

# EUNOMIA

Goddess of good order

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## Editor's Note

The very language we use to describe graduate education speaks to our ideas of how higher degrees grant holders authority: one can become a *master* of science or a *doctor* of philosophy. Graduate education generally implies a command of concepts, facts, and theories in a field.

As I interviewed the students for this issue of *Eunomia*, though, I was continually impressed by how they applied their knowledge to everyday life. For each of these students, graduate education is not just about mastering a field of study; it is about understanding how the knowledge they gain in the classroom affects other people.

Nursing student Catherine Moore and Information Systems student Richard Schilhavy are both conducting projects that they hope will lead to improved legislation. Moore's research on nurse staffing practices throughout the country influenced members of the North Carolina House of Representatives to conduct a study of nurse staffing in our state, while Schilhavy hopes his project on IT ethics will change the way lawmakers understand the complex ethical decisions web users make about their behavior online.

Music student Bojana Kragulj and Spanish student Sarah Tyler took their academic knowledge across national borders. Tyler traveled to Paraguay to interview families about their understanding of Guaraní and Spanish dialects, and Kragulj traveled to the Balkans to learn about the social role of the clarinet as a folk instrument.

Other students combined academic ideas with personal knowledge as they worked to help others. John Cone, from the Department of Kinesiology, used his experience as a soccer player and coach to design a study of performance changes in soccer players during a match. Educational Leadership and Cultural Foundations student Sarah Colonna returned to her old high school to develop a club to discuss gender issues. Nutrition student Mridul Datta built on her clinical work as a registered dietitian as she studied the role of lycopene in reducing side effects of radiation therapy in men with prostate cancer.

For each of these students, true understanding extends beyond a mastery of ideas. It depends, instead, on the ability to use those ideas to benefit others.

Lauren Wallis



Mridul Datta tests the effects of lycopene on radiation treatment for prostate cancer.

## Food as Medicine

Mridul Datta believes that food not only provides nourishment, but also can heal. "Sometimes it's easy popping a pill, but food can be a medicine," she says. As a Ph.D. student in nutrition, Datta's dissertation research investigates how lycopene, a chemical found in tomatoes and other foods, can reduce side effects of radiation therapy for men with prostate cancer. "There has been a lot of research on lycopene in prostate patients, and it has been shown to have benefits," she notes.

In her study, Datta is treating patients with variant doses of tomato juice and evaluating the impact on the side effects of radiation therapy. This treatment often causes inflammation throughout the body, and Datta is testing how lycopene might reduce it. "The concept that food can reduce inflammation and side effects of treatment is pretty powerful!" she says.

Datta's interest in nutrition began during her undergraduate work at the University of Delhi in India, where she grew up and began to develop her philosophy about food as a medicine. "What we consider alternative medicine here is mainstream medicine there," she says. She studied nutrition as an undergraduate but got especially excited about it when she did an internship at a hospital in India and decided she wanted to pursue a master's degree. She earned her

M.S. in clinical nutrition at East Tennessee State University.

Before she began her Ph.D. program, Datta worked at High Point Regional Hospital as manager of the department of clinical nutrition. Her work involved helping patients use



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*Sometimes it's easy  
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food to lower cholesterol, manage blood sugar, and prevent other serious conditions. During the first two years of her doctoral program Datta balanced school with her job at the hospital. Last year, she received the Naomi G. Albanese Doctoral Fellowship through her department and this funding permitted her to concentrate on research. Her advisors, Dr. Martha Taylor and Dr. Karen Katula, also received a UNCG faculty grant to guide Datta in her research.

Her current research allows her to continue working with patients while testing new theories about the use of lycopene for cancer treatment. "That's why nutrition fascinates me," she says. "With simple modifications in diet, I can see a positive change in patients that improves their quality of life." Whether she is working with patients in a clinical or research setting, Datta stresses the importance of using food to prevent disease and treat conditions. "It's not just about isolated nutrients, it's about food as a whole

and how it benefits the body," she says.

In addition to this project, Datta is involved in community organizations that promote health through nutrition. She is a member of the Guilford County Trans Fat Committee, which was formed to reduce and eliminate trans fat use throughout the county. In her work with the committee, she has written a newspaper article on trans fat, compiled educational materials for elementary students, and composed a pamphlet for patient education.

Recently, she was selected as an abstractor for the Nutrition Evidence Library, which reports to the Department of Agriculture about current nutritional research. Datta will review articles and compile information that will help the USDA make decisions about food and nutrition policy.

As she looks forward to graduating in Spring 2011, Datta realizes that she has many different opportunities. "At UNCG, I grew as a clinician and researcher," she says. "My doctorate will give me more options." She plans to continue oncology research, and she also wants to teach at some point in the future. "I want to be involved with shaping future nutrition researchers and practitioners," she says.

# Reevaluating IT Ethics

## *Pirates, Phishers, and Hackers: Oh My!*

When Richard Schilhavy started using computers, things were much simpler. "I grew up around computers, old 286s," he remembers. "I used to play adventure games where you'd have to type an exact command to use the shield to defend against the dragon."

As a student in the Ph.D. program in information systems, Schilhavy wants to create a new ethical framework that helps us better understand and address issues like digital piracy, cyberbullying, hacking, and phishing. The days of dragons and shields appear to be over.

Schilhavy recognizes that technology changes the way people apply ethical ideas to a situation. "Most people would agree that stealing a DVD from a store is bad, as the consequences of your actions are clear and measureable," he explains. "But with digital piracy, the cost is effectively zero, so the consequences, both real and virtually perceived, disappear." Similarly with cyberbullying, "Since we don't see an immediate reaction—the facial expression or tone of voice—we can't empathize with the person."

In his project, Schilhavy brings ethical theories and aspects of computer use together. He looks at different dimensions of technology, including issues of access, privacy, and data reproduction, investigating how these aspects influence users' reasoning in scenarios that are commonly considered unethical, like piracy or hacking.

As he began the project, Schilhavy found that the area of information technology ethics was underdeveloped, and he decided that more empirical research was necessary about how users make ethical choices in online situations. According to Schilhavy, discussion of IT ethics rarely includes the users who make ethical choices. "My project questions assumptions the field makes about moral behavior, which we don't question enough."

A small number of people create and main-

tain ethical norms through policy and legislation about behavior online, but Schilhavy sees that "there is a gulf of moral perceptions between those who create policy and those who are affected by it."

For instance, one group of web users has taken the term "piracy" and made it positive, creating the now defunct Pirate Bay website, where users could illegally download music, movies, and software. They even sold shirts and hats to show support for the resistance to rules against downloading media online.

Schilhavy realizes that rule makers and rule breakers discuss moral issues in technology amongst themselves but don't talk about their beliefs with others. "It's an issue of creating discourse," he says. "The two groups are not necessarily operating off of different ethical assumptions, they just don't talk to each other." Schilhavy wants to involve technology users in the discussion



*There is a gulf of moral perceptions between those who create policy and those who are affected by it.*

of how to create a new way to understand ethical issues online.

Schilhavy's interest in the ethics of technology stems from his undergraduate experience majoring in both philosophy and management at the University of Evansville in Indiana. "The field of information systems merges computers and philosophy," he says. After he finishes his Ph.D. this summer, Schilhavy hopes to obtain a faculty position where he can continue his research on the moral implications of technology.

# Wish You



## Living Language: Two Summers in Paraguay

Sarah Tyler started her graduate work at UNCG in the history department, where she conducted research on Stalin's use of the newspaper *Pravda* to express ideas about women's roles in the 1930s. Now she is studying attitudes toward Guaraní, the indigenous language in Paraguay, as she pursues a master's degree in Spanish. While Stalin's Soviet Union and modern-day Paraguay seem like they couldn't be more disparate, Tyler recognizes a theme in her academic pursuits. "I'm always looking at how different kinds of people are represented in society," she says.

Tyler's interest in traveling and learning about different cultures began when she lived in Chile as a child. Her educational pursuits stem from this experience: she earned a bachelor's degree in anthropology at UNC Chapel Hill, received her M.A. degree in history from UNCG in 2003, and returned in 2007 to complete a second B.A. in Spanish. "I just keep coming back to UNCG," she states. She earned her M.A. degree in Spanish in Spring 2010.

For the past two summers, Tyler received summer assistantship funding from The Graduate School that allowed her to travel to Paraguay. For her pilot study in the summer of 2008, she conducted one-on-one interviews with two family groups about their attitudes toward Guaraní. This indigenous, oral language began to lose its hold when the Spanish colonized the region starting in the sixteenth century. Negative attitudes about Guaraní have been passed down

ever since. It is often associated with the lower class, or is used to discuss emotional subjects. "Spanish is the language of the institutions and the government," Tyler explains. "Guaraní is often called 'the language of the heart,' or the mother's language." Since Guaraní has such a complicated place in Paraguayan history and current society, Tyler explored how Guaraní influences the users' identity and attitude toward the language.

During her research trips, Tyler lived with her father and stepmother in Asunción and fostered close connections with community members through them. Last summer, Tyler interviewed each family group together, encouraging a discussion of intergenerational changes in the Spanish dialect in Asunción. "They were all interested in my study, especially since I was a foreigner," she remembers. In her thesis, she concludes that for this small sample, the dialect is moving away from Guaraní as it is affected by Spanish influences from Mexico and Argentina and English influences through media and technology.

With so much varied academic and travel experience behind her, Tyler is interested in continuing to study the linguistics of Paraguay while pursuing a Ph.D. "Maybe I'll even learn to speak Guaraní someday!" she says.



*I'm always looking at how different kinds of people are represented in society.*



Left, Sarah Tyler studies attitudes toward Guaraní, the indigenous language in Paraguay. Top left, Lake Ypacarai. Top right, La Catedral in Asunción. Bottom right, the marketplace in Asunción.

# Were Here



## Music and Identity: Clarinet in the Balkans



When Bojana Kragulj was in high school in 1999, she took a trip to the Balkans with her father, who grew up in the former Yugoslavia. The region, which covers the Balkan peninsula and some surrounding countries in Eastern Europe, was still reeling from nearly a decade of warfare, but Kragulj noticed that musical traditions helped give people hope.

"There was little food and little money, but still plenty of music," she remembers. "This impacted me—that families destroyed by war and under the thumb of the West found some hope singing folk songs."

Now a student in the Doctor of Musical Arts program in clarinet, Kragulj remembers listening to Balkan folk music in the car with her dad and dancing in folk groups at church. Her dissertation on the social role of the clarinet in the Balkans is based on her lifelong interest in folk music.

Kragulj began her dissertation research on a trip to the Balkans last summer, but quickly realized that the diversity and popularity of the clarinet in the region would make her study difficult. "Balkan music is a lot larger than any region or country," she explains. "It is more of an intermixed musical identity." She finds this integration of musical styles reflective of Balkan history, noting that "for hundreds of years the Balkans have been a region in which the country borders continually shift."

To focus her research, Kragulj will travel to the origins of clarinet music in Greece and Turkey. There, she will

study with clarinet artists and listen to informal street performances. In these southern regions of the Balkans, the clarinet is used in both folk and pop music. "People who play clarinet there have rock star status," she explains.

Kragulj will study with one such star, Serkan Cagri, who plays turbo-folk, a combination of pop and folk. She also will work with Selim Sesler, the figurehead of traditional Turkish folk music, and Lefternais Bournais, who incorporates pop in the traditional style of Sesler. Working with these three artists, Kragulj will be able to get a better sense of how the clarinet is used in a variety of musical styles in Turkey.

Kragulj believes that "Music is an aural art form; it moves from teacher to student, performer to listener." During her trip to Turkey she will be a student, a performer, and a listener. At UNCG, she has also gotten to be a teacher, instructing undergraduate students in music theory. "I've always had the desire to teach," she says. "I have learned more from teaching other people about music theory than I ever learned in my master's or undergraduate program."

Kragulj knew music would be a lifelong pursuit from an early age. "I started band in fifth grade and I wasn't that good at first, but once I got the hang of it, I declared I was going to play in the Chicago Symphony," she says. As it turns out, her musical interests have led her down a much less classical path, around the world to the origins of Balkan folk music.



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Right, Bojana Kragulj studies the social role of the clarinet in Balkan folk music. Top left, Smolijana, Bosnia countryside. Top right, a house in Kotor, Montenegro. Bottom left, statue of Karadorde Petrovic, 18th and 19th century Serb leader, in front of the Cathedral of Saint Sava, the largest orthodox Christian church in the world.

# Gender Discussion with High School Students

As a master's student in Women's and Gender Studies at UNCG in 2007, Sarah Colonna found herself returning to the halls of Southern Guilford, her old high school in Greensboro. She wanted to start a club that would allow students to discuss gender issues that they encountered in their daily lives. That fall, Colonna started Gender and Other Open Discussion (GOOD) as a project for her master's program. Since graduating in 2008, she has continued to facilitate the club.

Her experience with these high school students inspired her to stay at UNCG to pursue a Ph.D. in educational studies with a focus on cultural studies so that she can continue to work with teenage students transitioning to college. "It is such an important time, and so much can be done in and out of school with young men and women," she says.

Based on student interest and input, the club is dedicated to raising awareness at SGHS about local and global gender issues. It also offers students an environment where they are free to talk about gender issues they see in their daily lives. Throughout the three years she has facilitated the club, Colonna has noticed personal growth in students: "I have seen them learn to lead, to think critically, and to support their opinions when they talk with others," she says.

During their meetings, students discuss issues such as media representations of women, the meaning of "sex" as opposed to "gender," and sexual assault. In addition to discussions, they plan service projects for the community. They organized an event to increase awareness of domestic violence in the community and raised money for Clara House, a women's shelter in Greensboro.

As she discusses gender issues with GOOD, Colonna finds that her interactions with high school students help make her work in the

ELC program more meaningful. "The students help me to keep teens, young women in particular, in the forefront of my reading, writing, and discussion," she notes.

Colonna was able to present her work with GOOD at the "Feminism in Practice" conference at Lehigh University in 2008. She brought a student with her to the conference to help her discuss the club's mission and work in the high school community. "That was a great experience for both of us!" she remembers.

While many of her classmates are current or former K-12 teachers, Colonna finds that her experience with GOOD gives her a different perspective on students' educational experiences, noting that "my work with GOOD gives me a unique view and insight into how students view their education and work in school."

In the distinctive educational setting of GOOD, Colonna tries to help students develop skills that they will need for college. The group discusses gender issues in a seminar format, similar to the environment of many liberal arts college classes. Colonna finds that "GOOD has taught me patience, creativity, curiosity, and how to push and work

with students to a further critical point." She knows she will use these skills in her future work with high school and college students.

Colonna received a Bachelor of Science in Nursing degree from UNC Wilmington in 2001, but her interest in feminist theory led her to UNCG after practicing nursing for several years. "My background is surely not traditional, but it all comes together to make an interesting journey!" she says. In both programs, Colonna has developed her interest in women's and gender studies into a goal of helping students become better critical thinkers as they transition from high school into college.



Sarah Colonna facilitates a gender discussion group at a local high school.

After several years of clinical practice in neonatal nursing, Catherine Moore's capstone project for her Master of Science in Nursing degree in nursing administration has taken her away from the bedside and into the realm of health care policy. During her yearlong clinical practicum, she worked with Joanne Stevens, master's-prepared nurse and professional lobbyist who represents the North Carolina Nurses Association (NCNA). Her research evaluated safe nurse staffing and mandatory overtime practices throughout the country. In January she presented her evaluation to the North Carolina Hospital Association (NCHA) and the NCNA. Based on her presentation, the two associations are working with North Carolina House Representative Rick Glazier to study nurse staffing and overtime practices in the state.

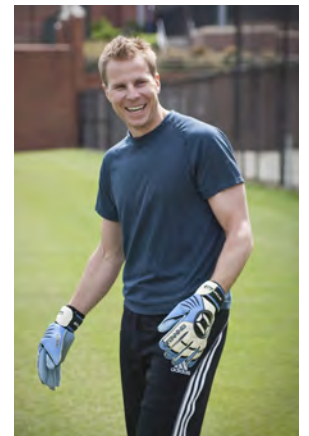


Catherine Moore researched nurse staffing practices throughout the country.

## Influencing Health

Moore has practiced neonatal nursing since she graduated from UNCG with a Bachelor of Science in Nursing degree in 2002. She started her M.S.N. program at UNCG in 2008. "I believe that nurse administrators are nurses for nurses," she says. "They're responsible for making sure nurses have everything they need to provide high-quality patient care." She chose to enter the nursing administration program because it would give her the opportunity to make an impact on the nursing field.

Dr. Eileen Kohlenberg, Associate Dean for graduate programs in the School of Nursing, and Dr. Hazel Brown encouraged Moore to work with Stevens, based on her interest in health policy. Moore conducted a review of research literature on nurse staffing and overtime practices, and she collected information on the legislation and



# Soccer Science

John Cone has had a lot of experience on the soccer field as a player and coach for college and professional teams. For his dissertation research for his doctoral program in kinesiology at UNCG, he simulated soccer matches to study how players' movements become compromised throughout a 90-minute game, often leading to injury. When training soccer players, Cone notes that "my primary goal is to increase injury resistance and resilience."

After majoring in English at Butler University in Indianapolis, Indiana, Cone pursued a professional soccer career with the Hampton Roads Mariners. When an injury prevented him from continuing as a player, he started his graduate education in sport science. He earned his master's degree in exercise physiology from the University of Tennessee at Knoxville in 2003. This program provided him valuable practical experience, including a stint as an assistant coach for the women's team, but he realized he needed background in research as well. In his Ph.D. program at UNCG, he has been able to use his background as a player and a coach in developing research. "I want to be able to apply my research in a practical environment like coaching," he says.

The study Cone developed for his dissertation simulates a 90-minute soccer match, asking players to engage in different movements that they would use throughout a game such as sprinting, cutting, and jumping. He recruited 12 male and 12 female soccer players from local colleges and individualized the simulation to their fitness levels. Each player was asked to perform a task at 7.5 minute inter-

vals. Over the course of 90 minutes, Cone noticed that performance decreased, even though the mechanics of the players' movements remained the same.

Most studies measure players' pre- and post-game levels of performance, but Cone looked at how performance changed over time. "I hadn't fathomed doing a study like this until I got into statistics," he acknowledges. Classes in his program have given him the tools needed to conduct an innovative study.

In addition to measuring how movements changed, Cone's study also looked at how players used dominant and non-dominant limbs. "I built the examination of the asymmetry from personal observation that players become increasingly asymmetrical in soccer," he explains. He measured the placement of players' right and left feet during each time period to see how they used their dominant side. "This aspect has the biggest practical impact on the way one trains," he notes. "It supports using unilateral training, which targets one limb." In future research Cone wants to look more closely at players' dominant sides in order to develop more ideas about using asymmetry in training.

Once he obtains his Ph.D., Cone wants to pursue a position as head of sport science for a soccer team abroad. "It's a position we don't really have in teams here," he explains. "They monitor the training load and the overall health and fitness of the players." In addition to his years of playing and coaching, Cone's research at UNCG will help him train players more effectively.

Above, John Cone does physical therapy with a member of the UNCG soccer team.

## Health Care Policy

regulations regarding mandatory overtime and safe nurse staffing in other states. She found the most current research supports policies that consider the many aspects of nurse staffing having impact on patient care, including educational credentials of staff nurses, available technology, nursing unit layout, and collaboration with other members of the team.

When she began her review of nurse staffing practices, Moore already had experience working in two states with different policies in place. In California, she worked under a mandate that specified minimum nurse-patient ratios that could not be exceeded. When she returned to North Carolina, she found that there were no laws in place that require employers to monitor or restrict the use of overtime or for nurses to disclose the number of places where they are employed.

"It is common for nurses to voluntarily work extra hours," she explains, noting that many nurses work 12-hour shifts three days a week and then work additional hours to make extra money. She found that research shows that nurses who work over 40 hours a week experience slower reaction times and

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fatigue that affect the quality of care they provide for patients.

Additionally, no laws in North Carolina limit the number of patients nurses are responsible for at one time or require staffing

assignments to be made with consideration for the many nursing variables that impact patient care. "I have had experiences where I felt that I wouldn't be able to give patients all the attention I'd like to or that I wasn't going to be able to complete all of my work during my shift," Moore remembers. In her current work environment, she notes that nurses are good at collaborating with each other and ask for help when they are overwhelmed. "But nurses don't usually like to ask for help," she admits. "If there were policies in place to help guide staffing practices, the situation might be improved."

The NCNA and NCHA are now working with members of the North Carolina legislature to conduct a survey to determine if safe nurse staffing practices are in place in North Carolina. Moore hopes to continue to work in health policy after she graduates in May.



## *From the Dean*

Beginning in the fall, those considering UNCG for graduate education will have several exciting new options. The Joint School of Nanoscience and Nanoengineering, a collaborative effort of UNCG and NC A & T State University, will enroll its first students in both a Professional Science Master's Degree program designed to prepare students for careers in industry and applied research and a research-oriented Ph.D. in Nanoscience. Both programs are being housed in temporary quarters while a new 100,000+ square foot state-of-the-art facility for the Joint School is being constructed on the Gateway University Research Park campus on East Lee Street. Also, the university will enroll its first students in the Ph.D. in Environmental Health Science, an interdisciplinary program centered in UNCG's Department of Biology. This doctoral program will emphasize research in environmental genomics, cellular/physiological dynamics, freshwater/riparian ecosystems, and environmental forensics. In addition, two new Post-Master's Certificates are being launched this fall. A certificate in Urban School Leadership and Administration will be offered by the Department of Educational Leadership and Cultural Foundations and a certificate in Ethnomusicology will be available in the School of Music.

As the stories in this issue of *Eunomia* illustrate, graduate students at UNCG are carrying out work that makes a difference in people's lives in many realms: food and health, internet ethics, the role of language, folk music, gender issues for high school students, health care policy, and sports. The new graduate programs being launched this fall will open up many more avenues for students to apply their studies for the improvement of our lives. I am sure that the results of their work will be appearing in these pages in a few short years.

This newsletter is published by The Graduate School at The University of North Carolina at Greensboro.

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Mridul Datta analyzes blood samples from prostate cancer patients at local hospitals. She is treating her patients with variant doses of tomato juice to determine if lycopene can reduce the side effects of radiation therapy.