

uncg research

Spring 2016

Research, Scholarship and Creative Activity



THE INDEPENDENT VOTER

Pushing past party lines

pg. 10



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As one of only 37 doctoral universities in the country classified by the Carnegie Foundation as having both higher research activity as well as a deep, broad, and sustained commitment to community engagement, UNCG has long focused on how the research and scholarship of our faculty, students, and staff move the needle on important issues. As this magazine demonstrates, *how* we move the needle is just as meaningful as the research itself. Our work moves beyond translating research into practice. What distinguishes UNCG is our collective impact.

The term collective impact was first articulated by Kania and Kramer in 2011 in a *Stanford Social Innovation Review* article of the same name. The term has since become the focus of many nonprofits, communities, and philanthropic organizations as they seek to effect change around some of the most pressing issues facing our world. While it incorporates many of the strategies one finds in translational or applied research, collective impact goes further.

Creating and maintaining collective impact requires what Kania and Kramer term a “backbone support organization,” a role played by UNCG in a number of the initiatives illustrated throughout this issue. This backbone support is evident in our efforts to ignite and focus the entrepreneurial spirit of faculty and students and in our efforts to yoke that activity with the economic efforts of the city. It is evident in Dr. Link’s extensive research, which provides investors and policymakers, including the federal government, with the best data to make evidence-based decisions to get return on their investments. And it is evident in the Center for Translational Biomedical Research’s efforts to detect, prevent, and treat devastating diseases.

But UNCG’s collective impact is perhaps best illustrated in this spring’s feature piece on early childhood. Collective impact begins with a common agenda — usually a big, hairy, audacious goal such as helping all children be healthy and ready to learn. To move the needle on something that big, you have to understand the complex pipeline; you have to find the right partners; you have to work together on all aspects. It means understanding what helps children manage their emotions and how doing so relates to later development. It means looking at the important adults in a child’s life and understanding which parenting and teaching practices provide that essential nurturing, safe, and supportive environment. It means developing ongoing and quality assessments that help families, child-care providers, and policymakers make good decisions about the educational environments young children need to thrive in K-12 education. It means ensuring a well-trained workforce to enhance a child’s development in child care and school settings. And it means sharing all of our hard-won insights with fellow researchers, teachers, and families — and advocating not only for the research but, more importantly, for solutions that really work.

TERRI L. SHELTON, PHD

Vice Chancellor for Research and Economic Development



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



8

The Independent Voter

Their power is growing. And as the current presidential election demonstrates, so is their dissatisfaction. Dr. Omar Ali explains the movement.



14

Right from the Start

We all want the best for our children. But how do we get there? UNCG researchers lead the way.



22

Ground Control to Professor Link

When it comes to assessing how their entrepreneurial efforts are working, international institutions, Congress, and even NASA call on the guru: Dr. Al Link.

uncg research

2 **rightidea** Growing Greensboro • Detecting devastating diseases early

12 **researchexcellence** Top senior research award goes to religious studies professor Eugene Rogers

26 **theword'sout** Character traits in presidential candidates • The complete T.S. Eliot

29 **up&coming** Extended families and childhood obesity

DREAM, BUILD GREENSBORO

INNOVATION AT UNCG ISN'T JUST ON CAMPUS. TOMORROW'S HIGH-ENERGY ECONOMY IS GERMINATING AT PLACES LIKE HQ GREENSBORO AND THINKHOUSEU.

STEPHANIE MCGILL, A MARINE CORPS VETERAN and UNCG business administration major, calls herself a hands-on learner. Classroom learning, she says, crystallizes when she can apply it in real-world situations.

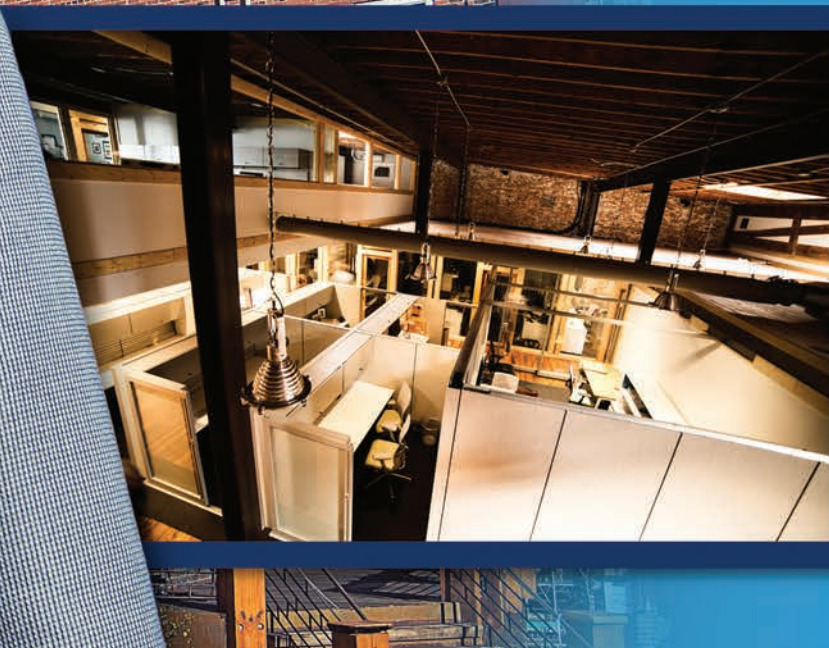
Through ThinkHouseU, an entrepreneurial, residential program near campus, McGill takes classes, meets with mentors, and trades ideas with other students who want to launch scalable businesses. ThinkHouseU, a national pilot, is a partnership between UNCG and Forward Impact. The Raleigh-based organization supports community-based strategies to develop high-impact entrepreneurs.

Justin Streuli, director of the N.C. Entrepreneurship Center at UNCG, calls ThinkHouseU “a bridge between the campus community and the startup community.”

HQ Greensboro is steps away from brewpubs, galleries, and eclectic South Elm Street. Modeled on a similar Forward Impact project in Raleigh, every element of HQ Greensboro is designed to stimulate interaction between members and the city's business community. Think of it as a hothouse for entrepreneurs.



I LOVE YOUR WORK



On any given day you will find one of UNCG's economic ambassadors at HQ Greensboro. Walk in to bounce ideas off Streuli, Director of the Office of Innovation Commercialization Staton Noel, or Associate Vice Chancellor for Economic Engagement Bryan Toney.

As a ThinkHouseU Fellow, McGill automatically has membership at HQ Greensboro and access to these resources.

McGill is a student-entrepreneur. Her Kova Coffee Co. sells cold-brew coffee kits online, allowing her to test concepts and practices with little risk. Her goal: a storefront coffee shop in Greensboro.

"Being able to meet people who can help me with ideas and support is the biggest thing ThinkHouseU has done for me," she says. "And having access to HQ Greensboro has been a lifesaver. It's like being in the workforce as opposed to being in the classroom. It tells you whether you're cut out for what you're doing."

ThinkHouseU and HQ Greensboro are fundamental to UNCG's strategy to reach into the business community and engage. UNCG's goal is to attract students, leverage faculty, foster entrepreneurship, retain talent after graduation, and spur economic development.

Associate Vice Chancellor Bryan Toney is the sparkplug behind ThinkHouseU and HQ Greensboro. He introduced Greensboro entrepreneur and developer Andy Zimmerman to Forward Impact and HQ Raleigh. Zimmerman saw the HQ concept's potential, assembled a team, and went to work. The 11,000-square-foot innovation space opened last August.

Some HQ Greensboro members rent workspace, which ranges from cubicles to offices large enough for eight or more. A co-working membership, the most affordable type, provides access to the common area where members, visitors, and staff chat, critique, and create. The commons resembles a coffee shop by design, and the java is free.

HQ Greensboro quickly became an epicenter for entrepreneurial activity. "There's constant energy," says Cindy Thompson, launch director for the Global Opportunity (GO) Center. "People want to come here."

The GO Center, to be located downtown, will leverage Greensboro's

strengths as a center for foreign investments and exports with the city's international population, higher education assets, businesses, and economic development interests. The center is the nation's first public-private partnership devoted to global engagement. "No other city or state has something like this," Thompson says.

The GO Center concept won 2015's Strong Cities, Strong Communities Challenge, sponsored by the U.S. Economic Development Administration. The \$500,000 prize plus matching funds of \$1.5 million will provide a five-year operating budget to the center.

Toney worked with colleagues from UNCG, NC A&T State University, and several other public and private organizations to formulate the GO Center proposal. Collaboration with other campuses and building alliances with the business community are the new norm at UNCG.

"Everything we do is about connecting and collaborating," he says. "When we do that well, new opportunities are created and everybody wins."

InnovateNC is another new gear in the city's economic engine. Greensboro is one of five communities chosen to participate in this two-year learning collaborative to spark innovation-centered economic development. The Institute for Emerging Issues at NC State University launched InnovateNC with nine other statewide partners.

Greensboro's proposal focuses on creating a "culture of inclusive innovation" to energize economic development. All of the city's colleges and universities are involved.

"UNCG is helping to provide some of the critical direction to develop Greensboro's InnovateNC program," says Deborah Hooper, chief operating officer for the Greensboro Partnership, an economic development organization.

Her co-chair for InnovateNC is UNCG's Bryan Toney.

*By Tom Lassiter • Photography by Mike Dickens
Learn more at <http://research.uncg.edu>*

LEFT TO RIGHT Individual working spaces available at HQ. | UNCG Assistant Professor of Political Science Allison Bramwell, an expert on community economic development with a particular focus on inclusive innovation in mid-sized cities, is helping Greensboro's InnovateNC develop its strategic direction and policy ideas. | Stop by UNCG's offices at HQ to meet Director of Innovation Commercialization Staton Noel, N.C. Entrepreneurship Center Director Justin Streuli, or AVC Bryan Toney and launch your big idea. | UNCG also maintains space at HQ for spinoff companies to conduct business.



DETECTING

DISEASES EARLY



AT THE UNCG CENTER FOR TRANSLATIONAL BIOMEDICAL RESEARCH, CO-DIRECTORS ZHOU AND ZHANG ARE SEEKING BETTER WAYS TO DETECT, PREVENT, AND TREAT DEVASTATING HUMAN METABOLIC ILLNESSES THAT ARE ON THE RISE GLOBALLY.

FROM THEIR LAB AT THE NORTH CAROLINA RESEARCH CAMPUS IN KANNAPOLIS, Dr. Zhanxiang Zhou and Dr. Qibin Zhang enjoy a commanding view of both the past and the future.

In the distance sit the modest, low, red-brick buildings of downtown Kannapolis, the city a little north of Charlotte that was once a key player in the state's textile industry. Immediately below their fourth-floor lab sprawls the bright green front lawn of the gleaming new North Carolina Research Campus.

Built on the site of a massive Pillowtex plant that closed in 2003, creating the largest mass layoff in North Carolina's history, the 350-acre research campus is the brainchild of David H. Murdock, chairman and CEO of Dole Food Company. The result of a public-private partnership seeking to spur innovation in biotechnology, nutrition, agriculture, and health, the campus involves eight universities and numerous industry partners.

They are all invested in the same dream — that a new era of economic development in North Carolina can arise from the ashes of an industrial past grounded in textiles, furniture, and tobacco.

And UNCG's Drs. Zhou and Zhang (seen left to right) are helping lead the charge.



CAMPUS FOR COLLABORATION The 350-acre North Carolina Research Campus brings together corporations, universities, and health care organizations to spur innovation in biotechnology, nutrition, agriculture, and health. Eight NC universities maintain labs on the research campus, which is located in the former mill town of Kannapolis, just north of Charlotte.

The research campus is home to UNCG’s Center for Translational Biomedical Research, the 5,500-square-foot lab that Zhou and Zhang co-direct. Both men lead five-member research teams that are funded by grants from the National Institutes of Health. They also share a common goal: finding new ways to detect, prevent, and treat devastating human metabolic illnesses that are on the rise globally.

TYPE 1 DIABETES TYPICALLY IMPACTS CHILDREN AND YOUNG ADULTS. IT HAS GROWN BY ABOUT 3 PERCENT ANNUALLY OVER THE PAST 20 YEARS AND NOW AFFECTS NEARLY 1.5 MILLION AMERICANS.

“When you’re talking about something as complex as diabetes and fatty liver disease, it is a lot more challenging to make any progress if the principal investigators work in silos,” says Zhang, who moved his family cross-country to team with Zhou. “There’s a lot of room for collaboration to break new ground, and that’s what has brought both of us here.”

Zhang joined the Center for Translational Biomedical Research in late 2014 after working in the state of Washington for nearly a decade as a researcher at the U.S. Department of Energy’s Pacific Northwest

National Laboratory, Biological Sciences Division. With a PhD in analytical chemistry from the University of California, Riverside and a BS in chemistry from Shandong Normal University in China, Zhang also serves as associate professor in UNCG’s Department of Chemistry and Biochemistry.

Zhou has served five years as a professor in UNCG’s Department of Nutrition. The co-author of a number of articles in prominent scientific journals and the principal investigator of two major NIH projects, Zhou joined the Center for Translational Biomedical Research in 2010 after working as a faculty member in the University of Louisville’s School of Medicine for 12 years. He holds a PhD from Japan’s University of Ehime, having also earned an MS degree at Beijing Agricultural University and a BS at China’s Hebei Agricultural University.

The ultimate research goals of both men are ambitious — and could contribute to major advances in health care.

Zhang is pursuing a groundbreaking approach for detecting and treating Type 1 diabetes, which typically impacts children and young adults. It has grown by about 3 percent annually over the past 20 years and now affects nearly 1.5 million Americans. The disease can cause disabling problems, ranging from eye and kidney damage to heart disease and pregnancy complications. The longer it goes undetected, the worse its toll can be.

“Often, by the time you get a clinical diagnosis, a lot of the damage is already under way,” Zhang says. “We need to find out how to spot it and treat it early.”

Zhou feels an equal sense of urgency in his study of alcohol-induced fatty liver disease, which can lead to hepatitis, cirrhosis, and liver failure.

In fact, 30 million Americans have some form of liver disease, which is the eighth-leading cause of death in the U.S. according to the Mayo Clinic. “There is no federally-approved treatment for any stage of alcoholic fatty liver disease right now,” Zhou says. “We want to be the first team there. We hope to make a ‘cocktail’ to work on different organ systems to protect against this deadly disease.”

For both Zhang and Zhou, the path to the major breakthroughs they envision is grounded in shared, sophisticated scientific instruments and a collaborative commitment to exploring the biomolecules and mechanisms behind diabetes and fatty liver disease.

Type 1 diabetes stems from the autoimmune destruction of insulin-producing beta cells in the pancreas — and typically begins with asymptomatic periods that can stretch for months or years, allowing the disease to take root unannounced. Currently, there are only limited ways to identify people who are at increased risk for T1D, as the disease is known by researchers. There’s a desperate need to identify more specific biomarkers that can tip off medical professionals to the presence of T1D and how it develops.

Using mass spectrometry-based measurements of human blood samples, Zhang and his team have zeroed in on a panel of unique serum proteins that are linked to immune response and can distinguish T1D from healthy controls with high accuracy. The Zhang team’s next move: extending its biomarker discovery effort to human pancreatic tissues obtained from T1D organ donors. The team is examining blood samples collected during different stages of T1D to comprehensively identify proteins that correlate to the progression of the disease. If they can identify which proteins show up in the earliest stages of T1D, one day doctors may be able to identify T1D so early that therapeutic strategies could be administered in time to reverse the condition entirely.

Zhou, meanwhile, has garnered more than \$4 million in federal research grants — and his team gets results that earn attention in top scientific journals. The team contributed an article this year in the *Journal of Hepatology* about a potential treatment for alcoholic liver disease. Last year, Zhou published a piece in *Alcoholism: Clinical and Experimental Research* that established a connection between niacin supplementation and lowering the lipid levels that correlate with liver disease. His research has also explored the positive impact of zinc supplements on reducing liver lipid levels.

Zhou and his team are also exploring alcohol-induced fatty liver disease from the perspective of the gut-liver axis, specifically looking at the effects of alcohol on other internal organs such as the intestines and how that could lead to inflammation and fat accumulation in the liver. Their work investigates, too, how to stimulate specific enzymes responsible for detoxifying the liver, part of an effort to search for dietary and pharmaceutical approaches to treating liver disease.

“Our findings strongly support a novel concept — that accumulation of free fatty acids in the liver can produce lipotoxicity, which is a metabolic syndrome that is very damaging and potentially fatal,” Zhou says.

Currently pursuing a second five-year grant from the NIH, Zhou and his team want to build on those findings. Their goal is to understand how chronic alcohol exposure leads to the accumulation of free fatty acids and how those acids can induce toxic reactions in the liver.

As their teams delve ever deeper into these research projects, Zhang and Zhou continue to learn from each other, sharing not only their spectrometers, centrifuges, and other high-tech instruments but also their hard-won expertise in chemistry, biochemistry, and nutrition. They both hope to take their work to a new level in the next few years — collaborating with clinical research centers and biotechnology companies on developing medicines with the potential to make a difference in the lives of millions of people globally.

By Stephen Martin • Photography by Martin Kane
Learn more: <http://ctbr.uncg.edu>

DISEASE DETECTIVE Dr. Wei Zhong, a scientist in Dr. Zhou’s laboratory, is one of ten researchers at the Center for Translational Biomedical Research.



The background of the entire image is a rustic wooden plank wall. The top right corner features a stylized American flag with a blue field of white stars and red and white stripes. The main title is written in a large, white, cursive script across the middle of the image.

The Independent Voter

IT'S INDEPENDENTS' DAY. This year's presidential contest illustrates the growing power of independent voters and their growing dissatisfaction with America's two-party political system. UNCG Associate Professor Omar Ali, the 2016 Carnegie Foundation North Carolina Professor of the Year, studies and advocates for the inclusion of independent voters in the political process.

ON A SNOWY WINTER MORNING SIX YEARS AGO, Dr. Omar Ali was in Greensboro to interview for a position as an associate professor.

He came downstairs for breakfast at his B&B and found two “little old ladies” in the dining room. When the cook asked what brought them all to Greensboro, Ali eagerly explained that he was there to interview at UNCG. The women responded, “We’re here to celebrate the anniversary of the sit-ins — because we were there.”

They were part of the 1960 Woolworth sit-in in downtown Greensboro, initiated when four black NC A&T State University students sat down at a whites-only lunch counter and asked to be served. When they were refused service, they refused to leave, helping to launch the national sit-in movement.

That snowy morning — February 1, 2010 — marked the 50th anniversary of the sit-in. The International Civil Rights Center and Museum, complete with a restored Woolworth lunch counter, was opening to a bevy of civil rights leaders and national media. And the two “little old ladies.” White ladies.

Ali, who specialized in Southern African-American history as a Columbia University PhD student, was interviewing for a position in UNCG’s African American & African Diaspora Studies Program. Thrilled to hear who they were, he went over to hug them and joyfully introduced himself. Over the next two hours he collected an oral history of their experiences.

What he discovered about their political views was strangely familiar.

INDEPENDENT SENTIMENTS

“When I asked them about ideology, they said ‘It just seemed like the right thing to do,’” Ali says. “One of them later turned out to be a Democrat, the other a Republican. But they came into the movement as independents.”

Ali is an accomplished historian of the African Diaspora — he’s written about African-American history, Afro-Latin America, and Africans in the Indian Ocean world. He also has an abiding concern about the structural discrimination faced by independents — the outsiders, the disaffected.

In 2016, as Americans prepare to vote in the presidential elections, the frustration and concerns of independent voters — indeed all voters — are everywhere.

As of early March, wealthy real estate developer Donald Trump was leading the Republican field, and many GOP elders were predicting big problems for the party if he were to win the nomination. Bernie Sanders, a self-described democratic socialist, was polling head-to-head with previously presumed Democratic nominee Hillary Clinton, despite party leaders’ worry that he was too far left to win the presidency.

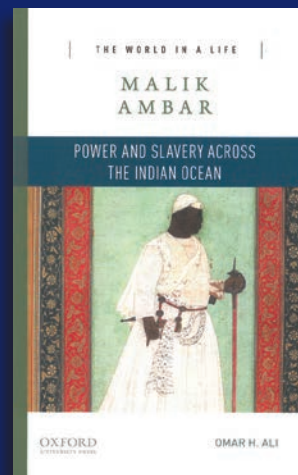
And former New York City Mayor Michael Bloomberg was contemplating a run as an independent candidate for president. Some media reported he was willing to spend as much as \$1 billion of his own fortune on the effort.

The Democratic and Republican parties, long the all-controlling power brokers of American politics, seemed to have lost their ironclad grip over the most important election in the country.

To Ali, it all makes perfect sense.



ABOVE As a historian and ethnographer of the African Diaspora, Associate Professor Ali explores the Atlantic and Indian Ocean worlds from the early modern period to the present. Ali has been a Fulbright professor of history and anthropology at Universidad Nacional de Colombia, Bogotá, a visiting professor of African American and Diaspora Studies at Vanderbilt University, and a Library Scholar at the David Rockefeller Center for Latin American Studies at Harvard University. He currently serves as the interim dean of UNCG’s Lloyd International Honors College.



LEFT Ali’s fourth and latest book is *Malik Ambar: Power and Slavery Across the Indian Ocean*. It focuses on the rise of a 16th century Ethiopian who was sold into slavery as a child but arose from slavery to become a powerful military and political leader in western India. Ambar’s ascension to power was possible, Ali says, because slavery wasn’t codified by race in the Indian Ocean world the way it was, ultimately, in America.

Read more at:
<http://go.uncg.edu/malikambar>

IDENTITY, POLITICS, AND COMMON SENSE

“In the polling data, most voters have a mix of views on issues. More and more people say, for instance, ‘I’m fiscally conservative and socially liberal.’ They’re mixing it up,” Ali says. “I think that’s more accurate in life. People are not all one thing or another.”

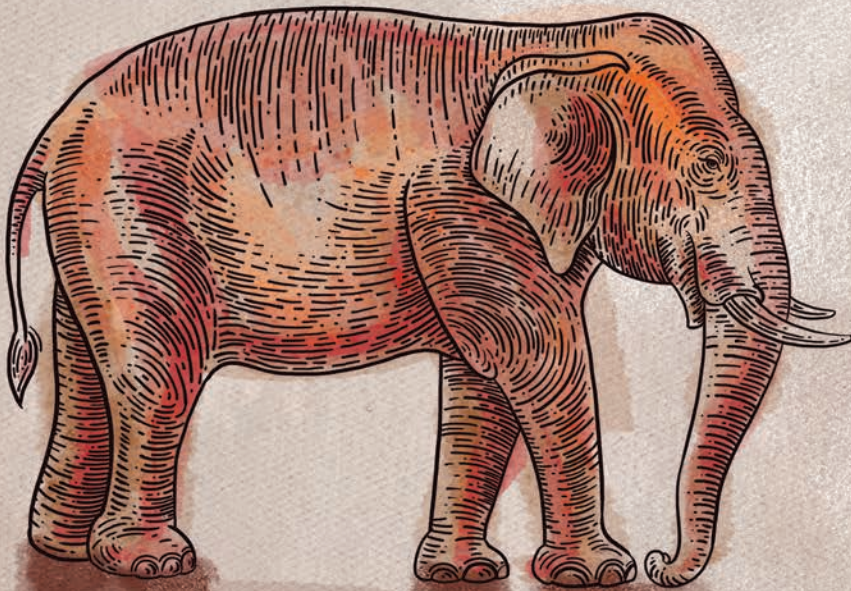
Ali comes to that view naturally. He isn’t “all one thing or another.”

His father is East Indian Muslim; his mother, Peruvian Catholic. He spent much of his youth living and traveling in different countries around the world, as his family followed his father’s job to North Africa and the Middle East. Visits to Ali’s mother’s family took them to Latin America. He went to high school in California and later did research in Ghana, Colombia, Ethiopia, and India.

“Being put into many different situations, I have some appreciation for nuance,” he says. “In some ways, I culturally identify as Christian and Muslim, but then again I also identify with many other traditions.”

So the idea that two white women in the South in 1960 might decide that supporting civil rights for African Americans was “the right thing to do,” or that voters in 2016 might reject the anointed candidates of the two major political parties and instead support outsiders, doesn’t surprise Ali.

“Why should anyone be excluded from the political process just because they don’t want to identify as a Democrat or Republican?”



“When I started learning about politics, it seemed silly, I believed, for people to be so fixed in this one camp or the other, this partisan mentality,” he says. “I can appreciate that you’re into a sports team, but your sports team doesn’t decide major social policy.”

Ali’s interests in African Diaspora history and in independent voters are linked. His studies of contemporary independents are an extension of his work as a historian. His first book, *In the Balance of Power: Independent Black Politics and Third Party Movements in the U.S.* (Ohio University Press, 2008), focuses on the history of independent African-American politics in the United States.

Ali’s knowledge of that history gives him a different perspective on independent politics.

CONCERN FOR PROCESS

Rather than share common ideologies or political sentiments, Ali says independents share a concern about process.

According to pollsters, 43 percent of Americans self-identify as independents.

“There is an emerging, organized movement of independents in America,” Ali says. “That’s the thing I am particularly interested in because it’s a basic issue of inclusion, of democracy.”

But it’s a movement that faces obstacles created by the two major parties. In many states — including North Carolina — it is nearly impossible to get on the ballot as an independent candidate. To run for governor, the Democratic and Republican candidates just have to win their party nominations — no matter how few citizens vote in the primaries.

An independent candidate faces a much steeper challenge.

“You have to get over 100,000 voter signatures to have your name just appear on the ballot, while the Democrats and Republicans have written the rules so they don’t have to gather any. Their nominee gets on automatically,” Ali notes. “Most people don’t know that there’s such a structural legal bias. In the law, independents are second-class citizens.”

Ali notes that independent candidates who have gained support have generally been people who were already public figures — such as ex-professional wrestler Jesse Ventura, who served as governor of Minnesota — or very wealthy — like Ross Perot, the successful businessman who ran as an independent candidate for president in 1992 and garnered 20 million votes.

Independent candidates who successfully win an election — like Ventura — are still few and far between. However, Ali believes that the support outside candidates have won in this year’s presidential primaries reflects a growing anti-partyism.

“What we’re seeing is an expression of Americans wanting to move away from parties altogether,” he says. “There is a strong perception that the parties are more concerned about themselves than ordinary citizens. That’s the thing that I am particularly interested in. It’s an issue of democracy, of participation.”

Ali serves on the board of IndependentVoting.org, a national strategy and leadership training center for progressive, post-partisan electoral reform.

Of the 43 percent of Americans who identify as independents, many remain registered as Democrats or Republicans. The reason? If they registered as independent, Ali says, they would have no voice in the primaries that effectively determine the outcome of most elections.

In a few places, though, independents have gained more influence over election outcomes, changing the culture of partisanship.

CALIFORNIA’S ‘QUIET REVOLUTION’

In 2010, California adopted an open primary system for all elections except the presidential race. Ali and Jason Olson, the president of San Francisco-based Independentvoice.org, studied the impact of California’s move to open primaries.

Their 2015 report, “A Quiet Revolution: The Early Success of California’s Top Two Nonpartisan Primary,” found big changes had occurred.

In the new system, an open primary is held — citizens can vote for whomever they choose, without concern for party. The top two vote earners then compete in the general election.

California politics have changed dramatically as a result. Among the study’s key findings:

★ **MORE COMPETITIVE ELECTIONS** From 2000 to 2009 just two incumbent candidates in state legislature and congressional elections were unseated (both were under criminal investigation). Since 2010, California elections have become the most competitive in the country.

★ **LESS POLARIZATION** California’s state legislature, long known for missed budget deadlines and deadlock, operates better. Budgets are balanced and lawmakers have been more willing to collaborate with colleagues across the aisle.

And, of course, independent voters can now vote in primaries, giving millions of people a more meaningful political voice.

“Those who make the rules, rule.” Ali says. “That’s the meat and potatoes of politics.”

California isn’t the only state with a nonpartisan primary system. Washington and Nebraska have similar systems, and there are proposals in several other states to adopt top-two primary systems. (Not in North Carolina.)

“One of my colleagues, Jackie Salit at IndependentVoting.org, explains it best: Independent voters are seeking respect, recognition, and reform. Open primaries. Nonpartisan redistricting. Independent election supervision. Campaign contribution disclosure. For independents, process is paramount.”

ENGAGING YOUNG VOTERS

Independent voters like open primaries. And young voters are much more likely to be independent.

Ali and four of his students conducted a study in 2012, meeting several thousand students at 16 North Carolina colleges — public universities (including UNCG), private universities, and community colleges. The polling was done face-to-face.

The research team found that three-quarters of the students they stopped identified themselves as independents — regardless of how they were registered for voting purposes. The team then asked 1,246 of the self-identified independents 21 follow-up questions.

They found that nearly two-thirds identified themselves as “anti-party” and that 94.3 percent agreed that independent voters should be allowed to vote in primaries.

Though that research focused on young voters, Ali points out that even among older voters — including those 65 or older — there is a large contingent who identify as independents.

This growing support for nonpartisan politics, for more power for all voters and less for the parties, for changing political structure and process, strikes Ali as fundamentally American.

“We forget that the American Revolution was actually all about process,” he says. “It wasn’t ‘No taxation,’ it was ‘No taxation without representation.’ It’s about representation. It’s about process.”

By Mark Toszczak • Photography by Mike Dickens
Learn more at: <http://go.uncg.edu/omarali>

Power In The Blood

*Professor of Religious Studies Dr. Eugene Rogers Jr., our interviewee, doesn't shy from taking on some of the most controversial and important issues in religious life and in our culture. Dr. Rogers' book *Sexuality and the Christian Body*, an evaluation of Christian arguments for and against same-sex marriage, was named essential reading by leading Protestant religious news journal *Christian Century* and has become part of the curriculum at prestigious universities such as Princeton, Yale, and Cambridge. Currently, Rogers is working in Jerusalem. The UNCG 2014-15 Senior Research Excellence Award winner's new focus? Blood imagery in religion.*

HIS NEW WORK

The book will be titled *The Persistence of Blood*. I'm thinking about how religious people, especially Christians, think about blood — how they use images of blood, symbols of blood, language of blood. To me, recently, it's become strange why Christians talk about blood *so much*. I'm also interested in how other religious groups such as Jews, Muslims, Aztecs, and Hindus talk about blood.

A MULTI-PRONGED ANALYSIS

I'm not a historian. I think about these things more anthropologically, philosophically, theologically — that is, I look for patterns that recur over time periods. In this case, I am looking for ways that Christians use the symbols and language of blood to distinguish “them” from “us” — that distinguish the borders of the group.

SYMBOLISM REINFORCES BONDS

An example is when Christians think about creation and evolution. There has been a lot of controversy within Christianity about whether Christians can believe in evolution. In many Christian responses to evolution, both in the 1920s and recently, authors consider whether humans share blood with apes. This gets thought out in terms of the blood of Christ. “If the blood of Christ — the blood of the atonement — excludes apes, they're not like us. If it includes apes, they are like us.” Both versions are controversial. Blood language has also been used, surprisingly, to reinforce gender roles.

RECONCILING OPPOSING VIEWS

My dissertation was on two figures who seemed to have opposite views on whether you can read the existence of God from nature. One was Thomas Aquinas, who is usually understood to say you can read God from the book of nature. And the other is a modern Protestant Calvinist theologian, Karl Barth, who is understood to think that any God whose existence you could show from nature would not be God. But both Thomas Aquinas and Karl Barth, who seem to have opposite views on this, comment on the same biblical passage: Paul's letter to the Romans, Chapter 1, where Paul says that the invisible things of God can be known from the things God has made. There, the Protestant and the Catholic, the medieval and the modern, end up saying very similar things, because they don't want to disagree with Paul.

DANGER IN BLOOD

There has been a critique of Christian blood language both outside Christianity and inside Christianity. For instance, there is a 2014 book called *Blood: A Critique of Christianity* by Gil Anidjar, who thinks that Christian blood talk is responsible for all the evils of the modern world. He thinks Christian blood language is responsible for war, violence, anti-Semitism, racism, and the evils of capitalism. That's overdone in my view, but that's a critique of Christianity from outside. Within Christianity, feminist theologians, especially, have observed a dynamic where the powerful tell the less powerful to take up their cross. They should bleed for Christ, they should suffer for Christ. This has been used by husbands to abuse their wives or slave masters to enforce slavery. Many people who observe this dynamic think that Christians should stop using blood imagery altogether. It's just too dangerous.

PERSISTENCE OF BLOOD IMAGERY

My view is that it is dangerous, but it is not going away. If some Christians avoid blood language, then other Christians will just keep using it and the danger will, at best, go underground to exercise its influence out of conscious sight. It's better to acknowledge that Christians do it, and try to figure out how to do it better than to try to suppress it, because suppression isn't going to work.

AESTHETICS OF RELIGION

I study Christian thought because it is beautiful. It hangs together in an aesthetic way. It has a certain elegance and depth and pattern to it that is endlessly engaging.

Interviewed by Mike Harris

Photography by UNCG Religious Studies senior Jamie Sullivan

Learn more at <http://go.uncg.edu/eugenerogers>

Rogers is pursuing his research on blood in Israel this year with funding from the Lady Davis Trust at Hebrew University in Jerusalem and from the Templeton Foundation.





RIGHT FROM THE

START

THE BEST FOOT FORWARD. It's what we all want for our children in those first few years. But, the question is — how do we get there?

Nationally and locally, debates rage. It's difficult to find consensus on the best way to educate our children or even prepare them to be educated. One thing we can be sure of? It's no simple task. It will require a lot of work and collaboration to get it right.

UNCG is leading the way. Here, researchers have investigated — sometimes for years — what it takes to make sure children are healthy and ready to learn. And, now, investigators are combining their knowledge, resources, and networks to meet these challenges directly.

Faculty and staff, from the UNCG Department of Human Development and Family Studies to the UNCG Center for Youth, Family, and Community Partnerships, conduct basic research, translate research into evidence-based practice, and help create local, state, and national educational policy. As they reach out to families, help towns and cities identify and intervene with struggling children, and teach professionals vital skills for the classroom, these investigators have one goal in mind — giving every child the right start.

"We take what we glean from research and teaching and put it together to make a difference. That knowledge shouldn't remain in the academy," says Dr. Chris Payne, director of the Center for Youth, Family, and Community Partnerships. "It's our mission to work for the greater good of our community."

THE IMPORTANCE OF EARLY SOCIAL & EMOTIONAL DEVELOPMENT

For children to maximize their educational experiences, it's critical they come into the classroom ready to learn. That makes the first five years invaluable to healthy growth, Payne says. During that time, approximately 90 percent of brain structures develop, establishing the foundation for how a child learns and processes information.

The healthiest growth occurs, explains Payne, when children have secure relationships with their caregivers and feel free to express emotions, including fear, anger, and happiness.

EMOTION REGULATION

Although school carries an inherent focus on grades, academic ability isn't the only factor determining whether a child is actually classroom-ready. Another key indicator is whether he or she can appropriately regulate emotions, says Dr. Susan Calkins. "The more structured preschool and school environments present a unique set of challenges to children — challenges that require emotional readiness."

If you visit the Human Development and Family Studies (HDFS) professor's lab while her team collects data, you'll observe children singing, counting, or playing games. Others might be crying and flailing fists. They're expressing a wide range of emotional abilities, dependent on their age and experiences.

While some children control their impulses by employing various learned strategies, others lack these skills and have trouble delaying gratification or managing frustrating tasks. Their negative emotional responses indicate immature emotional readiness.

"Being able to manage emotions is critical for academic achievement, school readiness, and mental health," Calkins explains. Without emotion regulation skills, children can't establish positive student-teacher and peer-to-peer relationships. If they can't express themselves or manage their feelings in age-appropriate ways, they also risk social rejection. "If children don't master emotional regulation, they face challenges for years to come."

To help children reach appropriate levels of emotional maturity, adults must recognize their natural responses and know how to handle them, Calkins says. To find the tools parents and caregivers need, she and her team have recruited children from more than 450 families to participate in the RIGHT Track study.



THE FUTURE STARTS NOW Developed by Calkins and current and former collaborators Susan Keane, Marion O'Brien, and Lilly Shanahan, RIGHT Track aims to understand how emotion regulation develops over time. With over \$8 million in R01 and R03 funding from the National Institutes of Mental Health, the study has followed its child participants from ages 2 to 19.

Although we can begin to understand emotion regulation by observing the behavior of and collecting information from children and their caregivers, collecting data at the physiological level also provides a key piece of the puzzle in understanding not only how emotional regulation develops but also the degree to which it impacts various areas of the child development.

In one component of the study, Calkins team attaches heart rate electrodes to each child to measure their physiological arousal and then presents them with a frustrating task. Two-year-olds are asked to open a cookie jar that was glued shut or wait to open a present, while 5-year-olds are tasked with unlocking a box using a set of keys that does not actually include the correct key.


The team watches both the child's actions as well as the caregiver's responses. Did the children quit or did they stick with the task? Did the parent offer guidance or withdraw from the situation? Children and parents returned to the lab for more advanced tests as they aged.

"So far, we've seen that children who get extremely frustrated with

The Center for Youth, Family, and Community Partnerships (CYFCP) was established in 1996 to encourage interdisciplinary research and to utilize the resources of the university to address social concerns in the community. CYFCP works with more than 150 community and state partners in research, evaluation, and training and technical assistance collaborations.

A major thrust for the center is school readiness. "We know we have to approach school readiness and early childhood at three

levels," explains Dr. Terri L. Shelton, UNCG Vice Chancellor for Research and Economic Development and previous director of the CYFCP. "First, we promote nurturing and responsive caregiver relationships and high quality, supportive environments for children across the board. Next, we identify children who are falling behind and offer them interventions and instruction that can get them back on the right path. Finally, we must develop more intensive options for children experiencing challenges so extreme that basic interventions are not enough."

CAREGIVER IMPACT Calkins has found that children who exhibit the most frustration and anger have parents who tend to do everything for them or excessively control their behavior, rather than letting the children do things for themselves. Watch the RIGHT Track video at <http://youtube.com/uncgresearch> 



these tasks also experience behavior problems,” Calkins says. “These kids who lack skills to control their emotions and cope are also more likely to experience depression and academic and health issues and to engage in substance abuse and risky sexual behavior later in life.”

There are many ways children can rein in overwhelming feelings. Distractions, such as singing songs, diverting concentration, or engaging in self-soothing behaviors, can effectively control emotions.

Knowing how to implement these behaviors helps a child navigate social and academic environments, says Calkins. They also help children stay focused on tasks and enhance their autonomy. When children have these skills, they can approach difficult situations without adult intervention.

Calkins’ findings are important not just for parents but for educators too. Early development of a positive teacher-student relationship can help children sidestep many of the aforementioned problems. “This is critical knowledge, especially in today’s kindergarten climate where we’re getting young children ready for a series of tasks and tests.”



DEVELOPMENT SIGNS, AGES 2-4: If children are on pace for appropriate emotional development, they will show signs of autonomy, compliance, emotional engagement, and communication skills. They may still demonstrate object attachment (using a teddy bear or a security blanket), but they will have begun working on other self-soothing behaviors.



BEAR NECESSITIES Dr. Esther Leerkes (center) oversees a parent-child planning game. Here, the caregiver must help the child plan the most efficient way for a bear to complete his list of errands. Researchers assess how the caregiver helps the child handle the task, looking at the kind and quality of the information she provides and at the emotional quality of the interaction (warmth, smiles, praise).

PARENT-CHILD RELATIONSHIPS

Healthy emotion regulation is imperative for children to achieve school readiness, but of course they can't do it alone. Parents must be involved, points out HDFS professor Esther Leerkes. And, at every step, parents must provide age-appropriate guidance or children won't internalize the correct skills.

"The quality of parenting matters. We know that how parents respond when a child is upset can help children learn to regulate their emotions — which in turn affects their early cognitive development and school readiness," she says. "We also know if children struggle emotionally, they are more likely to struggle academically."

Inside Leerkes' lab, parents and young children are completing a treasure hunt. They must find the best route for a bear to cross a body of water and reach a prize on an island. While the child's goal is getting to the treasure, the research team's objective is to determine how differing parenting styles affect a child's emotional and cognitive abilities and early readiness for school.

The kids and adults are participants in the School Transition and Academic Readiness (STAR) project. With over \$6 million in funding over

the last decade from the National Institute of Child Health and Human Development, Leerkes and her collaborators are following over 500 children from age 4 to the first grade.

It matters, she says, whether parents engage children in stimulating ways. The adults can choose to withdraw from the game, take it over, or engage the child and guide him or her through the process, helping them understand and make decisions.

The most successful children, she says, have emotionally supportive parents. They were involved in play and offered age-appropriate guidance, praise, and encouragement. Children faltered when parents took charge, became frustrated, or didn't participate at all. Children were also more likely to lose interest, appear bored, or withdraw when parents pushed too hard or became negative.

Leerkes' team also assesses the children's physiological and neural activity as they problem solve.

For example, the team puts each child through a Stroop test. These tests tax participants by requiring them to inhibit their initial responses — a child might be required to say the word "night" when they see a picture of the sun. The researchers observe which regions of the brain are active, and they record how many picture presentations the children get right.

Partnering for good

UNCG partners with Guilford County child advocates to provide a host of programs that support children and parents in reaching school readiness. Some focus on infants and new parents; some concentrate on children entering school for the first time; and some specifically target at-risk populations. “Each of these programs translates research into evidence-based policy and practice,” says Vice Chancellor Shelton.

READY FOR SCHOOL: READY FOR LIFE, led by the Cemala and Joseph M. Bryan foundations and Cone Health, brings together business and civic leaders across Guilford County to advocate for school readiness. The group employs a research-based organizing framework to determine what it takes to keep children in our county on the right trajectories and then works to make it happen.

THE JUVENILE CENTER INFANT TODDLER INITIATIVE works to halt the movement of families impacted by abuse and neglect through the revolving doors of our courts. With start-up support from the Cemala, Joseph M. Bryan, Ellison Family, and Weaver foundations and now with Smart Start funding from the Guilford County Partnership for Children, initiative staff inform judges on evidence-based interventions and use the administrative authority of the courts to get families the services and interventions they need quickly. In the worst cases, when interventions don’t work, the initiative



keeps infants and toddlers healthy by ensuring they don’t remain in untenable situations for long periods. “Six months may not be long for most issues addressed by the justice system,” Shelton says, “but that’s a quarter of a 2-year-old’s life.”

BRINGING OUT THE BEST was launched when budget cuts left young Guilford County children with behavioral issues without services, ultimately putting many children behind the curve when they entered school. Sustained by funding from the Guilford County Partnership for Children and a partnership with the Cemala Foundation, the program develops and delivers evidenced-based interventions for any child in need under five in child care in Guilford. Staff work in child care centers, in the home, with parents, and with children directly to support children’s social and emotional development and promote academic readiness. The program even boasts a hotline, called BOB Talk, that helps parents and teachers cope with children’s challenging behaviors.

THRIVING AT THREE serves Latino families with children up to age 3, identifying developmental delays and reducing mental health problems and other issues that hinder school readiness. Providing interventions and parenting education to enhance parent-child interactions, the United Way-funded program also addresses culturally specific stresses, such as those experienced by refugees and new immigrants.



They’re looking to see, Leerkes says, what types of brain activity correlate to high performance levels. One day, their findings could help predict a child’s level of academic performance and perhaps even help identify children who need early interventions.

In another study with infants and toddlers, the team monitors both parents and children as children are presented with frightening or frustrating situations. Leerkes’ team has found that a younger child’s emotional control is strongly linked to the caregiver’s behavior and emotions. If parents exhibit frustration, irritation, or anxiety — identified by elevated heart rates accompanied by poor regulation — children aren’t as able to control their emotions and behavior. To minimize a child’s exposure to negativity, Leerkes suggests that parents pay attention to their own emotions while interacting with their children. Imagine your child’s perspective, she advises, and calm yourself by pausing to take deep breaths and relax when you can feel your own strong emotions rising.

When parent-child interaction is positive, everyone benefits, Leerkes says. Children develop better emotional control, and they use that skill to maintain their attention and manage their frustration, both critical for adaptive peer relationships and active engagement in school. And parents proudly watch their children succeed in school transitions.

THINKING CAP With a focus on the development of emotional, cognitive, and social skills in children, the STAR project seeks keys to early school success. Leerkes’ current and former STAR collaborators, Susan Calkins, Stuart Marcovitch, and Marion O’Brien, hail from HDFS and the Department of Psychology.



CHILD CARE PROGRAM QUALITY AND TEACHER SUPPORT

In laying the foundation for school readiness and a lifetime of success, we know that quality of parent-child interactions and the home environment is critical. But quality in other child care environments, including preschools and child care centers, is just as crucial.

It's important for parents to know what an early childhood program offers, how effective their teachers are, and where the curricula are strong. In 1999, HDFS faculty Dr. Deb Cassidy, Dr. Linda Hestenes, Dr. Sharon Mims, and Dr. Steve Hestenes began collaborating with the N.C. Division of Child Development and Early Education to help parents make these important choices.

Their long-running N.C. Rated License Assessment project, which has received over \$50 million in funding, rates child care programs throughout the state — currently over 7,000 programs. Of these, 45 percent of child care centers and approximately 11 percent of home-based programs have earned the top, five-star rating.

The N.C. Rated License Assessment project is just one of many ways UNCG is helping improve the overall quality of child care and education statewide. Another example? In conjunction with the N.C. Department of Public Instruction, HDFS Associate Professor Catherine Scott-Little is providing technical support for a new North Carolina K-3 assessment system. The system collects data on students from kindergarten through third grade, to help individualize their teaching and learning. Teachers, support staff, and families provide information for the assessment from observations, conversations, work samples, and more.

Teachers are better prepared and can better personalize teaching strategies when they understand *how* children learn. The K-3 Assessment system will arm teachers with a more complete picture of each of their students, improving their instruction and helping to meet their individual needs. With the information from the assessment Scott-Little is helping to design, teachers can more effectively target and teach to areas where high-need children need the most help.

A well-educated, prepared teaching staff is the biggest factor in achieving a five-star rating in the current N.C. Rated License guidelines. But finding the best qualified teachers to choose from can be difficult in the current environment of student loan debts and low teacher wages statewide. UNCG is taking steps to help grow our pool of highly educated teachers and to make sure they are supported and paid a living wage to keep them in the field.

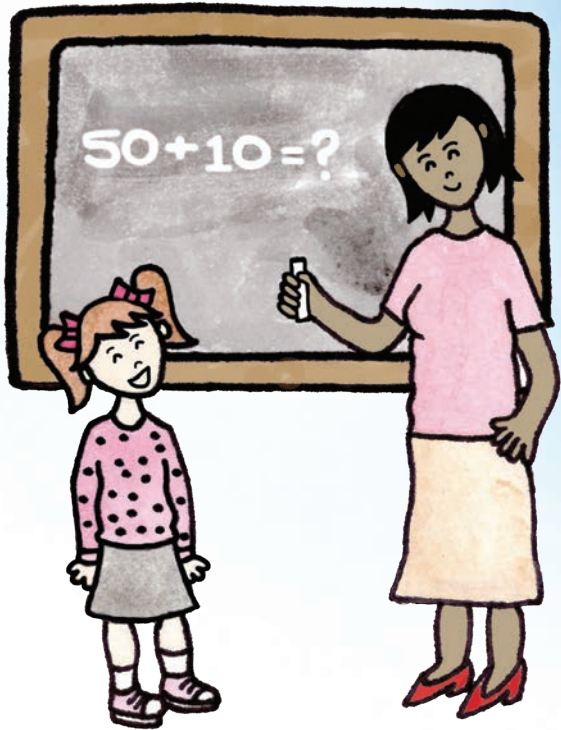
HDFS Professor Deborah Cassidy has led the charge in preparing North Carolina teachers for more than two decades. Her latest focus is the EQuIPD (Education Quality Improvement & Professional Development) program. Funded by a Smart Start grant from the Guilford County Partnership for Children, EQuIPD is bringing professional development directly to existing early childhood professionals in Guilford County.

"Traditionally, early childhood professionals struggle to find the time and resources to get the continuing education and professional development they need," says Cassidy. "Through this program, our staff brings interconnected services, such as peer coaching and training, directly to teachers and directors in early childhood settings. Together, we are implementing strategies we know have a direct impact on increasing the quality of early care and education."

Quality early childhood programs are important for all children but are especially important for children struggling with developmental or learning challenges. Scott-Little and HDFS Associate Professor Karen LaParo are working with UNCG School of Education faculty Margaret Gillis and Jean Kang to specifically prepare teachers for these situations.

Their new project, funded by the U.S. Department of Education Office of Special Education Programs, is recruiting 44 professionals with a bachelor's degree in early childhood or a related field into their Birth Through Kindergarten Initial Licensure certificate program. Through coursework and extensive field experiences in early intervention and special education settings, these current and future teachers will be prepared to implement responsive, evidence-based practices to meet the needs of all young children.





EQuIPD is an integral part of UNCG's Early Childhood Education (ECE) Community Engagement Network. The network, developed by HDFS faculty, is based on the principle of collaborative, community-university engagement. The ECE Community Engagement Network aims to connect research evidence with classroom practices, develop new training models, provide evidence to policy makers, and work with community partners to test and develop innovative, state-of-the-art intervention practices.

Another example of efforts in this area, says Cassidy, is UNCG's mentoring program, which pairs teachers working in higher-quality programs with those working in lower-quality programs over a four month period. Mentors — who receive a stipend — meet regularly with mentees to discuss problems, strategies, and tactics. These conversations help identify opportunities for reaching children, as well as actions that might hamper a child's academic progress. The connections are designed to give teachers a safe, reliable sounding board to analyze problems.

"The relationships that develop are more important than the content discussed. Being an early-education teacher can be isolating," Cassidy says. "Having someone to discuss issues with can be invaluable."

It's also important, Cassidy says, for teachers to feel comfortable instructing students on complicated subject matters. To foster that confidence, UNCG supports community-training events that raise awareness of early-education topics through keynote speakers and workshops. For example, a recent session offered guidance for teaching science and math in age-appropriate ways. The hope, she said, is these sessions will enhance teachers' abilities to create strong curricula that reach children of all readiness levels.

But having high-quality teachers who know how to reach students and who have targeted curricula that teach to every student's needs means nothing if those teachers don't make it into or stay in the classroom. There's only one way to ensure high quality teachers are



available, Cassidy says. Current and future educators must receive salaries that accurately reflect the time and effort that goes into the job.

To highlight this dire need, HDFS hosts Worthy Wage Day, an event that invites community leaders and politicians to work a child-care job for two hours, earning a teacher's hourly pay — \$10.97. They're presented an honorary check during a press conference and are given the opportunity to discuss their experience.

Not only does Worthy Wage Day give community leaders a first-hand view of what teaching and caring for young children actually requires, but it also highlights the dire income insecurity experienced by many of North Carolina's early-education teachers. Up to 45 percent receive income support. In fact, many can't afford to enroll their own children where they work.

Until this inequality is sufficiently addressed, Cassidy says, the state will continue to struggle to maintain a well-educated, dedicated, quality teacher workforce.

By Whitney L.J. Howell • Photography by Mike Dickens

Illustrations by UNCG Biology and Media Studies junior Jenna Schad

Learn more at:

<http://go.uncg.edu/hdfsresearch>

<http://go.uncg.edu/cyfcj>

<http://go.uncg.edu/schoolofed>





GROUND CONTROL TO PROFESSOR LINK

UNCG economist turns innovation into impact

MOST OF US RECOGNIZE THE VALUE OF RESEARCH. We're also more than willing to reap the benefits of new technologies. Electric cars? Full speed ahead! Outer-space vaccine development? Ready for lift-off! Small-business innovation? Entrepreneurialism is the backbone of America!

But when we're asked if we're prepared to invest in these new technologies—if we want our tax dollars going to support one program over another—we need more information before answering so enthusiastically.

Most organizations echo our reservations. If they are to invest in research and development, they ultimately expect to see a payoff. International institutions, Congress, and even NASA have one resource in common when the time comes to evaluate investments, programs, and payoffs related to innovation: Dr. Al Link. The Virginia Batts Phillips Distinguished Professor in the UNCG Department of Economics has spent the past 30 years helping public and private entities assess how well their entrepreneurial efforts are working.

COMMUNITIES OF INNOVATION

Ever since Stanford Industrial Park was built in the early 50s, university research parks have provided places for experts and private partners to cultivate new technologies and support their regional economies through their innovations. Around the world, academic research and economic development interests converge in these high-tech facilities.

"After the publication of my book *A Generosity of Spirit: The Early History of the Research Triangle Park* in 1995," says Link, "park directors from many countries starting calling asking for advice." From South Korea and Australia to France and the UK, founders of these parks looked to Link's expertise for help establishing themselves.

"Usually what they want to talk about is not a brick-and-mortar story, but 'how do we put metrics in place at the beginning of a process so that we can evaluate our growth over time to be sure we're meeting our goals and objectives?'" he explains.

Link's advice applies to anyone wanting to measure the success of a policy or endeavor. "First, agree on relevant data and metrics for evaluation, such as the number of industry scientists teaching as adjuncts at the university; internships leading to jobs in the park; and university graduates taking part in the park."

Then establish a sound infrastructure for data collection. "You need to create an ecosystem that is supportive of dialogue between industry and university scientists so that you can foster a synergistic relationship," Link says. Hiring leaders who understand both the researchers' and the industry's goals—and can bridge the two with effective communication—allows the research park to be successful within its environment.

The most effective research parks continue to grow over time, increasing the number of employees and number of buildings that generate benefits for the regional economy. "Those that have done well in terms of growth are fluid and can adapt to changing economic environments," Link explains.

Building ideas, not things, leads to longevity. "Pursuing basic research, not simply manufacturing a product, is the seed for continued economic growth," he says.

KNOWLEDGE TRANSFER

Link's work ranks him among the top 10 scholars in the world in a number of economic fields, according to *Research Papers in Economics*. He's served as an advisor to the Departments of Commerce and Energy and the National Research Council. As the U.S. representative to the Team of Specialists on Innovation and Competitiveness Policies at the United Nations in Geneva (2007-2012), he counseled with the world's sharpest minds, advising European science ministers on the implementation of technology and innovation policies to stimulate economic growth and development.

But his scope of work expanded from international to intergalactic last year when Congress asked NASA for a report on how to expand the International Space Station's (ISS) commercialization efforts. For about three years, a handful of companies had been conducting outer space research, and Congress wanted a status update and a plan for the future.

"A widely cited and prominent scholar, Dr. Link was an ideal contributor based on his extensive knowledge of innovation, research and development, and public sector entrepreneurship," says Patrick Besha, senior policy advisor at NASA who spearheaded the project to examine what he describes as a "particularly vexing problem."

Link and his co-author, Dr. Eric Maskin of Harvard, were challenged with determining whether companies would be more or less willing to conduct research on the ISS if they had additional information on the risks and costs. They decided to ask the companies conducting research on the ISS one question: What do you know now that you wish you'd known before you engaged in this research?

"It was a very simple question," Link says, "but we thought passing that type of information on to the next generation of firms would make their research process more efficient." The economists' findings confirmed the benefit of ISS research and identified valuable lessons for future ISS-engaged companies. For example, it takes longer than most firms expect to conduct research in outer space, and it costs more because it takes longer. "Fortunately," Besha says, "drawing upon the history of the ISS program, the economics of information, and a superb survey methodology, they concluded that improving access to information about past projects, experimental success rates, and the general process could lead to greater R&D and commercial growth."

"Hearing other people's success stories gives firms a lot more confidence in going where no man has gone before," Link adds. This spring, NASA will release a book featuring the contributions of Dr. Link and other prominent economists.

INVENTION TO COMMERCIALIZATION

As small firms and entrepreneurs find their footing in the business world, it's not unusual for them to enlist the help of university experts in their field. Initiating that relationship is a smart move, says Link. "Young firms that have been in existence for just a few years only have so much knowledge," he explains. "They may have four or five scientists who know a great deal but not quite enough to complete their project." The relationship with a university gives those scientists a broader perspective and expands their research base.

Establishing university partnerships was one of Link's primary recommendations for small businesses when the National Research Council asked him to evaluate the effectiveness of the Small Business Innovation Research (SBIR) program in helping small firms commercialize their technologies.





FOR THE PUBLIC GOOD Link (left) and Associate Professor of Economics Dennis Leyden discuss ways to incorporate analyses from their new book, *Public Sector Entrepreneurship* (Oxford University Press, 2015), into graduate courses in the economics department. The book looks at public technology policy as a form of entrepreneurial action carried out by the public sector.

After Link's team delivered a report containing case studies and descriptive statistics, he testified before Congress to help lawmakers determine whether the program would be reauthorized. "Eventually, the SBIR was reauthorized in 2012," Link says. His testimony was influential not only because it provided a resource for Congress to make an informed decision but also because it sparked academic research on the SBIR program.

The benefits of Link's expertise and expanded research on the SBIR transferred to North Carolina entrepreneurs when Link was later asked to help evaluate an SBIR-related N.C. program. "The North Carolina Board of Science and Technology has a program where they match some of the funding a N.C. firm receives from an SBIR program," Link says. "The additional funds help ensure a firm's success, and it was a privilege to help them evaluate our N.C. program and to provide a spillover benefit."

SCHOLASTIC IMPACT

No matter the organization, Link says, growth and development hinge on a research-supportive environment. That's especially true in an academic environment, and Link sees this first-hand in the UNCG Bryan School of Business and Economics, where he edits

the international *Journal of Technology Transfer*, conducts research, engages in professional service, and teaches several graduate-level classes.

"It's hard to think of another university that is more supportive of research than UNCG," Link says. "Our administrators understand research as a critical role of a faculty member and applaud when the research can be brought back in the classroom."

When asked what he finds most rewarding about his scholarship, Link turns the conversation to his students. "It's most rewarding for me to be able to go into a graduate class and give real-world examples that bring these policy issues to life," he says.

Link adds that university administrators who excelled in research before going into administration are behind UNCG's strength in recognizing and encouraging exploration. "We have a wonderful dean at the Bryan School who understands the relationship between teaching and research, that one complements the other," Link says. "So to the extent that I've been successful, it has been due to a supportive environment at UNCG."

By Robin Sutton Anders • Photography by Mike Dickens, contributing photography courtesy of NASA • Learn more about UNCG economics research at <http://go.uncg.edu/econresearch>

Link's work ranks him among the top 10 scholars in the world in a number of economic fields.

★ *In addition to ranking highly across all traits, Obama had the best ranking on any single trait — competence.*



WANT A FRIEND IN WASHINGTON? GET A DOG.

Voters value leadership and empathy over personal warmth

IN 1976, DR. CHARLES PRYSBY WAS GREATLY SURPRISED when his neighbor, Jim, expressed support for conservative presidential candidate Gerald Ford. Prysby knew that, in the previous election, Jim had voted for liberal George McGovern. But his neighbor didn't see any inconsistency. "In Jim's mind," explains Prysby, "it was all about trust." In '72, he didn't trust Nixon. "This time around, he just didn't feel like he could trust Carter."

Prysby and Dr. David Holian, UNCG political science professors and coauthors of *Candidate Character Traits in Presidential Elections*, will tell you that, for about 80 percent of voters, decisions come down to party and ideology. But for the not insignificant remainder — some of them independents and some of them simply more "persuadable" Democrats and Republicans — character traits can make a real difference.

Dr. Holian was 9 years old when Dr. Prysby had his enlightening conversation with Jim. For Holian, the seeds of this book are instead rooted in his 2000 election experiences. Many media pundits claimed that George W. Bush defeated Al Gore on the power of personality. The prevailing narrative? Gore was too dull, too pedantic,

while George W. was someone you could grab a beer with. The election left Holian wondering about the impact of likeability and personal warmth on voter decisions.

What the professors found surprised them. Yes, personal traits matter. But most people aren't assessing personal traits in terms of whom they'd rather have as a bowling buddy. They're looking for leadership, empathy, integrity, and competence.

Which of the four traits matter the most to voters? "Election after election, leadership and empathy are the two most important," says Holian.

Republican candidates almost always do better on leadership, adds Prysby, while Democratic candidates always lead on empathy. "If you think about the issues, the Republicans tend to support a strong, aggressive national defense, which might create perceptions of Republican candidates as stronger leaders. Democrats, the protectors of the social safety nets, have an advantage in that voters on balance see them as more likely to understand the problems of normal folks."

What does this mean for electability? "The best way for a Democrat to make gains in the vote against a

★ *Bill Clinton had the worst ranking on any single trait — integrity. He was about 20 points below the average.*

★ *Mitt Romney scored the worst overall across all traits.*



Republican, and vice versa, is to narrow the gap which usually exists between a Democratic candidate and a Republican candidate," advises Prysby. A Republican with strong marks on empathy is very electable. As is a Democrat with strong marks on leadership.

One reason the race was so close in 2000 and 2004 is because George W. Bush scored higher on empathy than most Republicans do, explains Prysby. "His platform of 'compassionate conservatism' was smart, strategically."

The highest scorers across traits in the book? Obama in 2008 and Reagan in 1984. Both candidates won the independent vote in their respective elections. "Candidates who were very strong with independents have been very strong on the four traits," confirms Holian.

By Mike Harris and Sangeetha Shivaaji • Current candidate images by Gage Skidmore, CC BY 2.0 • Learn more about UNCG political science research at <http://go.uncg.edu/polisci>

Holian and Prysby used the American National Elections Studies database of surveys for their investigation. The lengthy surveys, the biggest available on voter behavior, go back to the 1950s. "Every person is interviewed for 90 minutes before the election and 60 minutes after the election," Prysby explains. "These are long interviews, with lots of questions." Looking at candidates in every election between 1980 and 2012, the professors found that perceptions of four major character traits swayed voters.

- ★ **Leadership** — candidate has strength and is inspirational
- ★ **Empathy** — candidate understands the problems average voters face
- ★ **Integrity** — candidate seems to be honest/exhibits morality
- ★ **Competence** — candidate displays knowledge and intelligence

"Traits make an even bigger impact in primaries," says Holian. "Because partisanship is not a factor."

THE PROSE BEHIND THE POET

“THIS IS THE MOST IMPORTANT SCHOLARLY PROJECT I WILL DO IN MY LIFETIME.”

Anthony Cuda will never top this. He knows he'll never even equal it. And that's OK with the associate professor of English. He has the honor of engaging in an immense, historic project that will change how readers around the world regard T.S. Eliot.

Dr. Cuda is co-editor of a volume in the first undertaking to assemble all of Eliot's nonfiction prose writings.

Most of Eliot's nonfiction prose was previously uncollected, which means hundreds of items have not been republished since their first appearance in newspapers and magazines nearly a century ago. Many scholars do not know about these pieces, some of which are rare and inaccessible.

Cuda and Dr. Ronald Schuchard, emeritus professor of English at Emory University, worked together to collect and annotate all of Eliot's essays and literary reviews between 1919 and 1926. This 990-page volume II of *The Complete Prose of T.S. Eliot: The Critical Edition* is subtitled *The Perfect Critic, 1919-1926*.

The Modernist Studies Association named the volume winner of the 2015 MSA Book Prize for an Edition, Anthology, or Essay Collection.

In presenting the award, the association said in a citation, “A monumental work of scholarly editing, the long overdue *Complete Prose of T.S. Eliot* is sure to be widely used, appreciated, and admired. ... While the entire edition, projected to [be] eight volumes, constitutes a major achievement and an indispensable archive, volume II is certain to be the one most used by scholars, most central to ongoing studies and re-evaluations of Eliot and the history of modernist criticism.”

Why will this volume be so enlightening? When you think of Nobel prize-winning writer T.S. Eliot, you likely think of poetry. But while *The Waste Land* is considered by many to be the most important poem of the 20th century, poems were actually a tiny portion of Eliot's published works.

During the seven pivotal years from 1919 to 1926, Eliot suffered a nervous breakdown, wrote *The Waste Land*, and became one of the foremost literary critics in England, Cuda explains. Until now, a few Eliot essays have been widely read and deeply influential, such as “Tradition and the Individual Talent,” “The Metaphysical Poets,” and “Hamlet.” But these provide a deceptively limited viewpoint.

“I think it's going to transform how people view Eliot,” Cuda says. “Volume II is largely literary criticism and reviews. Other volumes will feature his writings on religion, politics, culture, etc. — they will reveal just how broad his intellectual commitments ranged.

“We've been looking through a crack in the glass.” Only a sliver of his writings had been in print.

“This is going to reveal for readers the whole window.”



It was a great honor for Cuda to take part in an editorial project of such great historic significance, the likes of which are usually reserved for scholars much more advanced in their careers.

Cuda impressed Schuchard, an internationally renowned Eliot scholar, when he wrote his dissertation under Schuchard's direction at Emory. Schuchard is general editor of the eight-volume undertaking. When Cuda became an assistant professor at UNCG, his mentor asked him to join the project, focusing on the formative years of Eliot's career.

*If you want to see what books Eliot was reading and critiquing during the time leading up to *The Waste Land*, now you can, month by month, sometimes week by week, Cuda explains. “Eliot comes alive in these pages. You see an immense body of work written in the heat of the moment.”*

By Mike Harris • Photo of T.S. Eliot, 1934. • Dr. Cuda's interests include transatlantic modernism; 20th Century British, Irish, and American poetry; and the history of poetry and poetics. Learn more about his work at <http://go.uncg.edu/cuda>

“for you know only / A heap of broken images”

IT TAKES A VILLAGE

YOU'VE PROBABLY HEARD THE OLD PROVERB "It takes a village to raise a child."

For many African-American families, that village is made of grandmothers, aunts, great-aunts, cousins, and second cousins.

That's why UNCG Assistant Professor of Nutrition Natasha Brown is focusing on the role of extended family members in childhood nutrition among African-American children in her Family Matters Study.

The rate of childhood obesity has more than tripled in the United States since 1980. In 2009, 19.3 percent of North Carolina children were obese, a rate almost 5 percent higher than the national figure. African-American children are also more likely to be obese than their white counterparts. Twenty-two percent of African-American children in North Carolina were classified as obese, compared to only 11 percent of white children.

Most research on childhood obesity focuses on immediate family, especially the relationship between the mother and the child. But extended families, particularly in the African-American community, are often tight-knit. Although mothers are typically the primary caregivers, they aren't the only ones teaching children normal behaviors.

"There's not enough consideration given to other folks who have influence or interaction with the children," Dr. Brown said. "Because

extended family members are the default caretakers, they're going to have an influence on kids' behaviors."

Brown, who is African American, said the Family Matters Study blends her personal and professional life.

"Growing up, I was constantly surrounded by extended family members. To me, this project just makes sense."

Brown and her research team of graduate students have conducted study visits with roughly 40 families in Guilford County. Each family must include a child between the ages of 8 and 12, their mother, and at least one other female family member. Researchers take height and weight measurements of each individual and ask them a series of questions about family dynamics and eating habits.

Right now, Brown's research is mostly exploratory, but she hopes to eventually be able to develop an intervention program to lower obesity rates among African-American children.

"We're trying to show that for an intervention to be effective with African Americans, extended families need to be considered. We can't ignore the other people who are influencing what the children are doing," she said.

By Jeanie Groh • Photography by Martin Kane • Learn more about UNCG nutrition research at <http://go.uncg.edu/nutritionresearch>



"Growing up, I was constantly surrounded by extended family members. To me, this project just makes sense." — Dr. Natasha Brown



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CELEBRATING UNCG'S 125TH This UNCG Archives photo depicts some of our first students of biology in Foust Building in the late 1890s. Today's biology department pursues research programs in environmental and behavioral ecology, evolution, population biology, and cell and developmental biology, as majors pursue concentrations such as biotechnology, environmental biology, and human biology. Here's to the next 125 years of impactful research, scholarship, and creative activity.

