

uncg research

Spring 2017

Research, Scholarship and Creative Activity



GOING GLOBAL

A brand new approach to business education, X-Culture opens up a world of data pg.14

UNCG Research is published by
The Office of Research and Economic Development
The University of North Carolina at Greensboro
1111 Spring Garden Street
Greensboro, NC 27412
336.256.0426

Vice Chancellor for Research and Economic Development
Dr. Terri L. Shelton

Associate Vice Chancellor for University Communications & Chief Communications Officer
Jeff Shafer

Editors-in-Chief
Mike Harris & Sangeetha Shivaji

Art Directors
Mike Dickens & Mark Unrue

Photography
Mike Dickens

Contributing Authors
Robin Sutton Anders
Alyssa Bedrosian
Chris Burritt
Mike Harris
Eddie Huffman
Whitney J. Palmer
Susan Kirby-Smith
Tom Lassiter
Robert Lopez
Dawn Martin
Sangeetha Shivaji
Mark Toczak

Contributing Editor
Debbie Freund

Contributing Photography
Martin W. Kane

Copy Editors
Alyssa Bedrosian, Eden Bloss, S. Grace Hutko
& Susan Kirby-Smith

Cover design includes artwork created by Freepix.

UNCG Research is printed on an FSC certified paper with 10% post-consumer recycled fiber. No state funds were used to print this magazine.



This year, UNC Greensboro celebrates 125 years of impact. Our upcoming anniversary events give us a wonderful opportunity to acknowledge our successes — and to look forward.

Our new strategic plan, building on our historic strengths, plots UNCG's path to the future: Our scholars will focus on transformation — of knowledge, of our students, and of our region. And we will bring these transformative efforts and resources to bear on three areas of focus in particular.

The first of these areas, health and wellness, includes the many dimensions necessary for humans to grow, to cope, to adapt, and to thrive. As is evident in this issue of our magazine, UNCG's expertise in this sphere is expansive. We are improving sexual health communication between fathers and sons. We are establishing new methods to diagnose and treat PTSD. We are leveraging big data to advance how we address alcohol abuse. And we are zeroing in on tiny carbon nanodots to foster cardiovascular health. Whether we're combating disease or examining more abstract factors related to the human condition, our work is about promoting healthy lives.

We are also looking at the health of communities as a whole, a hallmark of UNCG's second area of strategic focus. Vibrant communities are healthy communities. This relationship is no better illustrated than in the work of the Center for Housing and Community Studies, whose collaborative efforts — addressing the links between substandard housing and pediatric asthma, examining opiate addiction in rural communities, and combating housing discrimination — highlight the importance of resident health for flourishing communities.

Vibrant communities require a commitment to innovation, cultural enrichment, and open intellectual exchange. Through the Community Arts Collaborative, our College of Visual and Performing Arts is bringing the highest quality arts and education to local children and adults. Our scholars know that UNCG, Greensboro, and our surrounding region have a shared fate, and we are dedicated to making that future bright. Whether it's a new way of conceptualizing Southern studies or the transformative use of old typewriters to capture a nation's thoughts, UNCG's artists and writers are building a thriving space.

But, in an increasingly connected world, we know that we must also take our community-building efforts global. In these pages you will learn about UNCG's new joint civil-military interaction research and education network, which brings international actors from all walks of life together to build peace. And, in our cover story, the Bryan School of Business and Economics takes on the challenges of preparing students for the global workplace through the X-Culture project. UNCG's third strategic focus, on global connections, encompasses the multiple ways in which individuals, organizations, and geographic and civic entities engage with each other around the world.

The last 125 years of excellence have brought us to an exciting place ... poised to take giant steps that reflect our unique position, capacity, and responsibility as a public, urban research and community-engaged university. This issue offers you, our readers, a front row seat at the beginning of our next journey.

TERRI L. SHELTON, PHD
Vice Chancellor for Research and Economic Development

For more information about research at UNCG and the Office of Research and Economic Development, go to research.uncg.edu.

FEATURES



14 **X-panding the Classroom**

Global Connections
X-Culture offers global business experience to students, plus a world of data.



18 **Building Blocks**

Health & Wellness
Data crunching and cross-city collaborations to make neighborhoods stronger.



22 **Civics Education**

Vibrant Communities
Do tough political issues have a place in high school classrooms? Absolutely.



26 **Is It Worth It?**

Transformation
Getting the best bang for your buck in health interventions – including for alcohol use.

uncg research

DEPARTMENTS

- 2 **rightidea** Asylums to prisons, peacemaking, barbershop-based health interventions, PTSD treatments & more
- 10 **researchexcellence** Top senior research award goes to Professor of Philosophy Michael Zimmerman
- 12 **studentprofiles** North Carolina diaper banks and deviance in ancient Athenian burials
- 30 **theword'sout** The art of democracy, poet on the good road & coming to terms with the modern South
- 33 **up&coming** Nanomaterials for green energy

BREAK THE CHAIN

America imprisons more of its population than any other nation. Why?

As the nation's largest jail, Chicago's Cook County facility spans eight city blocks and houses 9,000 inmates.

It also has another distinction: by default, it's the largest mental-health facility in the United States.

To Dr. Anne Parsons, this is not surprising.

Her research shows that as state governments shuttered decades-old, often-barbaric mental asylums starting in the 1950s, society was left with an unintended consequence: the mass incarceration of people with psychiatric disorders. And, in jails and prisons, these individuals rarely get the help they need.

"It's deeply saddening, but I am optimistic that if we keep bringing this to the public's attention, perhaps we can break the cycle," says Parsons, an assistant professor of history.

Her recently finished manuscript, "Asylum to Prison:

Deinstitutionalization and the Rise of Mass Incarceration," delves into this transition and offers guidance on needed reforms. The book, to be published in 2018 as part of the UNC Press series "Justice, Power, and Politics," is intended for history scholars as well as for professionals who work for prison and mental-health reforms.

Parsons also plans to curate a traveling exhibition on this work for more than 100 libraries, universities, museums, and community centers nationwide. The exhibition, sponsored by the National Library of Medicine and funded by the National Institutes of Health, will likely open in 2019.

"My goal is to share this research with a broader audience and start conversations across the country," she says.

Parsons' book opens with the story of the Philadelphia State Hospital at Byberry, which held up to 6,000 people in the mid-20th

century, making it one of the nation's largest asylums. Committed against their will, people stayed for decades — often enduring horrific treatments and abject neglect — without any legal protections for release.

As the public learned more about the inhumane treatment there, and as funding for mental illness declined, Byberry began a process of deinstitutionalization that was repeated across the country. Between the 1950s and 1990s, patients with mental illness were released in droves, but often without medical aid, housing help, or educational assistance.

"While the impetus to release people was positive, there weren't available community services to support them," Parsons says. As a result, many found themselves in boarding houses — lost, alone, struggling with mental illness, and unable to integrate into society.

At the same time, a perfect storm was brewing: police forces were expanding, the war on drugs was beginning, and there were stricter sentencing guidelines and an upward tick in the criminalization of mental illness. All this led to a rise in mass incarceration.

According to a 2015 article in *The Atlantic* magazine, "at least 400,000 inmates currently behind bars in the United States suffer from some type of mental illness — a population larger than the cities of Cleveland, New Orleans, or St. Louis."

Similarly, the National Alliance on Mental Illness estimates between 25 to 40 percent of Americans with mental illness will find themselves incarcerated during their lifetime.

Parsons, who has visited jails and prisons over the years, says today's psychiatric units bear an eerie resemblance to the macabre asylums of yesteryear. "You'll find only a handful of psychiatrists on staff — stark rooms with bars on the windows and benches and a TV or two," she says. "How is it that we keep responding to people in a way that's not therapeutic?"

Part of the solution could be to redirect some prison funding into mental health and support services, she argues. It has worked before.

When Byberry closed in the 1980s, the Mental Health Association of Southeastern Pennsylvania sued to ensure patients would receive adequate housing and wraparound services. "That closure was an example of how this can be done right," Parsons says. "It's about putting people at the center rather than just closing an institution."

She hopes that research will help build an improved future. "By better understanding these cycles of confining people, we're in a better place to break them."

By Dawn Martin • Major photography by Martin W. Kane, Jumpsuit Project photography by Todd Turner • Learn more at <https://his.uncg.edu>

ON DISPLAY Last fall, Parsons and graduate students in the museum studies program brought the national "States of Incarceration" exhibition to the International Civil Rights Center & Museum in Greensboro. UNCG and 20 other universities contributed to the traveling exhibit, which explores the roots of mass incarceration.



One of the "States of Incarceration" exhibit guides and community participants was Sherrill Roland, a UNCG MFA student.

In 2013, Roland served nearly a year in prison for a crime he didn't commit. Today, he has been fully exonerated.

He feels compelled to share his experience in a deeply personal and sometimes shocking way. He wears a bright orange, prison-style jumpsuit around campus.

"The point is to throw people off and to get a reaction," says Roland, 32. "People pose questions instantly."

With the support of Assistant Professor of Art Sheryl Oring, Roland conceived of "The Jumpsuit Project" as a performance-art piece to start conversations. His goals are to shed light on what it's like to serve time, to tackle the stigma of incarceration, and to promote support for those in prison and their families and friends.

"Incarceration was the worst thing I'd ever experienced," Roland says. "Before it, I was really naïve. I think we can all be caught up in our bubbles, and if something doesn't affect us personally, we won't know the inner workings."

He hopes his project will change that. "Maybe being able to share my story can help people understand what it's really like."



ON A MISSION Last year, UNCG launched a new joint civil-military interaction research and education network, directed by Dr. Tom Matyók. The network's inaugural symposium attracted civil affairs personnel, military officials, and professors. Next year, UNCG plans to introduce a joint civil-military interaction concentration to its peace and conflict studies master's program.



PERSONAL HISTORY Associate Professor Matyók (top photo inset, center; lower inset, left) first developed an interest in peace building in the military, where he served 23 years.

Peacemaker

Service in the U.S. Army meant one thing.

"In my view, the purpose of the military is to build peace. Not war," says Tom Matyók, associate professor of peace and conflict studies.

Before joining academia, Dr. Matyók served 23 years. He was an enlisted soldier, a non-commissioned officer, and a commissioned officer. He was with the 24th Infantry Division (Mechanized) during Operations Desert Shield and Desert Storm.

His career has been one long peace-making operation.

"Building peace is hard. After a war or military confrontation, moving to reconciliation and past the trauma can take generations."

There's one essential component the military has long ignored: religion.

Overlooking local religious leaders — and local religion — does not make sense, Matyók explains. When armies have left, when nonprofit agencies have moved on, religious leaders remain.

"In many conflicts, the only positive force that remains during and after the fighting is a religious one," he says. They can ensure peace.

As an academic, Matyók served as Senior Fellow at the U.S. Army Peacekeeping and Stability Operations Institute, U.S. Army War College, from 2014 to 2016. There, he taught graduate courses on "Religion and Violence" and on "Conflict Studies: Analyzing and Assessing Violent Conflict." Many of his students had already seen deployments in Afghanistan and Iraq.

A frequent student response: "I wish I had this knowledge before I was deployed."

Matyók found that the curriculum of military education included almost nothing on religion. "Very little was being done to prepare these soldiers," he says. "It's a gap."

He has published widely on the topic, including the monograph "Religion: The Missing Component of Military Education" and his article "The Vital Role of Religion in Civilian/Military Interaction."

He co-edited the book "Peace on Earth: The Role of Religion in Peace and Conflict Studies" in 2014. "We looked around the world for work demonstrating the peace efforts we're talking about."

One example was South Sudan and the multiple actors there working to reconcile in the face of violence — each guided by their individual religious beliefs. Another was in Nigeria, where an imam and a pastor set aside their differences to work toward a lasting peace.

"Conflict resolution is a virus," Matyók explains. "You hope it'll enter a nation's body and spread."

Currently, Matyók is working with colleagues in the U.S. and Germany, producing white papers and presenting at symposia, to provide civil and military actors with insights on how to engage religious leaders in conflict prevention and post-conflict reconciliation.

This past summer, Matyók was invited to present on the subject in Ulm, Germany, at the Multinational Joint Headquarters, which provides crisis management operations for the United Nations, NATO, and the EU.

By Mike Harris • Main photo by Mike Dickens, inset photos provided by Tom Matyók • Learn more at <http://civ-mil-network.wp.uncg.edu>



BIRDS, BEES & BARBERSHOPS

African American barbershops have long been places for the black community to open up, to speak freely.

And Dr. Tanya Coakley is looking to them in her attempt to help foster better health communication between fathers and sons.

“Researchers have found that clear sexual health communication between African American parents and youth is associated with increased rates of condom use, delaying sex, and abstinence.”

Coakley, a professor in the Department of Social Work, recently received a prestigious R15 grant from the National Institute of Child Health and Human Development, to study how African American fathers talk to their sons about sexual health. One of the study goals is to reduce sexually-transmitted diseases and teen pregnancy.

She has enlisted a network of barbershops in Greensboro, Charlotte, and Reidsville to help recruit participants.

"One of the main issues with research in health involving black men, is that they may not want to participate; it can be hard to reach them," Coakley says. "Barbershops are pillars in the African American community. People respect them. They turn to barbershops to get information or vet programs. So that seemed

like a natural resource to tap into."

The research includes collaborators at NC A&T State University and Duke University.

Coakley, who has been with UNCG for 12 years, co-directed a similar study in 2015 that involved 29 African American fathers of middle-school-aged sons. Researchers hosted focus groups in barbershops.

In the current study, Coakley will focus on pre-adolescent sons.

"We would like to reach boys before they engage in sexual activity," she says. "We're helping fathers think about what to say to their sons and when to say it. It may be at a time when they're driving with their sons or maybe sitting on the couch watching a game."

According to the Centers for Disease Control and Prevention, African American males between the ages of 13 and 24 account for half of HIV infections among all youth. They are also disproportionately affected by other STDs such as chlamydia, gonorrhea, and syphilis.

Coakley is determining the frequency of the conversations taking place and examining the content of those conversations.

"We'll talk to fathers and sons," she says.

"Because sometimes the father's report will be different from the son's. They may think they said something or covered a topic, but the son heard something different."

What fathers should not do, Coakley has found, is glorify sex in sharing their own experience or, for that matter, solely talk about the negative aspects of sex, which might cause sons to dismiss anything else they have to say.

But many fathers, Coakley says, don't feel prepared to talk about sex with their sons.

"They may not feel they have the knowledge," she says.



CUT TO CONVERSATION Coakley (lower inset, right) visits Prestige Barber College. Owner Gene Blackmon (top inset, left) is one of her study partners. The community leader supports a host of entrepreneurial efforts aimed at helping African American adults and youth succeed.

"Their fathers may not have had those conversations with them. So it's sort of like a cycle. They can't teach their sons what they don't know."

Some fathers, she found, also fear being too forthcoming.

"They're concerned they might give their sons too much information, or that their sons might be intimidated and not want to have a second conversation," Coakley says. "Fathers want to give just enough information in a way that encourages sons to keep the lines of communication open."

By Robert Lopez • Photography by Mike Dickens
Learn more at <http://lhs.uncg.edu/wordpress/sok>

REWIRE

Memories are subject to change, just as anyone comparing childhood stories with a sibling or arguing about past events with a significant other knows. The way we respond to our memories varies, too, says Blair Wisco, assistant professor of psychology. She gives the example of an Iraq War veteran suffering from post-traumatic stress disorder.

“He may be struggling with vivid memories of a trauma, like the death of a fellow service member. In therapy the veteran might tell his psychologist exactly what the roadside improvised-explosive device looked like,” she says. He might detail the landscape and describe how his friend fought for his life. Ideally, each time he talks about the memory in his therapist’s office, it will bother him a little bit less.

“But if that same veteran, driving down the road, were to see a discarded trash bag resembling an IED, he might experience an entirely different — possibly much stronger — emotional response in that setting,” Dr. Wisco explains. And unless psychologists have a tool to measure that real-world response, they have no definitive way to track the progress of their PTSD treatment.

In a recent pilot study funded by a UNCG Faculty First grant, Wisco has introduced an innovative new method for monitoring a patient’s physiological reactions to trauma memories.

Veterans diagnosed with PTSD wear ambulatory heart monitors, which track their fight-or-flight responses 24 hours a day for three days in a row. These participants carry an iPad with them, and at random, frequent intervals throughout the day, they’re prompted to answer a quick survey on whether or not they are thinking about their trauma. They also rate the

intensity of their emotions.

Looking at data from their heart monitors, Wisco can examine participants’ physiological arousal throughout the day. “We know that, in the lab, participants with PTSD show strong physical reactions when they are thinking about their trauma,” Wisco says. “But this has never been tested in a naturalistic environment.”

Wisco describes two advantages to this groundbreaking technology: First, therapists can measure their patients’ physical response. “General practitioners don’t just ask you how you’re feeling at your annual physical,” she says. “They take your blood pressure. They measure your heart rate. We don’t have those tools for psychiatric disorders yet, but this is a step toward establishing biomarkers that measure the progress of PTSD treatments.”

Also, the use of ambulatory heart monitors is more ecologically valid. In other words, “we are actually measuring patients’ symptoms as they experience them instead of asking at the end of the week when people have a hard time remembering,” Wisco explains.

Wisco plans to conduct in-depth follow-up studies, collaborating with colleagues in biology and nanoscience. Ambulatory heart monitors might help match patients with specific types of treatment. “Up to a third of people who receive the best treatments still have PTSD,” Wisco says. “There is a lot of room for improvement with existing therapies, and this technology could help doctors identify what’s right for their patients.”

By Robin Sutton Anders • Inset photography by Mike Dickens • Learn more at <http://www.uncg.edu/~wiscolab>



ROAD TO RECOVERY Effective PTSD treatment has meaningful public health implications. Wisco (top inset photo, with graduate student on left) co-authored a paper finding that veterans with PTSD have much higher suicidal ideation rates. “We have data that suggest if you treat people’s PTSD, suicidal ideation goes down,” she says.

HEALTHY VESSELS

It’s no secret that controlling cholesterol levels helps ward off cardiovascular disease, particularly the build-up of plaque inside arteries. But you might not know it’s equally important to control inflammation in blood vessels.

Identifying the best ways to do so can have significant clinical implications. Current treatments require steroids and non-steroidal anti-inflammatory medications, which can produce negative side effects.

That’s where Associate Professor of Biology Zhenquan Jia comes in. With National Institutes of Health funding, he’s investigating whether it’s possible to control tumor necrosis factor-alpha (TNF- α), a cytokine that increases the number of white blood cells that stick to inner blood vessel linings, contributing to inflammation.

“Getting a better understanding of what prompts and what combats vascular inflammation can help us, potentially, reduce the incidence of atherosclerosis,” he says. “The beginnings of atherosclerosis are complicated, but there’s growing evidence that inflammation plays a fundamental role.”

Answering this question is important, he says, because atherosclerosis — the hardening and narrowing of blood vessels — contributes to heart disease, the leading cause of death in the United States.

To search for answers, Dr. Jia is investigating two substances. First, he researched genistein, a plant-derived compound common in foods found in Asian diets, such as soybeans. He has demonstrated, via mouse-model experiments, that genistein reduces TNF- α activity, making the natural compound a candidate to combat vascular inflammation. Jia also found that genistein reduces production of other cytokines that impact how strongly TNF- α influences white blood cell activity.

His next target is a nano-

technological strategy to combat vascular inflammation — carbon nanoparticles, called Cdots or carbon dots. Cdots, smaller than 10 nanometers, are an attractive option, he says, because they have low toxicity, can be produced in an environmentally friendly way, and don’t appear to cause negative side effects.

Jia, a toxicologist, initially launched his investigation into Cdots — considered the next “big thing” in nanopharmacology — to see if they would detrimentally affect human health. He was surprised to discover the opposite.

In testing Cdots on human umbilical blood vessel linings, he found that Cdots, like genistein, can reduce the number of white blood cells that stick to blood vessel linings.

“These results suggest there’s potential for an anti-inflammatory action against vascular dysfunction,” he says.

Cdots also offer a second benefit. Jia found they reduce the production of reactive oxidative species, or ROS. Reactive oxidative species, the natural byproduct of oxygen metabolism in the body, ordinarily play a positive role in maintaining the body’s inner balance. But some studies, Jia says, show the body overproduces ROS during times of stress, leading to inflammation and, ultimately, contributing to atherosclerosis.

Based on his preliminary results, Jia has netted a prestigious NIH R15 grant to expand his exploration of Cdots. He hopes using nanotechnology to combat America’s leading killer at the molecular level will reveal new options for patient treatment. “I believe Cdots will pave the way for a new treatment and prevention avenue for patients who face atherosclerosis,” he says.

By Whitney J. Palmer • Photography by Mike Dickens • Learn more at <https://biology.uncg.edu>



ANTI-INFLAMMATION Jia wants to control the activity of a cytokine called TNF- α . Cytokines are small proteins involved in cell signaling. They’re critical to a wide range of immune system activities, including inflammation.



TIME TO SHINE A lively Arts After School class is led by UNCG music education majors (main photo). Rauer (inset photo, right) looks on as Evan Campfield and Alyssa Anderson teach.

In Harmony

ARTS COLLABORATIVE BRINGS COMMUNITY KIDS AND UNCG MUSIC STUDENTS TOGETHER

Erika Rauer saw the usual suspects when she poked her head into a student-led violin class at a Greensboro Boys and Girls Club — an enthusiastic teacher surrounded by six focused children. But the object of focus wasn't a violin; it was a small, squishy ball — passed intently but swiftly to the beat of a hip-hop violin piece.

Just as the third-graders got comfortable with the beat, the UNCG music student changed the cue, giving the children a new challenge.

"It's a simple game, but for kids, it can be hard," says Rauer, who oversees the Arts After School initiative in her role as program director for the UNCG Community Arts Collaborative.

Through Arts After School, UNCG music students — graduate and undergraduate — teach experiential music education once or twice a week to underserved elementary-age children. The kids are eager to play instruments, ranging from the piano and violin to guitar, percussion, and cello, and the weekly lessons give them great exposure — beyond just the technical skills specific to their instrument.

"We ask our student instructors to think about that rounder music experience and push them to bring other skills to the classroom," Rauer says. "If you only get to practice a musical instrument once or twice a week, it's unlikely you'll be highly proficient at the end of the year." But that's not the goal right now.

Past evaluations of Guilford County have repeatedly identified a need for increased access to meaningful after-school activities. In 2016 alone, Arts After School served 145 children.

As children master the rhythm, they also learn high-level thinking, grit, perseverance, and listening skills.

"Those are directly relatable to understanding any content, whether it's math or literature. Music teaches kids the ability to hone their focus," she says.

It's a unique learning experience for the student instructors as well. According to Peter Alexander, dean of UNCG's College of Visual and Performing Arts, 21st-century arts students will need a different kind of toolbox than that of previous generations. "Our students might not want to be just a music teacher or dance with a company," he says. "Our recent grads may be playing in a regional professional orchestra while also teaching students or doing graphic design work for an arts council." Young arts professionals are branching out and mixing it up. "Through this program, we hope they'll discover how their skills might be used in any community."

Rauer agrees, citing her own path as an example. "I performed as a soloist opera singer while teaching children's opera in East Harlem and the Bronx," she says. "Full-time opera jobs are few and far between." After 12 years of freelancing and teaching, she became director of education for the New York City Opera — experience that paved the way for her current outreach work.

Classroom management proves to be one of the biggest challenges students face in their work with kids, Rauer says. "Our performance majors might be comfortable teaching one-on-one, but when they have to work with a larger group dynamic, they may not be as effective. We help develop those skills."

Arts After School also gives UNCG students meaningful experiences in communities that may be different from those they grew up in. "Most of the children they're teaching at the Boys and Girls Club receive free or reduced lunch. They're from communities where our students might not otherwise go," Rauer says. "Some of our students will realize they like this particular type of challenge and feel good about the work they're doing. By making this connection, they may decide to incorporate some aspect of service work into their career."

With faculty collaborators, Rauer is currently expanding Arts After School to include other disciplines, such as theater, visual arts, and dance. "I see all of these arts education classes as opportunities for kids to explore other perspectives and points of view. They're able to work together to create a performance or an exhibition, and they see the impact you can make if you work for something together."

Plus, Rauer adds, through the arts, children can put their ideas out there to be seen by other people.

"Our Community Arts Collaborative helps students claim a space to make their thoughts and themselves visible to the world. Through this program, we can give marginalized populations an empowering platform where their voices can be heard."

By Robin Sutton Anders • Photography by Martin W. Kane • Learn more at <https://opa.uncg.edu/community-arts-collaborative> • Arts After School is a partnership among UNCG, the Salvation Army Boys and Girls Club of Greensboro, Greensboro Parks and Recreation, and City Arts, with funding from the United Way of Greater Greensboro Community Enrichment Venture Grant and ArtsGreensboro.



With UNCG's renowned College of Visual and Performing Arts in their own backyard, North Carolina arts enthusiasts enjoy convenient — and affordable — training and world-class performances. Many of these connections take place through the college's Community Arts Collaborative.

"Faculty, staff, students, and community partners come together to provide hands-on, experiential opportunities to local residents," explains Rauer. "Efforts often address community needs, such as filling gaps left by public cuts to K-12 arts programming." Simultaneously, UNCG arts students gain valuable teaching and service experiences. Initiatives include:

LILLIAN RAUCH BEGINNING STRINGS PROGRAM

Students provide free in-school string instruction to over 135 underserved elementary students.

PECK ALUMNI LEADERSHIP PROGRAM

Dedicated graduates of the Lillian Rauch program return to help mentor new participants; in exchange, they receive advanced private lessons to continue their own education.

DANCERS CONNECT

Over four months, dancers ages 3 to 16 learn technique, improvisation, choreography, and performance from students and faculty.

NC THEATER FOR YOUNG PEOPLE

With featured presentations such as "Go. Dog. Go!" written just for children, students celebrate the art of live theater for young audiences through on-campus and touring productions.

PRIVATE LESSONS PROGRAM

Learners of all ages schedule private music lessons with undergraduate, master's, and doctoral students.

Are You *Sure?*

Dr. Michael Zimmerman's research in theoretical ethics is acclaimed for its incisive argumentation, nuanced insights, and major advances. He's a leading writer on moral obligation, moral responsibility, value theory, and the theory of punishment. With nine books — the most recent with Oxford University Press — and a host of articles in prestigious academic journals, the professor of philosophy is also prolific.

Zimmerman was invited to deliver the Hågerström Lectures in Sweden in 2011. The lecture series is internationally known for featuring some of the most eminent philosophers of our time.

BASIC QUESTIONS

"Most research asks 'What can we do to improve our knowledge?' In philosophy, we tend to consider questions prior to this, such as 'What is knowledge?' and 'How can we know anything?'"

"Similar fundamental questions have preoccupied me throughout my career: 'What is it to be morally obligated to do something?'"

"What is it to be morally responsible for something?" "How are moral obligation and responsibility even possible?"

"For example, our having freedom of will seems to be a precondition of our being morally responsible for anything. We believe we have such freedom, but do we? It's reasonable to think that everything that happens, including everything we do, has a cause. If that's true, then, in principle, we could trace the cause of our actions back to events that took place before our birth. If what we do now has its roots in a time before we came into existence, then how can we have the control necessary for being morally responsible for our behavior? People have been thumping their heads against this wall for millennia."

THEORY VS. PRACTICE

"Much of what's in the press and on people's minds has to do with practical matters. Does the president have an obligation to divest in order to avoid conflicts of interest? Is a woman in the later stages of pregnancy obligated not to have an abortion? But my research focuses on underlying theoretical issues. I ask, 'What conditions must be satisfied for someone to have any moral obligations at all?' We have to consider these fundamental questions before we can be confident about our answers to more practical questions."

IS IGNORANCE AN EXCUSE?

"I'm interested in how ignorance of right and wrong can affect our responsibility for our actions. Suppose some terrorist secretly rewired a light switch so that, when you flipped it, you detonated a bomb. Most would say you're not to blame for the destruction you caused. It looks like ignorance undercuts moral responsibility."

"But does ignorance always provide an excuse? We can be ignorant of a variety of things. Imagine you knew the switch had been rewired but thought you were doing the right thing in detonating the bomb. This is presumably the mindset of many terrorists. Does that ignorance provide an excuse? I've argued that we should be hesitant to blame terrorists for the terrible things they do. That's an unsettling conclusion, but it's where my argument has led me."

MORAL OBLIGATION

"Ignorance can affect not only whether we are morally responsible for failing to meet an obligation, but it can also affect what obligations we have in the first place. If you're pointing a gun at me, and the only way I can defend myself is to shoot you first, then many would say that I am under no obligation not to shoot you. But what if what you're holding is a water pistol, only it looks like a real gun to me? We saw this play out in the Iraq War, with our faulty intelligence regarding weapons of mass destruction."

PUNISHMENT

"I have argued that almost no state punishment is morally justified. Many find this thesis repugnant, but, again, that's where my argument has led me."

"The first problem with punishment revolves around ignorance. Did the defendant know that he was doing something wrong?"

"The second problem has to do with luck. Suppose Smith and Jones are assassins. Both fire at their targets, but only Smith manages to kill someone — Jones's bullet was intercepted by a passing bird. Typically, Smith would receive a greater punishment. But what did Jones do to be less blameworthy? It was just luck that he didn't kill his target."

"You can push this back further and further. Maybe what stopped Jones from killing someone wasn't a bird but a good upbringing, whereas Smith was raised in terrible conditions. Such considerations are really corrosive; they cast doubt on the conventional justifications of punishment."

ARE YOU REALLY SURE?

"I wish more people took the time to question their basic convictions. It's easy to make mistakes; by the same token, it's hard to provide rational support for one's views. It's just as important to engage in critical reflection on one's own views as on the views of others. This is something I try to impress upon my students. Everyone's views are subject to criticism, including your own. Recognizing that fact can be very humbling, and it should help you give a full and fair hearing to those who disagree with you."

Dead men tell no tales. But their graves can speak volumes.

Ena Prskalo, undergraduate researcher



“Burials show what the society values,” says undergraduate researcher Ena Prskalo, explaining her interest in ancient Athenian grave sites.

Prskalo, a sociology major with a minor in classical studies and a growing interest in archaeology, investigates the subject under the guidance of Associate Professor of Classical Studies Joanne Murphy.

Prskalo’s work began as a project for Dr. Murphy’s Archaeology of Death course. Murphy encouraged her students to pursue their own research interests through the lens of the class.

“It allowed me to work in a different discipline while also growing stronger in my own,” says Prskalo of Murphy’s research assignment. Prskalo, who had previously examined deviance in her sociology coursework, decided to apply her interest to classical burial traditions.

Using periodicals and photographs of ongoing excavations of Athens, she analyzed the location of burials, how bodies were laid out, and the objects that were buried with them, discovering which burial arrangements could be called “deviant.”

“In my work, deviancy doesn’t necessarily mean that a particular group is bad,” explains Prskalo. “I looked at burials and bodies that stand out from normal practices and expectations.”

In the Athenian society, honored warriors were given elaborate burials to show their special status, and they were interred outside normal burial locations. Their lavish funerals were accompanied by public games and speeches that were ordinarily prohibited by Athenian law, which required most burials to take place in quiet seclusion.

On the other end of the deviance spectrum, some Athenian children and people with disabilities have been found discarded in wells, and certain foreigners were buried faced down. Prskalo postulates that these individuals weren’t seen as real Greek citizens or contributors to the Athenian society.

Examining the ancient gravesites led her to contemplate contemporary burial practices and how they demonstrate societal values.

“That’s something we should take into consideration — how we treat the dead, and how we treat certain people and value some over others,” Prskalo says.

Prskalo, who conducted her research with support from the Undergraduate Research, Scholarship and Creativity Office (URSCO), has presented her burial findings at three conferences, including the International Conference of Undergraduate Research. This spring, with funding from URSCO, she will present her work at a fourth — the 2017 National Conference on Undergraduate Research at the University of Memphis.

But the dead aren’t the only deviants piquing Prskalo’s interest.

She has begun two new independent research projects, one that looks at the subculture of Juggalos, fans of the hip hop group Insane Clown Posse, and another that examines suicide.

Now a senior, Prskalo plans to pursue a graduate degree in sociology. She hopes to focus on the sociology of death and continue her work examining ancient burial practices.

“Every class has helped me improve the way that I gather data, interpret data, or write,” she says. “I’m grateful for everyone in the sociology and classical studies departments fueling my interests.”

Having teachers ask her to do her own original research for the first time, she says, really helped her grow into the scholar she’s become.

*By Susan Kirby-Smith • Photography by Mike Dickens
Learn more at <https://ursco.uncg.edu>*

Changing lives. One diaper at a time.

Kelley Massengale, graduate researcher

Kelley Massengale was having a cup of coffee in downtown Durham when she noticed a donation box for the Diaper Bank of North Carolina. She had never heard of the organization. Nor had many others, judging by a handwritten sign on the wall. It urged people not to drop dirty diapers in the box.

Almost four years later, as Massengale prepares to graduate with a doctorate in public health education, the Diaper Bank is distributing over two million diapers a year across North Carolina. It has grown from a fledgling nonprofit into an organization with aspirations of meeting basic needs of low-income families in all 100 counties in the state.

Massengale has used research and grant writing skills she gained at UNCG to help the Diaper Bank raise more than \$150,000 in funding since 2014.

She’s passionate as she describes a mother forced to choose between food for herself and diapers for her children.

The doctoral student came to UNCG because of its emphasis on community engagement. “I wanted to be out in the community, working with people and doing applied, practical research,” she says.

Her dissertation uses Durham County as a case study for understanding diaper needs in under-resourced communities. Her recently published article on the topic, she notes, is the first research on diaper banks in a peer-reviewed journal. Other diaper banks across the U.S. can now cite the research in funding requests. She has a second manuscript under review.

Massengale’s initial interest in the Diaper Bank was academic. She was teaching a course about health problems experienced by people with low incomes, and she wanted to learn more to share with her students. But she kept coming back, spending hundreds of hours with other volunteers in the Durham branch, where diapers are stacked on metal racks from floor to ceiling. They’re distributed to community organizations such as Early Head Start and Urban Ministries and ultimately given to families in need.

“I can’t imagine doing this without her,” says Michelle Old, the Diaper Bank’s founder and executive director who also oversees branches in Wilmington and Winston-Salem.

Around the time the Diaper Bank was denied a grant partly because it wasn’t able to substantiate a need for diapers among target populations, Massengale approached Old about doing a research study.

She conducted surveys with community organizations and recipient families and compiled data for the bank.

“She took something I knew we had to do and made it a reality,” Old says.

Massengale’s technical expertise and Old’s community contacts have proven to be a dynamic fundraising duo.

New grants have supported the opening of another bank branch and brought toilet-training classes to Durham families. They now also distribute cloth diapers, adult incontinence supplies, and menstrual hygiene products for females, including girls in Durham County schools.

A lack of diapers reaches beyond health concerns, says Massengale, now the bank’s volunteer director of research and evaluation. For instance, it prevents children from attending daycares that require families to supply diapers. That can prevent parents from working or going to school.

“It’s not really about diapers,” she says.

A chalkboard in the Durham center spells out the Diaper Bank’s mission — and Massengale’s calling. It reads “Changing lives one diaper at a time.”

*By Chris Burritt • Photography by Mike Dickens
Learn more at <https://grs.uncg.edu> & <https://phe.uncg.edu>*



X - P A N D I N G

T H E C L A S S R O O M

X-Culture offers global business experience and scholarly insights

MANAGERS WORLDWIDE struggle with this issue.

A team of capable people struggles, putting their project in jeopardy. The cause: One team member isn't pulling his or her weight. The others chafe at this individual's lack of effort. Some might call the person a slacker; among global virtual teams, the term is "free rider."

What strategies can a manager take to resolve the issue? Better yet, which strategy has been field-tested and statistically proven as the best approach?

Vasyl Taras, an associate professor of international business in UNCG's Bryan School of Business and Economics, has the answer, thanks to the X-Culture project.

He launched the project in fall 2010 as a way to give his MBA students a taste of international business experience — before they plunge into the world of global commerce.

That experiment has turned into an international success, with dozens of cooperating universities and thousands of students each semester.

Scattered about the globe, students usually work in teams of seven. Their communication tools are email, Skype, Google Docs, and Dropbox. Their challenges include varied time zones, diverse cultures, preconceptions, and prejudices.

Though students typically earn only a grade and a certificate upon completion, X-Culture mirrors a real-world corporate project experience. For a freshly minted MBA or business undergrad, that's invaluable.

X-Culture project alumni find that the experience gives them an advantage in the job hunt. And the results produced by the student teams are so well respected that companies ranging from Louis Vuitton to Home Depot have come knocking, seeking the assistance of X-Culture's expertise.



“I always explain in the classroom how difficult it is to communicate with people living somewhere else in the world, but via X-Culture they have first-hand experience.”

— Robert Warmenhoven
Arnhem Business School, the Netherlands

A BUSINESS PRACTICUM

Pursuing global business opportunities creates special challenges. Working with a diverse team of colleagues around the world tests an individual’s patience, stamina, and preconceptions. Textbooks and professors make this plain to students. But as every skydiver knows, there’s a difference between studying the sport and leaping out of a plane.

“The whole idea behind X-Culture was that people would work with people from other cultures and would experience, in practice, what we are telling them in the classroom,” Dr. Taras says.

Early on, Taras determined that almost all international business courses use similar textbooks that emphasize 16 standard topics. If students around the world are studying a similar, basic curriculum, he wondered, why not give them hands-on, global experience to reinforce their business diplomas?

Taras envisioned creating global virtual teams of students. Each team member would be from a different university and nation. Whether in Cape Town or Riga or Singapore or Dublin or Greensboro, team members would have to cope with the differences of time, locale, institution, and culture. English, the international language of business, would be used for verbal and written communication.

Each team would undertake a business task, such as performing a market feasibility study for a product or solving a logistics issue.



A native of Ukraine, Taras has a master’s degree in public affairs from the University of Texas at Dallas and a doctorate in management from the University of Calgary. His mind races and he speaks rapidly, his English lightly flavored by his native language.

In launching his project, Taras reached out over the Internet, seeking a few international partners to test his idea. The response from colleagues was immediate and enthusiastic. Suddenly, he was coordinating a global virtual program from his tidy office in the Bryan School, a program that didn’t even have a name.

Brainstorming with colleagues led to the idea of X-Culture. “I don’t even remember who said it,” Taras says. Having X in the name refers, in part, to intentionally creating experiences across cultures. A sketch on a napkin roughed out a logo. In short order, Taras had a brand.

A NATURAL PROGRESSION

International experiences shaped Taras and his academic pursuits. His doctoral dissertation examined how quickly, and how thoroughly, immigrants assimilate culturally in their adopted country.

“I was born in Ukraine and have lived in a number of countries,” he says. “That’s how I developed an interest in cross-cultural stuff.”

Others are interested also. So far, X-Culture has involved nearly 500 professors from a variety of disciplines. In addition to

business, these fields include marketing, entrepreneurship, and cross-cultural psychology.

Engineering students from a Mexican university take part every semester. “They know that engineers will have to work across borders,” Taras says. “They really don’t care what the task is. They want to work with people who are in a different country.”

X-Culture has engaged about 35,000 students and counting. Taras coordinates the program, assisted by a couple of UNCG graduate students and a paid administrative assistant in Ukraine. The team, as well as all of the participating professors, operates in the same digital, global environment that X-Culture students experience.

The X-Culture project has a Facebook page — started by a former student — with more than 86,000 followers. “I assume that at least two-thirds of them just find our project interesting,” Taras quips. He’s always analyzing data, even Facebook “likes.”

Data accumulation wasn’t on his mind when Taras started X-Culture. But at the first X-Culture conference, which brought together students and professors face-to-face, someone suggested he begin collecting data. Taras remembers hearing, “You have all those students!”

Here’s why, data-wise, that’s so important.

Academic researchers in the social sciences or psychology often conduct studies with student populations simply because campuses provide a ready pool of individuals. Samples tend to be homogenous, however, and not representative of real-world demographics. Researchers interested in studying human dynamics in business environments prefer samples that more accurately reflect reality. Enter global virtual teams.

“Now we measure anything and everything possible that can predict performance in global virtual teams,” Taras says. Determining factors range from culture and cultural differences to “technical skills, personality, demographics, all those kinds of things.”

So why not study global virtual teams of real corporate employees? It’s not practical, Taras says, starting with corporate cooperation. Teams form and disband rapidly, and members have no compelling reason to answer a third party’s questions. (They’ve got work to do.)

The X-Culture project offers many benefits. X-Culture’s scope provides hundreds, if not thousands, of study participants each semester. The teams are stable and in place for several weeks. Most members typically are in their late 20s or early 30s, rather similar to a workforce. This means that findings based on this sample probably correlate well to the real corporate environment. As a result, companies consider the data collected to be trustworthy, Taras says, giving study results more gravitas.

Academic researchers poring over the data explore topics that range from interesting to mission critical. Their findings are of interest to companies looking for a competitive edge.

Take those free riders, for instance. Taras and his colleagues had ideas about how to identify free riders and take action to rectify the situation.

“We thought of a couple of solutions, and we tested them on the global virtual teams,” Taras says.

“One reduced free-riding by 52 percent.” Now he can advise corporations on strategies for reducing free-riding, plus cite costs and benefits.

X-Culture research currently underway includes studies of how global virtual teams affect gender roles in Middle Eastern contexts, how socio-economic bias affects teams, and the impact of emotional intelligence on multicultural team performance.

X-Culture now attracts companies looking for advice.

“The dataset provides vast amounts of opportunities for researchers. There are already dozens of publications and projects that have come out of the project.”

— Dr. Secil Bayraktar
Ozyegin University, Turkey

“We have real companies, with real, live challenges,” Taras says. “They want to know the answers.” Project reports generated by the student teams, he says, are “virtually indistinguishable from real consulting projects.”

X-Culture students have researched how a maker of luxury Italian shoes might break into the U.S. market. Instead of just offering theoretical strategies, the team interested a U.S. retailer in importing and selling the brand. That experience convinced the shoemaker that entering the U.S. market was feasible.

Another team investigated the hurdles that a South American chocolatier would have to navigate to export its products.

Taras says the X-Culture project’s data is a rich and ever-growing resource, full of answers to questions yet to be posed. So he’s tossed out the welcome mat to researchers everywhere.

“Join us on the knowledge treasure hunt,” he writes at X-Culture.org. “We offer our own huge database to the world.”

Just as crowd-sourcing, open data sharing, and large-scale collaboration have led to new discoveries about the human genome and the cosmos, Taras believes they offer opportunities to advance business knowledge.

“We believe there is never too much brainpower. More researchers mean more, better ideas and studies. There are many discoveries hidden in our data.”

By Tom Lassiter • Photography of Dr. Taras by Mike Dickens
Design includes artwork created by Freepix • Learn more at <http://bryan.uncg.edu/mgt>

BUILDING BLOCKS



CRUNCHING DATA & MENDING NEIGHBORHOODS



ALL IN University and community partners gather at the team's house-turned-community-center at Cottage Grove. Clockwise from left: CHCS's Dr. Stephen Sills, Greensboro Housing Coalition's Josie Williams, undergraduate researcher Francheska Elliott, former undergraduate researcher and current CHCS staff Phillip Sheldon, and community activists Sandra Williams and Verna Torain.

VERNA TORAIN has lived in east Greensboro's Cottage Grove neighborhood for more than 25 years.

When she first moved to the community, many residents worked in nearby factories.

"Now everything's closed down," she says. "There's no jobs."

Traditional manufacturing jobs that powered the Piedmont Triad's economy for decades have mostly disappeared — automated away or shipped abroad.

The economic toll has left its mark on Cottage Grove. Houses and apartments have fallen into disrepair. And it's not just buildings suffering.

Job loss and substandard housing are two factors contributing to a host of other issues, including health problems. These are the problems that Torain and other volunteers and activists work on each day.

MAPPING PROBLEMS, DESIGNING SOLUTIONS

The connections among housing, sickness, and related problems are the primary focus of Dr. Stephen Sills' Center for Housing and Community Studies at UNCG.



Sills, an associate professor of sociology, is using statistical analysis and software to better understand these issues. Then, he works closely with residents, plus nonprofit organizations, government agencies, foundations, and health care providers, to design, test, and implement solutions.

"I'm working on health one day; I'm working on educational outcomes on another," he says. "I'm working on mortgage markets and fair housing. It looks like I'm all over the place, but what I'm doing is taking problems that come to me and applying the best research tool I have."

Sills also taps other faculty — such as Dr. Keith Debbage, who holds a joint appointment in the Department of Geography and the Bryan School of Business and Economics, and Dr. Ken Gruber at the UNCG Center for Youth, Family, and Community Partnerships — to bring additional expertise to center projects.

With the support of a highly competitive Invest Health grant, Sills and his partners are currently examining the relationship between substandard housing and pediatric asthma in Greensboro.

For the project, Sills combined multiple databases from the U.S. Census Bureau, the City of Greensboro, and Cone Health.



PLUGGED IN The center’s collaborative, problem-solving approach, which brings researchers and community members together as equal partners, is called community-engaged scholarship. UNCG is one of 50 universities distinguished by the Carnegie Foundation for both higher research activity and an institutional focus on community engagement.

His center also created a new database.

In the summer of 2016, a dozen student researchers used software that pulls photographs from Google Maps’ streetview. The students spent untold hours sitting at computers and viewing images of tens of thousands of Greensboro properties.

For each one, they completed a 53-question survey based on the images — is the property residential or commercial? What’s the condition of the roof or siding? Are there potential code violations, such as grass being too high or junk cars in the yard?

With all that data, software could be used to map out substandard housing “hotspots.”

Those hotspots were cross-referenced with Census data and data from Cone Health’s Emergency Department on pediatric asthmas visits.

That brought Sills and his team to the Cottage Grove neighborhood.

CONCENTRATED PROBLEMS

Sills found the substandard housing hotspots correlated with communities with high levels of poverty, low levels of home ownership, and poor health outcomes.

Many of the properties are poorly maintained — either because their owners can’t afford to repair them or because they have little incentive to invest more capital in rental housing.

The result? A leaking roof creates high levels of moisture inside a home, spurring mold growth, which then exacerbates the asthma of children living there. Holes in a foundation allow insects and pests into a house; roach droppings, rodent waste, dust mites, and the like also worsen symptoms and trigger asthma attacks.

Josie Williams, the Cottage Grove project team coordinator for the Greensboro Housing Coalition, works closely with resident families, helping them improve their housing and their lives. She’s based in a house-turned-community-center in the neighborhood.

“I get to see firsthand the issues that are going on,” she says. She recalls one family with children ranging from 8 to 14 years old. When they moved into the neighborhood, “their asthma became severe because of the air quality.”

She’s also seen residents who leave their doors open when they can, or frequently go in and out of their homes because of the poor indoor air quality.

And although asthma is the specific condition that Sills’ team is tracking, it’s hardly the only challenge arising from substandard housing.

“For certain senior citizens, I noticed there were no bannisters on the stairs to their front doors,” says Sandra Williams, another resident and volunteer in Cottage Grove. One rainy day, she says, she saw an elderly man crawling up his front steps to get to his house, unable to navigate them safely without a rail. She helped him in.

One poorly maintained apartment complex in particular is a striking source of pediatric asthma cases. The data also tell Sills that problems in one apartment or one house often affect neighbors, so a single substandard home can impact a whole neighborhood.

“A lot of the problems concentrate at the same time in the same place,” Sills says. “We’re providing the data that then inform the policy. It informs decisions from the health care system. It informs community advocacy agencies on where to go.”

COMMUNITY CONNECTIONS

One Tuesday morning in early January, almost a dozen people have gathered in the Center for Housing and Community Studies. Besides Sills and his staff and students, there are community volunteers, housing organization representatives, economic developers, a Cone Health staffer, and a representative of the Cone Health Foundation.

The goal of the meeting is to discuss next steps in the Invest Health project. Normally, this twice-monthly meeting takes place in Cottage Grove, but it snowed the previous weekend. Many neighborhood streets are still impassable.

Several topics are reviewed.

How can what the group has learned — from both Sills’ data and community partner and resident input — inform city plans for just-approved housing bond funds? How hard should the group pressure landlords in the area whose properties need improvements — and who among the group should take the lead on that? And much more.

“It’s really important for Cottage Grove, now that we’ve got their trust, that we deliver value,” Sills says to the group.

That sentiment is echoed by others. “They’ve been let down so many times that building trust is really hard,” says Beth McKee-Huger, referencing residents of the most rundown apartment complex. McKee-Huger is a volunteer and retired nonprofit executive who has worked on housing issues in Greensboro for almost 30 years. “They’ve been hurting for years.”

Among the top priorities are plans to create a minor repairs program. It would harness trained volunteers to make simple, inexpensive repairs to homes, such as fixing a leaking roof.

Those repairs, along with health education (“don’t clean with bleach — it can trigger an asthma attack”) and advice on eliminating mold and other triggers, can reduce asthma attacks that send children to the hospital, keep them out of school, and cause their parents to miss work.

Organizers also want those volunteers to become advocates for fair and healthy housing, UNCG’s Gruber reminds the group.

Between the data analysis that identifies “hot spots” and proven interventions, such as small repairs and health education, the group hopes to improve Cottage Grove and develop a model for other neighborhoods.

“We’re the design team,” says Mac Sims, president of the East Market Street Development Corp., an economic development group focused on east Greensboro. “You can take this model and apply it in any place in the community.”

BEYOND ONE NEIGHBORHOOD

Taking effective, proven ideas to other neighborhoods — and even other cities — is Sills’ bigger vision.

“We’ve done a proof-of-concept with Cottage Grove,” Sills says.

“Can we translate that to Ole Asheboro? Can it translate to some of the neighborhoods in High Point that we’re working with?”

Eventually, Sills says, the work could create a model that could be applied across an entire city here or anywhere in the country.

And it’s not just poor, urban communities that Sills is focused on.

For example, the center has researched the impact of opiate addiction on rural communities in western North Carolina and Georgia.

Sills has also studied discrimination in housing and mortgage applications, sending testers of different racial, gender, and sexual identity to apartment communities and analyzing banking data to see if they’re treated differently.

“When I’m looking at housing and health, I’m in the same neighborhoods where I know there is racial steering that goes on,” he says. “I know that I’ve sent a white female tester to this neighborhood

in a previous project, and the property management company said, ‘You might not want to live in that neighborhood.’”

“It’s a fair housing issue at the same time that it’s a substandard housing issue; it’s a health issue; and it’s an economic opportunity issue. They’re really all intricately connected.”

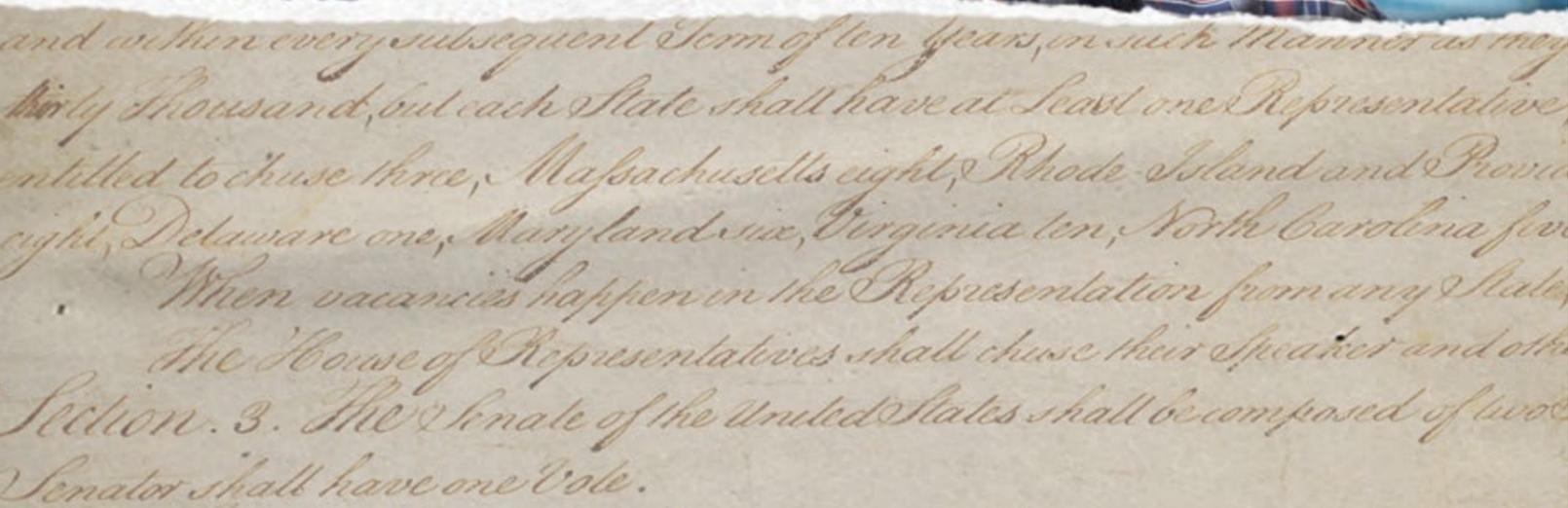
Sills’ research pinpoints and measures how those issues cluster together, and how tackling one can affect the rest of them. That’s what Sills cares about most.

With any report that comes out of the center, he’s looking for policies changed, community funding generated, and numbers of lives impacted. Ultimately, Sills says, “It’s ‘What’s the impact on the community?’”

By Mark Tosczak • Photography by Mike Dickens • Learn more at <https://chcs.uncg.edu>

HOTSPOTS Josie Williams leads the group on a tour of the Cottage Grove neighborhood, pointing out issues that can lead to health problems. Greensboro is one of 50 U.S. cities selected to participate in the Invest Health initiative. The funding from the Reinvestment Fund and Robert Wood Johnson Foundation supports the development of new strategies to help low-income communities thrive, with a particular focus on health.





CIVICS EDUCATION

Tough questions in the classroom

EVERY FOUR YEARS, U.S. voters go to the polls to elect a president. Politics fills our Facebook feeds, candidates and pundits dominate TV, conversations with friends and family focus on the latest election news.

For high school civics teachers, a presidential election — or any election — ought to be the perfect opportunity to connect what students learn in the classroom with “the real world.”

But Dr. Wayne Journell, whose research is focused on preparing high school social studies teachers, has discovered it’s often a missed opportunity.

Journell’s research reveals that teachers are afraid of teaching politics. “They’re afraid the parents are going to complain,” the associate professor of education explains. “They’re afraid the administration is going to complain. Because when teachers do it badly, it ends up on the news.”

And it’s not just fear. Many young teachers — like the teachers-to-be Journell instructs at UNCG — may not know enough. Many social studies teachers have studied history, not politics. And some haven’t paid much attention to current events.

In the last few years, Journell has studied differences in how politics is taught in schools. He’s also worked with teachers to figure out creative ways to get students more engaged in civics and government, such as using the television series “The West Wing” to dramatize important concepts and prompt discussion.

His message to teachers? Don’t fear the elephant (or donkey) in the room. Teaching politics and using current events in your lessons can help engage kids more deeply in the material and make them better citizens.

WHY TEACH POLITICS



Remember the 1976 Schoolhouse Rock video featuring the plaintive, animated legislation singing “I’m just a bill ... But I know I’ll be a law someday, at least I hope and pray that I will”? Maybe that’s how you remember high school civics — procedural material on how our government works (probably without songs and animation). Except, the Schoolhouse Rock version of a bill becoming a law — or of any government action — isn’t how government truly works.

“Knowing the nuts and bolts isn’t enough,” Journell says. “You’ve got to know how the process works.”

That process involves politics: lobbying, campaign donations, political coalitions, deals between legislators, and all the other factors that influence which bills become laws and which don’t, which candidates run for office, and much more.

For his dissertation at the University of Illinois at Urbana-Champaign, Journell studied how government was taught at three high schools just a few miles apart. Two of those schools — a private Catholic school with students mostly from affluent families and a public school where most students lived in low-income households — dramatically illustrated the difference it makes when students learn how politics works.

Students in both schools were studying current events during the 2008 election. By around 9 p.m. on election night, Journell figured Barack Obama had won, based on results in important East Coast swing states. But when he talked to students at the schools the next day, he found they had very different perceptions of election night.

“Many students at the private Catholic school had looked at polling data; they were talking about strategy and getting into the politics of it,” Journell recalls. “Several conservative students came in and said, ‘Once Obama won Pennsylvania, I focused on whether Republicans would take the Senate.’”

It was a different conversation at the other school.

“Many of the students at the less affluent school, they had no idea, because their instruction had not delved deeply into polling data and strategies,” Journell says. Several pro-Obama students told him, “I was scared when McCain started to come back as it got to the Midwest.”

But politically aware people, Journell says, “knew that there’s a big red streak right in the middle of the country that McCain was going to get.”

In fact, Journell and other education researchers say that, broadly, there’s a “democracy divide” between students in wealthier schools, who get more sophisticated instruction about politics, and students in underfunded schools, who don’t.

However, teaching politics is about more than helping students watch the Electoral College map on election night. It’s also a chance for students to practice tolerant, civil discussion of political issues — something that seems to have all but disappeared from public life.

“Most don’t tune into Fox News or MSNBC to see tolerant civic discussions. You’re trying to win the argument,” Journell says.

“Increasingly, you’re not even seeing it from the politicians themselves. So, at some point, if we value such discussions as a society, we’ve got to see a model of it somewhere. Schools are a great place, because — even in the most homogenous schools — you have more ideological diversity than most students have at their family dinner tables or their places of worship.”



HAVING OPINIONS AND TEACHING, TOO

Before he entered academia, Journell taught high school government. He used current events — including elections — in his classes. And he even told students what his own political leanings — a little to the left — were. He didn’t worry about being accused of inappropriately influencing young minds, though.



TOUGH TOPICS Dr. Wayne Journell leads a seminar (center & right photos) for UNCG education students currently working as teaching assistants in social studies classrooms. Journell models what they’ll need to do to teach civics. “I disclose. I try to model the committed impartiality approach. We talk about current events.”

“When I was teaching in Virginia, I wouldn’t have cared if they had a camera on me the entire time,” he says. “I like to think I was doing it the right way.”

Though he didn’t know the name for it at the time, he was using an approach education scholars call “committed impartiality.” In this approach, teachers reveal their views to students, but they don’t claim their views are the right ones.

“Then the students are like, ‘Ding, ding, ding! I need to take whatever is being said and put it through a filter,’” Journell explains.

Though many education scholars are split on whether teachers should disclose personal views on politics, Journell’s research links disclosure with improved classroom instruction.

Teachers can’t be perfectly objective or neutral — they must decide when to cut off the conversation in the classroom, whether to call on the liberal or conservative student.

“When teachers disclose their views, it actually makes the discussion more vibrant, because the students realize where their teacher stands and they can ask questions,” he observes.

Even with that in mind, teachers still face challenges finding time to mix in current events with the required civics elements (the three branches of government, for example). At lower-performing schools, Journell found, teachers feel more pressure to spend classroom time on things they know will be on end-of-grade tests.

This is unfortunate, says Journell, since his research shows that teaching politics can also help engage students with the core civics material.



LEFT-WING, RIGHT-WING, ‘THE WEST WING’

In 2010, after coming to UNCG, Journell looked at how television might be used to improve civics education. When he taught high school, he had used “The West Wing,” a drama set in the White House that ran from 1999 to 2006. Now he wanted to study it formally. He found a Chatham County civics teacher willing to give it a try.

“I jumped at the opportunity,” says Roddy Story, who was teaching 10th grade Civics and Economics in Northwood High School. “When we first met, I was expecting to show maybe a handful of episodes. I remember asking him ‘How many episodes did you have in mind?’ and he said ‘The entire first season.’”

Story, who now teaches in Tennessee, spent every Friday showing an honors class and regular class “West Wing” episodes. The dialogue and plot in the show is fast-paced and complex, and Journell and Story quickly realized they needed to stop the show every few minutes to discuss what was going on and what principles of government and politics were involved.

“That’s when they really got into it,” Story says.



Journell, who observed much of his teaching that semester, says Story was also able to relate material taught on other days to scenes in the show.

“It’s kind of the Mary Poppins thing — a spoonful of sugar,” Journell says. “If you can get the students hooked on something, they’re more likely to get involved.”

Using “The West Wing” as an instructional tool, Journell found, helped students to practice thinking politically, to better understand real-life political events, and to make connections across the civics curriculum.

Though such tools can be a helpful, Journell also grapples with a more fundamental issue as he’s training young teachers: They’re simply not that politically literate themselves.

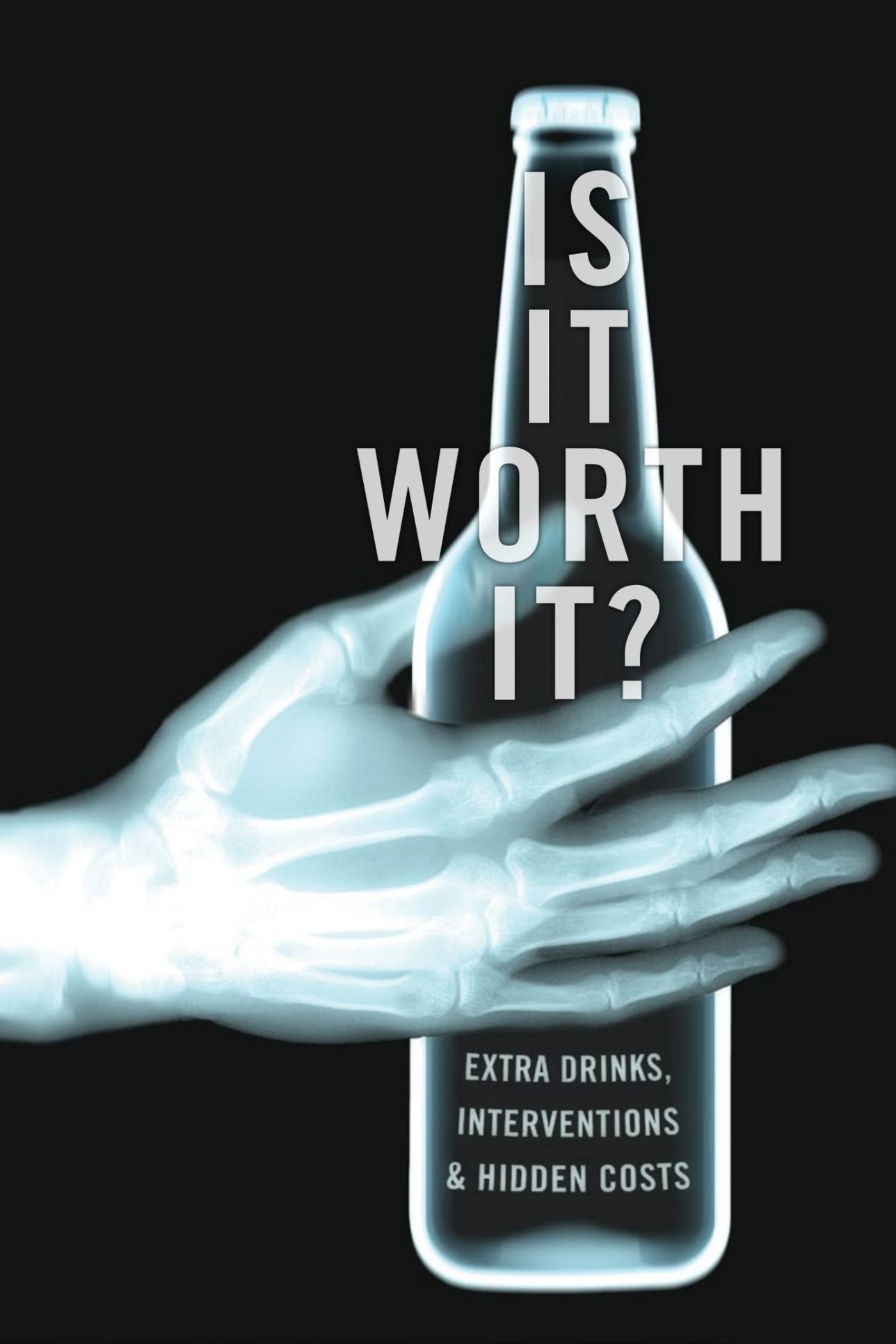
Over a three-year study, he surveyed pre-service social studies teachers on their knowledge of politics and current events. Turns out, they didn’t know much. Many of them were history majors, so they weren’t studying politics. And, he found, they were not in the habit of watching or reading news.

“The survey itself was kind of a wake-up call for my pre-service teachers,” Journell says. Some told him, “When I was just sitting there, just staring at the thing and not knowing the answers, I went home and learned the information, and I changed my habits.”

Journell models for his students what they’ll need to do to teach civics and current events. “I make it clear to them on day one,” he says. “I disclose. I try to model the committed impartiality approach. We talk about current events.”

“I think once it becomes normal for these pre-service teachers, they’ll go out and do it in their internships, and their student teaching, and then beyond.”

By Mark Tosczak • Photography by Mike Dickens • Learn more at <https://soe.uncg.edu/tehe>

A hand holding a bottle with text overlaid. The hand is rendered in a light blue, semi-transparent style, showing the skeletal structure. The bottle is also light blue and has text on it. The background is dark with a faint, repeating pattern of leaves or flowers.

IS IT WORTH IT?

EXTRA DRINKS,
INTERVENTIONS
& HIDDEN COSTS

THIS IS AN INTERVENTION.

"A patient walks into their primary care physician's office and fills out a short questionnaire about their alcohol use," describes Jeremy Bray, professor and head of the Department of Economics. "Let's say the patient has four or five drinks a week. The physician will say, 'You're doing a great job. Keep up the good work.'"

If the patient's drinking habits are just outside the recommended range, but not so much as to cause alarm, the doctor offers advice on cutting back. "And if the answers seem to suggest the patient might have a disorder, the physician would encourage them to see a substance abuse professional who can help with an assessment and formal treatment," Dr. Bray says.

"We tend to think about alcohol use as 'yes, you are an alcoholic, or no, you're not an alcoholic,'" he adds. "But it's a continuum with different kinds of problems. For example, low levels above guidelines can disrupt sleep patterns and cause gastrointestinal issues. From a public health standpoint, we really want to address those things."

This intervention, known as SBIRT (Screening, Brief Intervention, and Referral to Treatment), reduces alcohol consumption by an average of about two to five drinks a week. Studies have shown that excessive alcohol use is connected to a variety of social costs, like crime, traffic accidents, and extra healthcare visits, so it seems reasonable to suggest the intervention should be implemented across the board.

The thing is, Bray says, "there are a lot of recommended screening programs for physicians — mental health, substance abuse, hypertension, exercise, smoking," just to name a few. "If physicians did every single recommended screening for their patients, it would take up more than their entire day. Physicians want to know which ones are the highest value."

That's where economists enter the picture. "Given that we are going to make an investment, we ask which one has the best bang for our buck," Bray explains. Whether he's reviewing programs or taxes meant to reduce alcohol use, Bray considers the benefits and the drawbacks. Only from examining every angle can he evaluate a policy's true cost — and know when it's worth it.

INVESTMENT VERSUS IMPACT

The majority of Bray's research delves into alcohol prevention programs, but he looks beyond drinking outcomes to find ripple effects. "The theory behind these programs is that they will get people to change their drinking habits," he says. "And if they do, we want to know if society will benefit. For example, if we increase the tax on alcohol, will there be an impact on things like wages and education?"

To determine a program's value, Bray often chooses between two evaluation methods — a cost-benefit analysis and a cost-effectiveness analysis.

With a cost-benefit approach, or return on investment, economists look at the total amount spent and ask if the investor is saving money. An employer, for example, may invest in a workplace wellness program and want to know if the program is actually making employees more productive. "With this analysis, we are asking whether the employer is saving money," Bray says.

On the other hand, a cost-effectiveness analysis doesn't just look at cost savings, Bray explains. "It doesn't only ask the question, 'are we saving money?'" Imagine a hospital's response when a patient comes in with a broken leg. "The hospital is going to treat it," he says. "It's not a question of whether it's going to cost money. The question is, how do we treat it in a way that has the greatest effect for the least amount of money."



THE ECONOMIST WILL SEE YOU NOW Bray and UNCG doctoral student Nilay Unsal are evaluating a workplace wellness intervention at a local retirement community. “Given that we are going to make an investment, we ask which one has the best bang for our buck,” Bray explains.

“If physicians did every single recommended screening for their patients, it would take up more than their entire day. Physicians want to know which ones are the highest value.”

According to Bray, with most programs, a greater effect follows a greater investment. “What you want to know is, is that extra effect worth the extra money. In other words, given that we will spend something, what’s our best value?”

Since the late ‘80s, results from economists’ analyses on substance abuse programs have contributed to the debate on whether treating substance abuse is worthwhile. For a long time, it was treated as a weakness, not a disease, says Bray. “Certainly, now most physicians agree with the disease paradigm. Alcoholism may start with behavior choices, but substance abuse eventually alters brain functioning and brain physiology. It becomes a neurological disorder that needs to be treated.” But the rest of society doesn’t necessarily see it that way.

Returning to the broken leg analogy, Bray says substance and alcohol abuse have a barrier to overcome that other diseases don’t. “If you ask whether a treatment can save money, that implies the only reason to treat it is to save money. We don’t ask whether repairing a broken leg will save money. We just repair the broken leg.” People have more questions when it comes to substance abuse treatment.

Evaluating programs like SBIRT, which have a broad impact on society, can’t happen in a vacuum. Bray’s colleagues include experts in behavioral therapy, such as clinical psychologists and addiction therapists.

“We found that patients who received SBIRT reduced their alcohol and drug use — and that it was very inexpensive to implement in large clinics and hospitals.”

“I’ve led a lot of these evaluations, most with multi-disciplinary teams,” Bray says. Before joining UNCG, he served nine years as program director for the national cross-site evaluation of SBIRT programs funded by the U.S. Substance Abuse and Mental Health Services Administration.

Bray’s work supported the adoption of SBIRT reimbursement codes in Medicaid, Medicare, and private insurance plans. Now, under the Affordable Care Act, screenings and brief interventions are a required preventative service—covered without insurance or copay. “My research has also influenced state and federal legislatures’ decisions on whether to move forward with SBIRT grants,” Bray says.

RIPPLE EFFECTS

In addition to programs like SBIRT, Bray examines pricing and taxes — two areas of focus for policymakers hoping higher price tags will discourage alcohol abuse.

As an example, he points to the cigarette tax, which effectively caused smokers to curb their habit. At first glance, cigarettes and alcohol have a lot in common. Both can be detrimental to one’s own health and can cause negative ripple effects in society.

But unlike cigarette usage, which is discouraged at any level, economists don’t want to disincentivize a moderate drinker who causes no public harm. “If you have someone who is drinking one glass a night, it isn’t causing societal problems like someone who drinks eight to nine beers on a Friday night before driving home,” Bray says.

Economists help policymakers determine how they can implement policies that target the dangerous behaviors rather than impacting all drinkers, across the board. In European countries, Australia, and New Zealand, governments have implemented “minimum unit pricing,” a price floor rather than a tax, where drinks are priced according to how strong the unit of alcohol is.

With this type of pricing, a pint of an imperial stout with a higher alcohol count may count as 2.5 units as opposed to a pint of Guinness that counts as 1.5 units of alcohol. This type of policy can be effective because it targets the cheaper drinks that are more likely to be abused. “You don’t often see people drinking expensive microbrewed beers, or the high-end vodkas, with reckless abandon,” Bray says.

Bray’s particular interest lies not just in reducing consumption through taxes or price floors, but in pairing taxes with subsidies so that people change their consumption patterns. “If we borrow the cigarette model, you need to look at taxes and policies, and then you need to look at interventions that help people quit,” he explains.

When policymakers taxed cigarettes, they also provided coverage for smoking cessation therapies on insurance plans and nicotine replacement therapies. “People weren’t just forced to pay more money for cigarettes; they also received help,” he says. “Likewise, maybe we could increase taxes on beer sold in bars and use that money to subsidize treatments like SBIRT and alternate activities like local sporting leagues.”

Bray notes the user isn’t the only one impacted by taxes. He believes it’s important to consider the harm taxes cause by reducing profits of the alcohol industry. “If you look at Kentucky’s bourbon industry, that’s a core part of the state’s cultural heritage. We don’t want to tax those into non-existence.”

Bray’s research all leads to one definite conclusion: “The effects are more complicated than we might think,” he says. That’s why his work is so valuable to policymakers. “There are subtleties we need to understand. People make a whole suite of life decisions, and just because you change one of a multitude of decisions, it doesn’t mean you’ll get people on the right path.”

By Robin Sutton Anders • Photography by Mike Dickens • Learn more at <http://bryan.uncg.edu/econ>

In terms of its effect on labor markets, alcohol may not actually be as big of a problem as some think. When economists examine nationally represented surveys, they find that social drinkers are in the majority. “Most of the people using alcohol do not have a use disorder,” Bray says.

Still, social drinking has an impact on one’s leisure time and that can impact productivity. Bray has found that higher beer prices correlate with shorter unemployment spells. “If you look at young people in a social setting, it makes sense that when beer is cheap, they engage in more social activities that take away from a job search.”



LETTERS TO THE PRESIDENT “Socially engaged art invites collaboration with people, communities, and institutions in the creation of art,” Oring explains.

The art of democracy

When Sheryl Oring returned to the United States in 2004 after six years in Germany, she felt out of touch.

Out of touch with American politics, and out of touch with how people were feeling about the upcoming election.

So, as a socially-engaged artist with a background in journalism, she decided to launch what has become known as the “I Wish to Say” project. In her part-research, part-public-art endeavor, Oring sets up a 1960s-style public office of sorts – complete with vintage typewriters – and invites individuals to dictate messages to the president.

Since 2004, “I Wish to Say” has traveled to dozens of cities – from New York to Oakland to Raleigh – and has produced more than 3,200 postcards that have been sent to the White House. Over the years, the project has been highlighted by ABC, NPR, and The Washington Post, to name a few.

Now, Oring has brought over a decade of work together in “Activating Democracy: The ‘I Wish to Say’ Project.” The book captures her unique project and examines the role of art in advancing public discourse, free speech, civic participation, and democracy.

The assistant professor of art started exploring the idea of a book in 2015.

“I knew the 2016 election would likely be historic, and I felt like I had enough material to make this kind of a book,” Oring says. “I hope it will inspire students and others to make work that engages in important political and social issues.”

In addition to her book, Oring is sharing the project through a new digital archive. The thousands of postcards are now available

to the public via a searchable web application created by Oring and UNCG University Libraries. The archive is designed to spur additional research.

“‘I Wish to Say’ is a poignant, anecdotal sampling of voters from cities across the country,” Oring says. “It makes a very human portrait of what people were thinking at the time. I want students and scholars to be able to use the digital archive as a research tool.”

With a new president in the White House, Oring is planning future “I Wish to Say” performances and exploring how to integrate her work into the classroom.

She’s also applying the concept in new ways, including a public art project called “Greetings from Tampa Bay.” The final product, residents’ stories about the city typed and integrated into an aluminum sculpture, will be installed this summer in the Tampa International Airport.

Ultimately, Oring’s goal is to provide a platform for individuals of all backgrounds to speak out. The key to the project’s success? Listening.

“In the end, that’s what we all want: a chance to be heard,” Oring wrote, in an op-ed published last fall in the San Francisco Chronicle. “It is not only the act of speaking, but the act of listening that makes this possible. This is what I wish to say, and I hope the next president is listening.”

By Alyssa Bedrosian • Photography by Todd Turner and Jillian Clark
Learn more at <https://opa.uncg.edu> & <http://www.sheryloring.org>

Poet on the good road

“‘Good Hope Road’ — that sounds so American.”

Stuart Dischell recalls his friend, Pulitzer Prize winning-poet Frank Bidart, hissing those words upon hearing the title. He remembers the critique with a smile.

“It’s an aspirational title for an America that seemed to be all possibilities, at least in my childhood,” he says, “or maybe an America where possibilities seemed to have dwindled.”

Last year, “Good Hope Road” became the 105th book published in the Carnegie Mellon University Press Classic Contemporary Series, putting Dischell in the company of Pulitzer Prize winners like James Tate and Carolyn Kizer, as well as National Book Award winners like Gerald Stern and Jean Valentine.

The 1991 National Poetry Series winner was originally published by Viking in 1993 to much acclaim — the book was reviewed approximately 25 times. The re-release of “Good Hope Road” through the prestigious Classic Contemporary Series means it will remain in print. It’s a fitting honor for Dischell, who is a recipient of awards from the National Endowment for the Arts, the North Carolina Arts Council, and the John Simon Guggenheim Foundation and author of four other collections of poems.

Twenty-four years after the book’s initial publication, the scenarios within are still contemporary. The poems show Dischell’s uncanny ability to vocalize the complex thoughts of a variety of characters as they contemplate the boundaries of their lives.

“A lot of the characters — when I look at them now — they seem to be like many characters in fiction, a composite of people I knew as well as myself at that time,” Dischell says. “In my poem about the old woman who’s returning groceries at the supermarket — that’s me. The girl who has aspirations of going to live in Paris, that became me. The old man with problems with his teeth — that’s me too, unfortunately. Maybe I was just laying the groundwork for what I would be like in 25 years.”

In the past few years, Dischell has published a series of essays focused on urban landscapes of France.

“I do ‘ambient research.’ More so than my poetry, my nonfiction writing is integrally set in places, and I need to be in those locations intensely in order to write about them.” In 2015, he was awarded a residency at the Château de Lavigny near Lake Geneva in Switzerland.

“I’ve kept what I absorbed of that experience, and subjected it to the quirks of my imagination,” he says. “These experiences cannot be simply imagined: they need to be experienced in order to be imagined.”

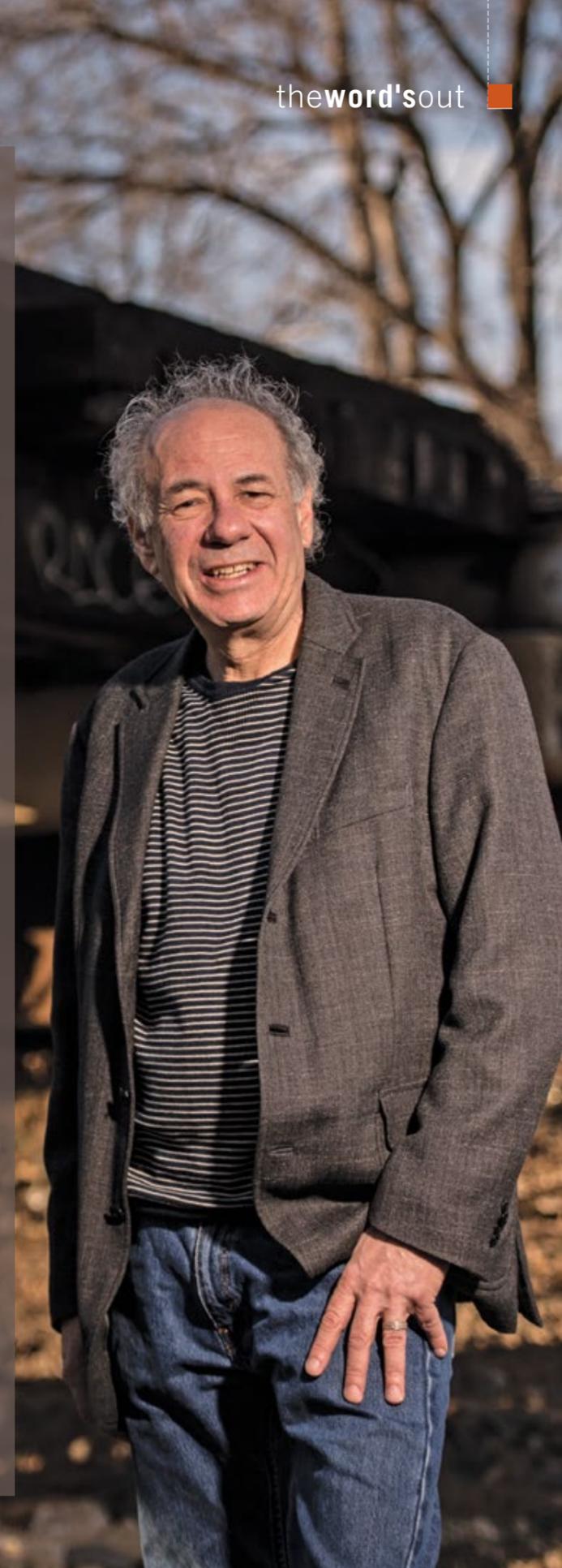
As one of the UNCG MFA program’s resident faculty, Dischell has seen many former students publish their first books through nationally prominent series as well — students such as Jennifer Whittaker, Ansel Elkins, Jillian Weise, Sarah Rose Nordgren, Christina Stoddard, Alison Seay, and Dan Albergotti.

“We are successful creative writers educating future successful creative writers,” says Dischell. “Researchers teaching researchers. We teach the deep process of writing and revision that, with the right talent and perseverance, leads to fine published books.”

Dischell’s newest poetry collection, “Children with Enemies,” will be published this year by the University of Chicago Press.

... *Good Hope Road: that name alone
Takes me from suburbia to Alpha Centauri,
Quick as the once-taught “World of the Future” ...
Good Hope Road: I was a boy there delivering papers,
A hitchhiker, a convict working a jackhammer ...*

By Susan Kirby-Smith • Photography by Martin W. Kane • Excerpt from the poem
“Good Hope Road” • Learn more at <https://english.uncg.edu> & <http://mfagreensboro.org>





Coming to terms with the modern South

Thirteen years ago, the president of the Society for the Study of Southern Literature, Dr. William L. Andrews, asked Dr. Scott Romine to update “The History of Southern Literature,” published in 1985. Romine, head of the Department of English at UNCG, talked it over with some colleagues, and they decided it was time to scrap the concept altogether.

“We collectively decided that there really was no single, coherent history of Southern literature anymore,” he says. “The existing narrative of Southern literature had become shopworn. Focusing solely on Southern literature and limiting that interrogation to the U.S. South was out of joint with the way the field was evolving. For example, scholars writing about literature were also writing about film, music, and other cultural forms, and they were writing about these things with an eye to a history of plantation colonialism that extended to the Caribbean and South America.”

Those discussions involved Jon Smith, an associate professor of English at Simon Fraser University in British Columbia, and Jennifer Rae Greeson, an associate professor of English at the University of Virginia. Romine would ultimately team up with Greeson to co-edit a very different book, “Keywords for Southern Studies,” a collection of 30 essays. The book was published by the University of Georgia Press in 2016 as part of The New Southern Studies, a series co-edited by Smith.

“It is very much a research-driven book, and a book that tries to reflect research trends in Southern studies over the past 15 to 20 years,” Romine says.

He and Greeson asked colleagues to choose a keyword and write an original piece about the topic. Those keywords range from terms long

associated with the South (“plantation,” “segregation,” “fundamentalism”) to ones with a decidedly modern bent (“queer/quare,” “postsouthern”).

Romine, author of “The Real South: Southern Narrative in the Age of Cultural Reproduction” and “The Narrative Forms of Southern Community,” took on the keyword “consumption.” He expanded on a keynote address he gave in 2011 at the University of Copenhagen for a conference called “Creating and Consuming the American South.”

“I wrote a paper for that conference that was later published as ‘God and the Moon Pie.’ I was interested in how contemporary Southerners invest food with an almost sacred significance, treating the Moon Pie, for example, as a kind of secular equivalent of a communion wafer.”

The research Romine and Greeson did for “Keywords for Southern Studies” involved extensive reading in Southern studies and related fields. They narrowed down a list of potential contributors, ultimately landing such cutting-edge scholars as Dr. Houston A. Baker Jr. of Vanderbilt University (“incarceration”), Dr. John T. Matthews of Boston University (“fetish”), and Dr. Eric Lott of the City University of New York Graduate Center (“Global South”).

“I don’t know that it’s self-consciously iconoclastic, but we did tend to prioritize people who were asking new questions about the South rather than trying to answer the same old questions,” Romine says.

By Eddie Huffman • Photography by Mike Dickens, at Greensboro bed and breakfast Double Oaks, owned by UNCG alumni Amanda and James Keith. Learn more at <https://english.uncg.edu>

NANOMATERIALS FOR GREEN ENERGY

Imagine charging your cell phone outside using only a tiny sticker on the back — no cord or pad needed. Thanks in part to Dr. Hemali Rathnayake, solar-powered cell phones could be the wave of the future.

Alongside collaborators from University of Louisville, Rathnayake is developing smaller, more energy-efficient, environmentally-friendly, inexpensive solar panels.

Her research has received \$1.5 million in grant support from the National Aeronautics & Space Administration, National Science Foundation, and other funders. In July 2016, the associate professor came to UNCG and the Joint School of Nanoscience and Nanoengineering.

“Our goal is for you to be able to go to Walmart, buy your solar panel, pull off the sticker, and put it on your window,” she says. “That’s the dream. It needs to be plug and play.”

To meet this goal, she’s using carbon-based nanoparticles, roughly one-millionth of a millimeter in size, to build flexible solar panels. They’re bendable, making them useful in more places than existing rigid silicon panels. The unique structure of the particles, which incorporate many void spaces, also makes the panels lightweight.

In addition to being small — roughly 4 cm by 8 cm — they use less sunlight energy to create the same amount of electricity as a silicon panel, she says. They produce voltage equivalent to a small battery, and, while they don’t outlast silicon panels, they do cut production costs by 25 percent. Carbon-based panels are also more environmentally friendly because they don’t include heavy metals that become toxic when processed.

Ultimately, she envisions being able to use a spray can, much like an airbrush used to paint a car, to coat the carbon solar cell solution on any surface.

And that includes surfaces in space. Currently, astronauts at the International Space Station are using a high-definition electron microscope monthly to monitor how well the nanoparticles, suspended in solution, align themselves under microgravity.

One hypothesis, Rathnayake says, is that the particles will organize in a more stable pattern under less gravity and can be returned to Earth for even more energy-efficient solar cell production.

NASA is also testing Rathnayake’s carbon particles to see whether the nanotechnology could improve how satellites are powered for expanded space exploration. Even in space, solar panels don’t have access to constant sunlight. By reducing the sunlight needed to produce energy, carbon solar panels could make it easier to power satellites for long time periods.

But her research doesn’t stop there. Rathnayake’s also interested in harnessing waste energy — energy produced, but not captured — for electricity production. In particular, she’s investigating thermoelectrics, the direct conversion of temperature differences into electric voltages.

She’s working on a device that uses body heat to power electronic devices. For example, the body heat you produce while jogging could be used to run — and recharge — the mp3 player playing your music.

Overall, she says, the impetus behind her research is bringing electricity to the public in a more effective, affordable form.

“I come from a country where sunlight is abundant, but electricity isn’t,” she says. “Electricity isn’t affordable for all families. That’s the reason we’re thinking about doing this in an environmentally-friendly, cheaper way.”

By Whitney J. Palmer • Photography by Mike Dickens • Learn more at <http://jsnn.ncat.uncg.edu>





THE UNIVERSITY of NORTH CAROLINA
GREENSBORO

*The Office of Research
and Economic Development*

PO Box 26170
Greensboro, NC 27402-6170

Non-Profit Org.

US Postage Paid

Greensboro, NC

Permit 533

GOLDEN ANNIVERSARY This year the School of Nursing celebrates 50 years of preparing nurses, educators, and researchers to make a difference in the lives of their communities. Here, visitors tour new nursing education and research facilities at the Union Square Campus in downtown Greensboro. The campus is a collaboration among UNCG, NC A&T, GTCC, and Cone Health. Learn more at <https://nursing.uncg.edu>.

