while handing him new opportunities to lead Senegalese military cadets in vehicle search training and other exercises, something he hadn't yet tackled back home.

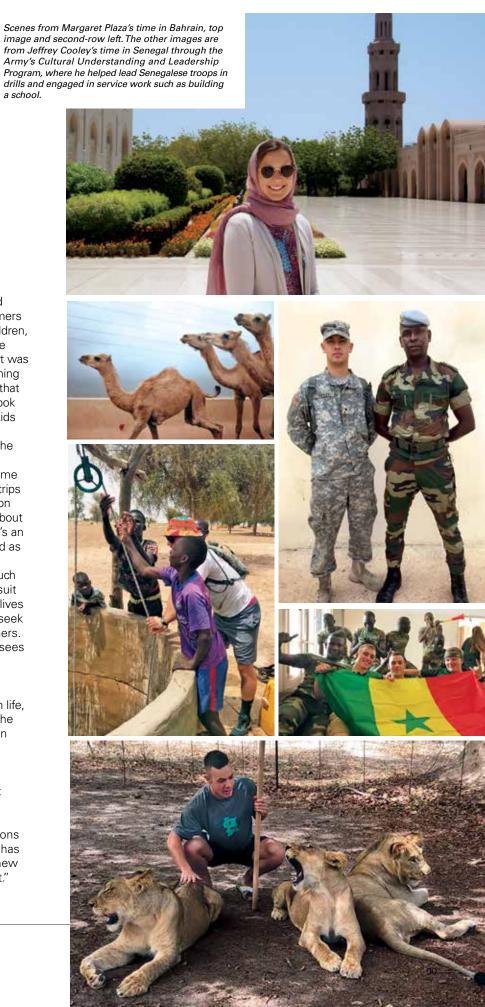
Based in the town of Saint-Louis, Cooley alternated these military experiences (where he used a translator to communicate with his French-speaking counterparts) with service projects such as painting a mural at a

children's shelter, helping to construct a school and working with Peace Corps volunteers to teach farmers new techniques. "We got to interact with local children, playing soccer or teaching them better hygiene," he recalls. "Their living conditions were horrible, and it was touching to see how grateful they were for everything we did, even though I felt we weren't really doing that much for them. We didn't change their whole outlook on life, but the connections we made with those kids were awesome"

Whether the program is Project GO or CULP, the outcomes are similar, says Kiriazis, who leads Marguette's ROTC program from its academic home in the Klingler College of Arts and Sciences. "The trips expand their intellectual aperture through interaction with a foreign culture and make our cadets think about the world and appreciate differences in culture. It's an important part of their development as cadets and as human beings," he savs.

That's a message that resonates with cadets such as Cooley and Plaza as students at a Catholic, Jesuit university whose mission calls them to use their lives and their military service, whenever possible, to seek peaceful solutions and to improve the lives of others. Through her involvement in Project GO, Othman sees how it leaves behind a lasting legacy in students. "The personal interactions help transform their identity. Acceptance and sensitivity toward other societies are now at their core," she says. "Later in life, they communicate this awareness with others in the military and government and that informs American foreign policy. When working abroad, their cultural competence informs their interactions with non-Americans and facilitates good relations between nations. That will help them avoid errors that result from unfamiliarity with international cultures."

The beneficiary of this training, Plaza says attending Project GO was one of the best decisions she has ever made. She says, "For anyone who has a chance to go to a different country, explore a new language and culture, I would simply say — do it."



Marquette University, P.O. Box 1881, Milwaukee, Wisconsin 53201-1881 USA

EXTRA-ORDINARY THINKERS. DECISIVE DOERS.

We know that no matter what happens, the world will always need ethical leaders. Leaders who are as smart as they are passionate. Who act for the good of others. Who demand change. Within the Klingler College of Arts and Sciences, we are preparing those leaders. As they work directly with faculty, they learn how to apply those interests. As they develop in an environment of excellence and integrity, they understand how to act with and for others. Through this process, they are transformed. They are ready to go out into the world, and step up to become the people the world needs.



MARQUETTE UNIVERSITY

marquette.edu/arts-sciences