Preface to *The Eagle Feather* 2007

Editor-in-Chief: Gloria C. Cox, Honors College & Department of Political Science, College of Arts and Sciences

Editor: Susan Brown Eve, Honors College & Department of Applied Gerontology, College of Public Affairs and Community Service

Editors' Preface

We, the editors of *The Eagle Feather*, are happy to share with you, our readers, the fourth issue of UNT's online undergraduate research journal. In this issue we have 23 research articles that represent the culmination of a period of intensive research by undergraduate students at the university. "Nationally, there is nothing hotter than undergraduate research" according to a recent Associated Press article posted on CNN.com ("Moving out," 2007). We certainly agree with that statement and we hope you will too once you have seen the quality of the work represented among our group of young authors. Of course, these students owe much to their faculty mentors who are willing to dedicate time, effort, and resources to the education of tomorrow's researchers with no expectation of reward other than the satisfaction of a job well done.

One such faculty mentor is Dr. Edward Dzialowski, who was the keynote speaker at the 2007 University Scholars Day held March 29 on the UNT campus in Denton. Dr. Dzialowski is an Assistant Professor in the Department of Biological Sciences and an active researcher with 20 published articles in refereed professional journals, two book chapters, 28 research presentations at national and international conferences, and a grant from the National Science Foundation. More relevant to the Honors College, he has done yeoman's duty chairing four Honors thesis committees in the past three years. His keynote address, *Understanding the Development of Human Respiratory and Cardiovascular Systems Using Avian Models*, tells a fascinating story that explains how studies of the developing heart and cardiovascular systems in bird embryos can provide new information that can be used to develop treatments of malformations of these systems in human fetuses and infants.

Undergraduate Scholar Articles

Science and Technology — For Good or Evil

Dr. Dzialowski's discussion of the complexities of doing scientific research using avian models and of developing treatments from it is the first of seven articles in this issue that deal with science and technology and the reciprocal interactions of science with social systems for production of good or evil. These articles span a range of disciplines from engineering, to the social sciences, to the humanities. While most of the articles focus on the positive effects technology can have on the quality of the human life, others remind us that there is a dark side to technology as well.

The first of the articles on the theme of technology is *Radio Frequency Identification: The Current and Future Solutions for Privacy and Security*, written by Vivek Jain, a graduate of the

College of Engineering and the Honors College. Mr. Jain is employed by an applied engineering firm specializing in the development of radio frequency identification (RFID) systems. This technology has the potential to make all our lives easier by using RFIDs to track our purchases in stores and automatically charge our credit cards when we check out, but it also has the potential to tell others more than we would like them to know about our buying habits and financial status.

Nicole Obregon's research from geography focuses on hybrid cars that could help ease the world's energy crisis by being more energy efficient. In her article, *Future Consumers Weigh In on Hybrid Vehicles: A Look at College Students' Opinions and Knowledge*, she discovered that it is one thing to develop new technology to solve problems and quite another to get consumers to use it. Young people did not perceive the hybrid models to be appealing nor did they think the new cars have enough horsepower. Old habits die hard.

In his article, *Environmental Inequality in Tarrant County: An Analysis of Public and Private Sector Waste*, Remington Pohlmeier explores the socioeconomic and race/ethnicity variables that are correlated with the location of solid waste sites, as well as Superfund sites, that result from dumping toxic industrial byproducts of technology production in neighborhoods that can least afford to resist it. Both types of sites pose health hazards to populations located near them, including potentially lethal ones such as cancer. Contrary to his hypotheses and previous research studies, he did not find that these sites were more likely to be found in low-income and minority neighborhoods in the City of Fort Worth, Texas. The city fathers and mothers in Fort Worth have been conscientious in placing these sites in areas with the lowest population density, although it is not clear if these areas, with their low property values, will continue to have low population density in the future.

Afshan Kamrudin, in her study, *Language as a Barrier to Access to Healthcare Among Vietnamese Immigrants*, found that access to sophisticated healthcare technology is difficult for immigrants, especially those who do not speak English. In her research she found that having the best healthcare technology in the world available in county safety-net healthcare clinics is not enough if patients lack the means to access it.

The next two articles explore ways technology can improve the quality of life for people with disabilities. Mary Pat Kleineck, in her article, *Can You Hear Me Now: A Meta-Analytical Perspective of the Benefits of Frequency-Modulated (FM) Systems for People with Cochlear Implants*, conducted a meta-analysis of three frequency modulated systems that can help people with cochlear implants hear better in conditions where there is background noise. Her research showed that a direct-audio input (DAI) produced the greatest increase in speech recognition.

Monique Chabot studied the types of assistive technology devices and services offered to students with physical, hearing, and visual impairments by the Office of Disability Accommodation at UNT. In her article, *Assistive Technology Use by Students with Disabilities at UNT*, she found that there was a wide range of assistive devices available to students. Problems with using the technology included locations of labs that are less than ideally accessible, lack of technicians to help students with disabilities who have difficulty using the equipment, and lack of training in the use of the technology by students who enter UNT without

previous training. As in Obregon's article, we see again that it is not enough just to make the technology available; people must be empowered through skills and availability to use it.

Landeia Phillips examined disability from another perspective — that of the caregiver. While there are legal mandates for assistive technologies and programs for people with disabilities, caregivers are too often on their own with little or no support for use of technologies and/or programs. In her article, *Grandparents Raising Children with Disabilities*, Phillips reported that there has been an astonishing 40 percent increase in the number of grandparents raising their grandchildren in the last 14 years. Although her sample was very small and therefore only suggestive, she found that most grandparents were satisfied with their involvement in developing their grandchildren's Individualized Education Plan (IEP) in the school system, although a vocal minority expressed the view that teachers and counselors in the schools were not as sensitive to their needs as they would like. Grandparents reported experiencing stress over care for their disabled grandchildren and a majority reported experiencing physical and mental exhaustion on a weekly basis.

When it comes to health of the elderly, Heather Soltau argued that an ounce of prevention in an exercise program beats a pound of cure in high technology medicine. In her article, *Get Up and Move: Independence and Maneuverability Related to Regular Exercise Among Non-institutionalized Elderly Adults*, she reported on the results of regular exercise in a nationally representative sample of 6,146 adults 65 years of age and older from the 2001 National Health Interview Survey. She found that adults who regularly exercise five or more times a week had less difficulty doing activities of daily living such as walking a quarter of a mile and that they had a lower body mass index. She concluded that exercise is effective in improving the health of older adults.

Brooke Blake-Taylor's paper is entitled *Science and Creativity: How Illness, Medicine, Pseudosciences, and Sciences Have Influenced Selected Works of Nathaniel Hawthorne and Herman Melville*. In her research she found that Hawthorne was most suspicious of science, seeing it as an instrument to corrupt men's souls. Melville, on the other hand, was less prejudiced on the subject and saw the potential of science and pseudoscience, such as mesmerism, as tools to gain knowledge to improve man's lot in life.

In the final paper in the science and technology section, Sebastian Arduengo's research demonstrates that technology does not solve every problem. His article, *Hail Mary: The Effect of the 1972 "Linebacker" Bombings on the Paris Peace Accords*, examined the premise of American policy in the Vietnam War that superior airpower would lead to victory in a war with a less developed society. It did not. Arduengo analyzed the way motivation of the North Vietnamese led to their victory in spite of less developed military technology.

The Humanities and the Arts

We have two stellar papers from the humanities and arts. The first paper, by Stacey Kniatt, is entitled *Machiavelli's 'The Prince' as a Satire: An Exploratory Look at Machiavelli's Works to Determine His True Political Inclinations*. The researcher marshaled evidence using a comparative analysis of the other writings of Machiavelli to make a convincing case that his

book, *The Prince*, was written as a political satire rather than as a how-to manual for would-be political tyrants. In both his earlier and later work, Machiavelli was a strong supporter of the republican form of government so, Kniatt argued, it is antithetical for him to have championed dictatorships in the middle of his career.

David Hanna has written a brilliant comparison of the work of William Shakespeare and the twentieth century American playwright, David Mamet. In his article, ‘Remember Me’: Examining Parallel Language and Structure in William Shakespeare’s *Hamlet* and David Mamet’s *Glengarry Glen Ross* Through Cultural Linguistics, Hanna compared passages from the two authors to illustrate the similarity of the rhythm of their language using iambic pentameter. Even though they lived in societies that were separated in time by 400 years, both deal with similar universal themes in the human condition.

Religion and Social Behavior

Two papers were submitted in the field of sociology that examined the effect of religion on social behavior. The first article, by Rebekah Chase, is entitled *On Your Knees at the Bar: A Study of Religiosity and Alcohol Use among College Students*. Chase examined the effects of religiosity and spirituality on the frequency of alcohol consumption, extent of alcohol consumption, and social context of alcohol consumption. She found that both religiosity and spirituality were negatively related to alcohol consumption, especially with students under the legal drinking age. Chase postulated that religious and spiritual organizations could use this information to develop more effective programs to deter alcohol abuse among college students, particularly younger students.

In her article, *The Dynamics of Interfaith Relationships*, Kimberly Banks examined the effects of age, education, and economic status on willingness to date persons with a religion other than their own. She examined data from 2,064 personal advertisements in the Yahoo dating service. She found widespread acceptance of interfaith dating among people who used this service, especially among younger adults, which she interpreted as indicating young people were becoming more cosmopolitan and accepting of differences among their peers and close friends.

Special Section: Undergraduate Scholar Articles in Anthropology

In 2007, the Anthropology Student Association, sponsored by Dr. Mariela Nunez-Janes, co-sponsored University Scholars Day. Two of her students submitted their papers to TEF 2007 and we were pleased to accept them. The first paper was written by Ryan Gilbert for the Chicano/a Latino/an Oral History Project (CLOHP). It is based on an in-depth interview with a student at UNT who is of mixed German and Mexican heritage. She called herself “Germxican.” Her story is a fascinating and inspiring one.

The second paper was written by Elizabeth Schuelke who is also a student editor of this issue of TEF. Schuelke’s paper is a review of the literature on the concept of “Whiteness” as a racial or ethnic group in the United States. Perhaps the most surprising conclusion from her research was that Whiteness as a racial or ethnic identification has been ignored or taken for granted as the norm, and therefore not viewed as in need of analysis.

Special Section: Proceedings of the Department of Anthropology's National Science Foundation Summer Research Methods Program 2007

We are very pleased this year to publish the proceedings of the UNT Department of Anthropology's National Science Foundation-sponsored Summer Research Methods Program. The program was funded by a grant to Dr. Tyson Gibbs, chair of the Department of Anthropology, in 1999. Dr. Gibbs is an applied anthropologist with previous research experience at the Centers for Disease Control and Prevention. Dr. Douglas Henry, co-director of the NSF grant, has considerable applied research experience and publications.

The Project Coordinators on the summer NSF project were graduate students in the Department of Anthropology at UNT. The Project Coordinators, Danyel Rios (an Honors College alumnae) and Shimaa Dessouky, supervised the students through their summer research experience and devoted countless hours to helping the students prepare their research projects for their final reports and a poster presentation at the end of the summer program. They also assisted students in preparing their reports for publication in *The Eagle Feather* 2007. The staff of TEF 2007 is immensely grateful to them for their conscientious dedication to the project.

The students and their projects are described in the preface to the special section and so we will not repeat ourselves here. We will just note that seven students from five different states ranging from New York to Utah were chosen to participate in a highly competitive selection process. All plan to pursue graduate degrees.

In addition to the principal investigators on the NSF project and the project coordinators, TEF 2007 would like to extend a special recognition to the faculty who worked so diligently with these undergraduate students with no expectation of reward other than the satisfaction of mentoring deserving young scholars along their way. Our special thanks go to Professors Beverly Davenport, Doug Henry, Lisa Henry, Mariela Nunez-Janes, Ann Jordan, and Christina Wasson.

Conclusions

Each year that the Honors College has sponsored the publication of *The Eagle Feather* for all undergraduate students at UNT, we have been impressed by the talent of our students and the dedication of our faculty in bringing *The Eagle Feather* to life. This year marks a milestone in terms of the number of undergraduates publishing in TEF. This issue contains 23 student-authored articles, up from just seven in the first issue in 2004. Additionally, it includes for the first time a major undergraduate research program in the Department of Anthropology at UNT. The partnership of aspiring undergraduate researchers and dedicated faculty mentors continues to not only produce serious research outcomes among our undergraduates, but also to inspire others to follow their example in pursuit of serious research with talented undergraduates.

We cannot thank Dr. Don Grose, Dean of the University Libraries, and Kristin Boyett and the staff of the UNT Multimedia Development Lab too often or too much for the critical role they played in developing this innovative electronic journal for undergraduate research. *The Eagle*

Feather at UNT was recently featured in a panel session at the Council on Undergraduate Research's conference as one of the first such journals in the United States and a model for others to follow.

Finally, we would like to close with a big thank-you to our student editors who served on The Eagle Feather Review in summer 2007 — Huma Hameed, Cameron Forrest McCord, Elizabeth J. Schuelke, Melissa J. Sines, Amber Michelle Wnek, and Whitney Neal, our Managing Editor. These students represent the College of Arts and Sciences, the College of Engineering, and the College of Public Affairs and Community Service. Final copy editing was done again this year by Dona Perkins. With the diligent and conscientious editing of our student editors and Ms. Perkins, our diamonds-in-the rough were polished into the gems you are about to read.

References

Moving out of classroom, more undergraduates turn to research. CNN.com. Retrieved September 5, 2007, from <http://www.ecu.edu/cs-cas/chem/customcf/UndergradResearchCnn.pdf>