

# WELCOME

November 17, 2005

Welcome to the College of Arts and Sciences Second Annual Research Conference. The various sessions showcase the quality, depth, and breadth of original theoretical and applied research being conducted by the faculty, students, and alumni from Indiana University Northwest's College of Arts and Sciences and our colleagues from other divisions, schools, and universities.



The importance of research as a way of informing one's teaching and the pride I take in the research of faculty at Indiana University Northwest represent major reasons for founding the conference. The event is the outgrowth of a strong constellation of academically excellent programmatic offerings. It illustrates the importance and relevance of intellectual pursuit in the arts, humanities, and social and natural sciences to our understanding of ourselves, our communities, our nation, and our world. We know you will be intellectually stimulated by the caliber and variety of presentations.

Join me in celebrating research, scholarship, and creativity at Indiana University Northwest. We thank Chancellor Bruce Bergland and Interim Vice Chancellor Anna Rominger for their support and sponsorship. We also owe a special thanks to the planners and the internal and external participants for their contributions to making this happen. Learn and enjoy!

**Dorothy W. Ige**

Dean , College of Arts and Sciences  
Indiana University Northwest

THURSDAY NOVEMBER 17, 2005

1:30-2:00pm

**OPENING REMARKS** - LC 105 A,B

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Dorothy Ige

Dean, College of Arts and Sciences

**The Arts & Sciences in the 21st Century Global Academy**

Adam Herbert

President, Indiana University

Anna Rominger

Interim Vice Chancellor for Academic Affairs

2:00-3:15pm

**SESSION A**

**LOOKING, LOSS, AND LOGIC IN LITERATURE** - LCC110

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Chairperson: Jerry Pierce, Department of History

**“If you don't know what a Gryphon is, look at the picture”: Victorian Authors Address their Illustrators**

George Bodmer, Department of English

**Mourning Becomes David: Loss and the Victorian Grief of Young Copperfield**

Alan Barr, Department of English

**The Contradictions of the Oompa-loompa(s): Marx, Freud, Postcolonial Theory and *Charlie and the Chocolate Factory*.**

Charles Leigh Robinson, Department of History and Philosophy

**BIOLOGY AND MEDICINE** - LCC 105C

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Chairperson: Atila Tuncay, Department of Chemistry

**Setting up a unilateral lesion model for dopamine depletion in rats and its applications in Parkinson's disease research**

Heath Brown, Indiana University School of Medicine-Northwest

Sponsor: Subbiah P. Sivam, Indiana University School of Medicine-Northwest

## **Anatomical studies of corneal isolectin IB4-positive nerves**

Lauren Dvorscak, Indiana University School of Medicine-Northwest

Sponsor: Carl Marfurt, Indiana University School of Medicine-Northwest

## **Analysis of Plasma Membrane Calcium-ATPase Isoform Expression in Human RPE Cell Lines**

Catherine Nelson & Barbara Kural, Valparaiso University

Cristina Casas, Indiana University School of Medicine-Northwest

Roli Mandhana., Munster High School

## **Localization of calcium transport proteins in pig retinal pigment epithelium (RPE)**

Sambodhi Das, Indiana University School of Medicine-Northwest

Sponsor: Brian G. Kennedy & Nancy J. Mangini, Indiana University

School of Medicine-Northwest

3:15-3:30pm

## **BREAK**

3:30-4:45pm

## **SESSION B**

## **COMMUNITIES AND CULTURE - LCC 105C**

Chairperson: Tanice Foltz, Department of Sociology and Anthropology

### **On our Own through Changing Seasons: Language and Cultural Shift among Young Haitian Females in Quebec**

Scooter Pégram, Departments of Modern Languages and Minority Studies

### **Shifting the Burden: Drug Courts and Healthcare Costs**

Wm. Dustin Cantrell, Department of Sociology and Anthropology

### **Drumming up a Global Community: Spirituality, Service, and Social Change**

Tanice Foltz, Department of Sociology and Anthropology

## **OF RACISM, UTOPIAS, AND ETHICS - LCC 110**

Chairperson: Alan Barr, Department of English

## **Radical Realism and Feminist Theater**

William A. Evanouski, Department of English

## **The Real Fullness of Her Nature:**

### **Mary Pickford and the Utopian Space of the Acting Body**

Taylor S. Lake, Department of Communication

## **The Ethics of Globalization**

Anja Matwijkiw, Department of History and Philosophy

4:45-5:00pm

## **BREAK**

5:00-5:45pm

## **PLENARY ADDRESS I - LCC 105AB**

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### **The Interrelationships of Geology and Early History in the Calumet Area**

Kenneth J. Schoon, School of Education

The landscape of the Calumet, an area that sits astride the Indiana-Illinois state line at the southern end of Lake Michigan, results from the effects of glaciers that left the area toward the end of the Ice Age – about 14,000 years ago. In the years since, many natural forces, including wind, running water, and the waves of Lake Michigan, have continued to shape the land. Lake Michigan, a barrier to east-west land transportation, forced people to move through the area at its southern tip. When the glaciers left, Lake Michigan was higher than it is now. As the lake dropped in elevation, it left behind shoreline features that in turn have served as Indian trails, stagecoach routes, highways, and sites that have evolved into many of the cities, towns, and villages of the Calumet area.

People have also left their mark on the landscape: Indians built mounds; farmers scraped sand from the tops of hills and filled in wetlands; governments commissioned ditches and canals to drain marshes and change the direction of rivers; sand was hauled from where it was plentiful to where it was needed for urban and industrial growth. These thousands of years of weather and movements of peoples have given the Calumet region its distinct climate and appeal.

-Inside jacket summary of Kenneth J. Schoon's *Calumet Beginnings: Ancient Shorelines and Settlements at the South End of Lake Michigan*

FRIDAY NOVEMBER 18, 2005

8:30-9:45am

## SESSION C

### **ACHIEVEMENT AND AFFECT** - LCC 105C

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Chairperson: Cynthia O'Dell, Departments of Psychology  
and Women's Studies

#### **Gender Differences in Mathematics Achievement: Perspectives from a State Contest**

Vesna Kilibarda, Departments of Mathematics and Actuarial Sciences  
Clyde Wiles, School of Education

#### **Goal Orientation and Academic Success in Traditional and Non-Traditional Aged Female College Students**

Cynthia D. O'Dell, Departments of Psychology and Women Studies  
Mark Sudlow Hoyert, Department of Psychology

#### **Response Time for a Computer-Administered Mood Instrument**

Karl Nelson, Rex Hood, Dominic Albano, Nancy Kirk Jancaric,  
Donnita Coutee, Leonard Kosinski, Sasho Dojcinovski, Alexander Vasileski,  
Department of Psychology

## **HERESY, INTELLECT, AND POLITICS:**

### **TRACING THE HISTORICAL** - LCC 110

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Chairperson: Robin Hass Birky, Departments of English and Women's Studies  
and the Office of Academic Affairs

#### **Heretical Monuments: The Contested Memory of a Medieval Heresy**

Jerry B. Pierce, Department of History and Philosophy

#### **An Alternative Approach to Marxism in the 1930s: Feng Youlan and the Search for "Society"**

Xiaoqing Diana Lin, Department of History and Philosophy

## **Agnes Nestor: An Activist for Women Workers**

Tracy Garner Traut, Department of Psychology

Sponsors: Cynthia O'Dell, Departments of Psychology and Women's Studies

Roberta Wollens, Departments of History and Women's Studies

## **The Sino-Soviet Conflict:**

### **An Analysis of its Geopolitical Roots and Causes**

Andrew Bodinet, Department of History and Philosophy

Sponsor: Paul Kern, Department of History and Philosophy

9:45-10:00am

## **BREAK**

10:00-11:15am

## **SESSION D**

## **IT'S ALL IN THE BUBBLES:**

### **CHEMISTRY, PHYSICS, AND GEOLOGY - LCC 105C**

Chairperson: Julie Peller, Department of Chemistry

### **Photocatalytic Oxidation Methods for the Destruction of Cladophora along the Lake Michigan Shoreline**

Scott Griffith, Julie Peller, Department of Chemistry

### **Bubbles of Higher Dimensional Spacetime**

John Morris, Department of Physics

### **Compositional Variation within the Ubehebe Volcanic Field and Implications for Eruptive Conditions**

Dawn Knipe, Department of Geosciences

Kristin Huysken, Department of Geosciences

### **Sonochemistry in Organic Synthesis: Nucleophilic Substitution Reactions of Alkynyl Iodonium Salts**

Maureen Petrunich, Janice Smith, Janushi Dalal, Atilla Tuncay

Sponsor: Atilla Tuncay, Department of Chemistry

# **PLEASURE, PERSPECTIVE AND POSTMODERNISM** - LCC 110

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Chairperson: Adrian Garcia, Department of Modern Languages

## **Reading Brecht Reading Horace: On Pleasure and Use**

Doug Swartz, Department of English

## ***Pleasuralities: Discourses of Textual Pleasure***

Robin R. Hass Birky, Departments of English and Women's Studies  
and the Office of Academic Affairs

## **Unloading the Self-Refutation Charge**

Brad Brown, Indiana University Northwest Alumnus

11:15-11:45am

# **PLENARY ADDRESS II** - LCC 105AB

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## **Gary's First 100 Years: A Video Monologue**

William J. Dorin, Computer Information Systems  
James B. Lane, History and Philosophy

11:45-1:00pm

## **LUNCH**

Lunch will not be provided; however, you may purchase lunch from the Little Red Hawk in the Library.

1:00-2:15pm

## **SESSION E**

# **GEOLOGY – FROM DINOSAURS TO DUNES** - LCC 105C

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Chairperson: Kristin Huysken, Departments of Geosciences

## **Fossil Clues to Tyrannosaurid Physiology**

Richard Hengst, Department of Biological Sciences – Purdue North Central

## **Textural analysis of sand from Fair Oaks Dune Field**

Stephanie Kite, Joe Blockland, & Zoran Kilibarda, Department of Geosciences

## **A multi-proxy approach to dating coastal strandplains of the Great Lakes**

Erin P. Argyilan, Department of Geosciences  
John W. Johnston, University of Waterloo, Ontario

**Poster Presentation: Lake Michigan glacial lobe  
fluctuations revealed in Valparaiso moraine**

Zoran Kilibarda, Department of Geosciences  
Steven E. Brown, Indiana Geological Survey

**CANNIBALISM, CASTE SYSTEMS, AND COMPUTERS** - LCC 110

Chairperson: Robert Mucci, Department of Sociology and Anthropology

**Cannibalism & Disease**

Mara Brie Deckter, Department of Sociology & Anthropology  
Sponsor: Robert Mucci, Department of Anthropology

**The Reinvention of Tradition**

Victoria Lacny, Department of Sociology and Anthropology  
Sponsor: Michelle Stokely, Department of Sociology and Anthropology

**A Regional Geography of Northwest Indiana on the Web**

Michael W. Longan, Department of Geography and Meteorology  
Ted Schultz, Valparaiso University

**PHILOSOPHICAL EXPLORATIONS OF GOD AND MORALITY** - LCC 115

Chairperson: Frank Caucci, School of Social Work

**God, Immortality, and the Meaning of Life**

Gianluca Di Muzio, Department of History and Philosophy

**Huckleberry Finn against Morality**

Richard Hull, Department of English

2:15-2:30pm

**BREAK**

2:30-3:45pm

**SESSION F**

**FROM CHILDHOOD TO ADOLESCENCE:**

**INDIVIDUATING THE SELF** - LCC 105C

Chairperson: Taylor Lake, Department of Communication

**Francine Pascal and Judy Blume: Easing the Transition from Childhood to Young Adulthood**

Randi Lynn Guernsey, Department of English

Sponsor: George Bodmer, Department of English

**Media's Mixed Messages to Teens: A Research Documentary**

Crystal Angeles, Department of Communication

Sponsor: Taylor S. Lake, Department of Communication

**A Qualitative Study of Adolescent Decision-Making about Healthy Eating and Physical Activity**

Erika Alcantar, Department of Psychology

Alex Vasileski, Department of Psychology

Sponsor: Mary Ann Fischer, Department of Psychology

**Poster Presentation: Young Children's Use of Exploratory Procedures in Identifying Objects Varying in Temperature**

Katherine Hannigan, Mary Johnson, Colleen Rhoda, Department of Psychology

Sponsor: Cynthia O'Dell, Departments of Psychology and Women's Studies

**SARCASM AND SATIRE** - LCC 110

Chairperson: Gianluca Di Muzio Department of History and Philosophy

**A Global Poetics of Sarcasm: Humor in the Poetry of Anselm Hollo**

William (Bill) Allegrezza, Department of English

**Mariama Bâ's Fiction and Reader-Oriented Theories:**

**A Subjective Perspective of So Long a Letter**

Ada Uzoamaka Azodo, Department of Minority Studies

3:45-4:00pm

**CLOSING REMARKS** - LCC 105AB

Cynthia D. O'Dell, Departments of Psychology and Women's Studies

4:00-5:30pm

**CHANCELLOR'S RECEPTION** - LCC 105AB

Sponsored by Bruce Bergland, Chancellor, Indiana University Northwest

C O N F E R E N C E

# ABSTRACTS

ABSTRACTS APPEAR IN ALPHABETICAL ORDER BY FIRST PRESENTER'S LAST NAME

ERIKA ALCANTAR AND ALEX VASILESKI, DEPARTMENT OF PSYCHOLOGY

## **A Qualitative Study of Adolescent Decision-Making about Healthy Eating and Physical Activity**

The purpose of this study was to identify variables that may affect adolescent decision-making when having to choose between engaging in unhealthy or healthy eating and physical activity behaviors that may have been overlooked in previous research studies. Focus groups were used to provide descriptive data that could help to identify some of those variables by categorizing the main topics and concerns that adolescents mentioned during the discussions. We included Caucasian American, African American, and Hispanic American males and females from Northwest Indiana as participants. Influenced by the transtheoretical model of health behavior, this research examined the beliefs and opinions of forty-three adolescents aged 14-17 years. The most frequently mentioned healthy eating and exercise themes included barriers for change, reasons for change or maintenance of change, social support, and information sources. The most common barriers to healthy eating and more physical exercise mentioned by the teens were bad school lunches, satisfaction with their current selves, and habit. The reasons for change or maintenance included appearance, confidence, less illness, and avoidance of health problems. Social support was most commonly received from friends and parents, and the most common information source mentioned was TV commercials. Our results can be used to conduct additional quantitative studies.

WILLIAM (BILL) ALLEGREZZA, DEPARTMENT OF ENGLISH

## **A Global Poetics of Sarcasm: Humor in the Poetry of Anselm Hollo**

Translator, essayist, poet, teacher, journalist—Anselm Hollo and his work are difficult to position. One moment he is translating writers like Pierre Reverdy (French), Friederike Mayröcker (German), Gunnar Harding (Swedish), and Kai Nieminen (Finnish), and the next moment he is teaching classes at Naropa on how

to deviate from what Charles Bernstein has labeled the “official verse culture.” His poetry has been called eccentric, transcultural, hip, primal, and lyric, but the aspect that distinguishes it the most is his use of humor to entertain the reader and push him/her in new directions. In “Lyric Poetry and Society,” Theodor Adorno discusses how the lyric acts in opposition to the collective, forming a necessary tool against the ever-increasing collective tendencies of modern capitalist cultures. As if a direct descendant of Adorno’s, Hollo exemplifies this aspect of the lyric through his work. Hollo’s poetry allows us to laugh at our contemporary situation and asks us to question the absurdity of it. During our distraction, he reminds us of the fragility and possibility of being fully human. In this presentation, I examine Hollo’s various uses of humor as paradigms for using humor in experimental poetry as a means of individuation in a culture that values the individual as primarily a consumer.

CRYSTAL ANGELES, DEPARTMENT OF COMMUNICATION

### **Media’s Mixed Messages to Teens: A Research Documentary**

In my presentation, I will be showing my audience a brief look at a research project/documentary on how media advertising sends mixed messages to teenagers. I will summarize my research in progress and present clips from my documentary video. Mixed messages include language, images, and sounds of media advertising, in television, magazine, and the Internet. They include positive and negative messages about how teenagers should live their lives, with the negative ones dominating. In my documentary, I will present an in-depth look at ten teens from a few high schools in Northwest Indiana, the way they live, dress, eat, and act at home and at school and talk with them about how media affects them.

My target audience includes parents, young adults, and others who need to understand why and how negative attitudes toward the self are created in teenagers. I believe my documentary will show that media messages are an important part of the problem of so many teens’ negative self images. I hope that through this documentary I can show this to parents and teens to help create better communication and understanding in their relationships.

ERIN P. ARGYILAN, DEPARTMENT OF GEOSCIENCES

JOHN W. JOHNSTON, UNIVERSITY OF WATERLOO, ONTARIO

### **A multi-proxy approach to dating coastal strandplains of the Great Lakes**

Beach ridge sequences that commonly occur in embayments of the Laurentian Great Lakes represent sedimentologic time series of lake level changes, sediment supply, and vertical ground movement during the Holocene. Dating of coastal strandplains has primarily relied upon <sup>14</sup>C dating of basal peats that commonly

form in swales between individual beach ridges. The potential to date coastal strandplains, and other sedimentary coastal landforms in the Great Lakes is therefore often limited by a lack of organic material with a clearly identifiable provenance.

This study presents a detailed study of four strandplains adjacent to Au Train, Grand Traverse, and Tahquamenon Bays along the southern shore of Lake Superior and Batchawana Bay along the northeastern shore. 14C and OSL dating methods were applied to strandplains to develop age models for ridge development and late Holocene lake-level records. Ages generated by 14C dating of basal peats from inter-ridge swales are evaluated against optically stimulated luminescence (OSL) ages on foreshore sediments. Geomorphic and sedimentologic data are used to evaluate absolute ages obtained via 14C and OSL dating. Geomorphologic interpretations of ridges, wetlands, and river channels are combined with sedimentologic studies of foreshore deposits to identify (i) major lake phases including the Nipissing and Algoma and (ii) ridges that formed after the separation of Lake Superior from Lake Michigan-Huron when Sault Ste Marie replaced Port Huron/Sarnia as the primary outlet for Lake Superior.

ADA UZOAMAKA AZODO, DEPARTMENT OF MINORITY STUDIES

### **Mariama Bâ's Fiction and Reader-Oriented Theories: A Subjective Perspective of *So Long a Letter***

This study examines the notion of narratee (Gerald Prince), that is, the listener or reader, as different from the narrator, the "actual reader" (the one engaged in the act of reading the text as published by the author), the "virtual reader" (that reader to whom the author destines the textual discourse), and the "active reader" (the insightful reader who fully understands the writer's language and style). When Senegalese Mariama Bâ's seminal work, *So Long a Letter* (Une si longue lettre), is read as a letter, the narrator directly specifies the narratees, identifying them by name, age, gender, class, and relationships with them. However, when seen as a diary, other listeners or readers, representatives of causes and ideologies, which multiply as the reader engages in linguistic play, emerge. Critical efforts devoted to the narrator and the genre should rather dwell on the narratee, in order to converge and consolidate the plural meanings of this postcolonial text. Viewing *So Long a Letter* as a Wolof *taasu* (laudatory and satirical poetry) in which the *taasukat* (performer) marks her subject position and negotiates relationships with the reader, will once and for all establish the identity of the narratees, and account for the multiplicity and variety of the critical reception, and counting, of this important literary work.

ALAN P. BARR, DEPARTMENT OF ENGLISH

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## **Mourning Becomes David: Loss and the Victorian Grief of Young Copperfield**

Despite the wealth of critical discussion that has accumulated around Dickens's *David Copperfield*, only tangential or brief attention has been paid to the novel as an elegy mourning the loss of innocence. Dickens, publishing in the same year (1850) as Wordsworth's *Prelude* and Tennyson's *In Memoriam*, is overtly concerned with the same Nineteenth-century theme that they and so many others were: how does one move from innocence to experience, at what cost, and with what grieving.

*David Copperfield*, as has been often observed, portrays the process of maturation, the relationship of love and death, and the diligence expected of a commercial venturer. It can also rewardingly be discussed as a novel that traces the process of mourning. The loss mourned is not so much the people David loved, including his mother, wife (Dora), and idolized—if treacherous – friend Steerforth, as it is the basic human experience of losing an innocent, enthusiastic, passionate response to the world. Through the references to fairy tales, the evolution of David as a writer, the different loves and losses in his life, and a series of journeys, Dickens achieves an effect analogous to that of Wordsworth and Tennyson, a strongly elegiac element. It also becomes useful to recognize how well Freud's 1917 "Mourning and Melancholia" and subsequent psychoanalytic commentaries on mourning illuminate this "autobiographical" fiction.

ANDREW BODINET, Department of History and Philosophy

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## **The Sino-Soviet Conflict: An Analysis of its Geopolitical Roots and Causes**

The Sino-Soviet split in the early 1960s was one of the most important moments during the Cold War and one of the most significant events in international relations in the twentieth century. Each side accused the other of selling out the principles of Marxism-Leninism; the Soviet Union had become too bureaucratic and staid for the Chinese, and the Chinese were too willing to upset the status-quo for the Soviets. The dispute was based more on geopolitics than ideology. Despite Sino-Soviet pledges to friendship and Western fears that the Communist Bloc was a creature that took orders from Moscow, the sharp break between the two and the bitterness of the accusations hurled between China and the Soviet Union showed this was not the case. Mistrust existed between Mao Zedong and the Soviet leadership since the 1920s. Soviet dictator Joseph Stalin had ordered the Chinese Communists to merge with the Chinese Nationalists as a step to taking over the country, which almost led to the destruction of the CCP, earning Stalin Mao's undying hatred and enmity. The Soviet Union's stinginess with aid to China after the Communist takeover in 1949, the Soviets' hesitation to send troops to China to fight the Korean War, Soviet support for India instead of China during their dis-

pute, and Soviet economic demands on China strained the already tense relationship. By 1963, the split had become public and pushed the two toward nuclear war and closer to the United States.

GEORGE BODMER, DEPARTMENT OF ENGLISH

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## **“If you don't know what a Gryphon is, look at the picture”: Victorian Authors Address their Illustrators**

In illustrated works, typically for the young reader, the pictures frequently comment upon their accompanying written texts, explaining a confusing point and even providing the artist's slant on the story. But, for the most part, the words turn a blind eye on their illustrations, telling the story as if they don't exist. In this, the written text takes the superior position. Victorian writers Lewis Carroll in *Alice's Adventures in Wonderland* (1866) and George MacDonald in *The Princess and the Goblin* (1872) unusually call attention to their pictures and illustrators, directing the reader's attention and even offering advice to the artists. These, Sir John Tenniel, principal cartoonist of the humor journal *Punch*, and Arthur Hughes, a popular wood engraving artist for serialized novels, typified artists in the illustrative mode. Although each book is the story of a young girl who is traveling in a strange environment and encountering unusual creatures, the subtext of each book is the way messages such as stories are passed on. Sometimes the language fails, and a visual image must take up the burden of description. But language is complex enough that even that at times is found wanting. These instances of slippage highlight the differences between the media, suggest what each does best, and focus on the relationship between writer and artist.

BRAD BROWN, IU NORTHWEST ALUMNUS

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## **Unloading the Self-Refutation Charge**

In her book on post-modernist thought, *Belief and Resistance*, Barbara Herrnstein Smith examines the charge of self-refutation, in which a statement or argument may be self-negating. It is important for her to do so because, in her defense of post modernism, it is necessary to attack the objectivist claim that one can know anything with certainty. For Smith, post modernism rests on the supposition that one cannot know anything with certainty, which is often thrown back at the post modernist as self-refuting and, hence, illogical, irrational and false. Smith attempts to unload, or disarm, this charge. If she is successful, she has struck a solid blow against the very notion of objective truth.

Her defense is two-fold. First, she is correct that sometimes the charge that a statement is self-refuting is incorrect, or leveled unfairly. It is a powerful charge, carrying great weight, and she cautions that such charges must be carefully examined. Secondly, in regards to charges that do have merit, she attempts to dissuade us that they are really that important at all. Post modernism has a lot to say about perspec-

tive, and Smith's defense rests on that. The weight of the claim should be determined by one's point-of-view, and we are told to consider self-refuting claims in terms of their applicability, coherency, and connections to other ideas. She writes that these criteria avoid the charge of relativism, or that all claims are equally valid or invalid. My presentation will examine Smith's arguments.

**HEATH BROWN, INDIANA UNIVERSITY SCHOOL OF MEDICINE-NORTHWEST**  
**Setting up a unilateral lesion model for dopamine depletion in rats and its applications in Parkinson's disease research**

Parkinson's disease is a condition of dopamine (DA) deficiency in the brain as a result of degeneration of striatonigral DA neurons. The purpose of this study was to set up a unilateral DA deficiency model of Parkinson's disease in rats. The neurotoxin 6-hydroxydopamine (6-OHDA) was stereotaxically microinjected to selectively destroy the medial forebrain bundle (MFB). Destruction of the MFB causes loss of DA and its metabolite DOPAC in the ipsilateral striatum. The DA agonist, apomorphine produces characteristic contralateral rotation in DA deficient animals. In this study unilaterally 6-OHDA lesioned animals showed contralateral rotation following apomorphine administration thereby exhibiting behavioral manifestation of DA deficiency. The animals were sacrificed two weeks after 6-OHDA lesion, and the striatum from the lesioned and unlesioned side were used to determine the concentration of DA, serotonin and their metabolites by HPLC method. The HPLC data show that there is a 97% and 95% depletion of DA and DOPAC on the lesioned side as compared to unlesioned side. There were no changes in serotonin or its metabolite 5HIAA, indicating the selectivity of the lesion to DA neurons. These behavioral and neurochemical data validate the unilateral 6OHDA lesion model of dopamine deficiency. We plan to use this model to study the influence of DA agonists on the expression of neuropeptide genes for opioids (enkephalin) and tachykinin (substance P) in the basal ganglia of rat.

**WM. DUSTIN CANTRELL, DEPARTMENT OF SOCIOLOGY  
AND ANTHROPOLOGY**

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**Shifting the Burden: Drug Courts and Healthcare Costs**

While statistics show that violent crimes are down nationwide the prison population in the United States continues to swell. In 2004 the numbers of inmates in prison rose to over 2 million individuals. Drug offenders make up nearly half of this population. Recently created "Drug Courts" have attempted to reduce these numbers by placing drug offenders in treatment rather than prison. The courts have proven to be extremely successful alternatives to incarceration. There is a hidden cost; addicts are more likely to have untreated health concerns than the larger population. Prisons and county jails serve as the primary source of healthcare for many of these individuals. If they are diverted to drug treatment before receiving

medical treatment the cost is shifted from correctional facilities to the drug treatment program. In addition to the fiscal burden, focusing on physical health can divert attention from managing and treating the drug addiction.

This paper utilizes data from two Chicago-based studies to examine the healthcare needs of drug offenders as well as the ability of substance abuse facilities to address these issues.

SAMBODHI DAS, INDIANA UNIVERSITY SCHOOL OF MEDICINE-NORTHWEST

### **Localization of calcium transport proteins in pig retinal pigment epithelium (RPE)**

Diabetes can lead to blindness and changes in the retinal pigment epithelium (RPE) are involved in this pathology. The purpose of this study was to examine plasma membrane calcium ATPases (PMCA) or calcium transport proteins) in pig RPE. The goal of the research is to determine whether the amount or distribution of PMCA is altered by diabetes. Pig tissue was used because the Ossabaw high fat pig is a new animal model to study changes that accompany diabetes. In our work, we used immunoblotting and immunocytochemistry to examine expression and localization of PMCA in normal pig RPE. Our findings provide the baseline for comparison in future studies using diabetic eyes. RPE cells were isolated from pig eyes by gentle scraping. The proteins were separated using SDS gel electrophoresis and transferred onto Immobilon. For localization studies, eyes were fixed and RPE tissue was sectioned. Antibodies against PMCA1, PMCA2, PMCA3 and PMCA4 were tested. Immunoblotting showed that pig RPE expressed all four PMCA isoforms. PMCA2 expression was highest followed by PMCA4 and PMCA1; PMCA3 expression was least. By immunocytochemistry, PMCA4 and PMCA1 exhibited different patterns of immunolocalization. PMCA1 was prominent in the lateral junctions between RPE cells and along the basal membrane. PMCA4 was found along both the apical and basal membrane. Pig RPE, like human RPE, expresses all four PMCA. Individual isoforms differ in level of expression as well as localization. Future studies will examine whether PMCA are altered in diabetic pig tissue.

MARA BRIE DECKTER, DEPARTMENT OF SOCIOLOGY & ANTHROPOLOGY

### **Cannibalism & Disease**

Few other themes within the cultural boundaries of being human can create people to be so “scandalized, titillated, and spellbound” (Osborne 1997: 28) as the topic of cannibalism. “Man eating man” is one of those topics taken from the earliest traveler’s stories dating back to antiquity, but more recently, evidence is proving that it was practiced as early as the Neolithic Period. Think of why Homer’s hero Odysseus, in search of home, order, safety and structure must meet up and defeat the cannibalistic Cyclops. For thousands of years man has fought chaos.

Cannibalism within our culture is a symbol of chaos: a lack of morality, law, and structure; it stands for what is brutish or savage, or utterly inhuman. (Visser 1991:6) Cannibalism defies what is natural and creates one of man's most powerful taboos. But, is that chaos real or is it really an age-old archetype for which man is hard wired; deep in the recesses of his subconscious. Some may argue that man has always treasured meat and ate off of those around him. Was it to avoid starvation? Or was it to ingest the spirit of a loved one to continue to have them live on long after they had died? Perhaps it was to take in the soul of a precious enemy from a victorious battle. Whatever the reason behind a particular group of people practicing cannibalism, it is anything but chaotic. Cannibalism has been shown to occur within the framework of a ritualistic act. Rituals traditionally have a specific set of rules and customs that must be followed. The dining on human flesh has shown to be no different; there are rules to be followed.

GIANLUCA DI MUZIO, DEPARTMENT OF HISTORY AND PHILOSOPHY

### **God, Immortality, and the Meaning of Life**

Philosophers who subscribe to theism argue that human life would be meaningless without God and personal immortality. The present paper evaluates the truth of this claim. First, I explore the conception of meaning that is at the roots of the above theistic view. After pointing out some difficulties with it, I show that, on a plausible alternative interpretation of what it is for a life to have meaning, human existence fully qualifies as meaningful even if it does not continue in another dimension or is not inscribed in a universal divine plan.

WILLIAM J. DORIN, DEPARTMENT OF COMPUTER INFORMATION SYSTEMS

JAMES B. LANE, DEPARTMENT OF HISTORY

### **Gary's First 100 Years: A Video Monologue**

What do you do with nearly 450 photos that describe the birth and growth of the city of Gary over the last 100 years? You make them into a descriptive video slide show with narrative captions recounting the early buildings, businesses, people, culture, dreams, ideas, and changes that embody the "City of Steel." This paper will recount little of the actual history of Gary, but will present the making of the video from a creative and technical point of view. The video producers will recount the process and hours needed to create such a video from digitizing the photos, to recording the narration to the final rendering of the finished product. The technical aspects of the video will include a discussion of the computer software and hardware needed to produce such a product, while the creative aspects will describe the emotional connections to the story being told. In part of the presentation we will play several minutes of the video.

## **Anatomical studies of corneal isolectin IB4-positive nerves**

Corneal nerves promote the integrity of the ocular surface by releasing trophic substances and by activating brainstem circuits that stimulate reflex tear production. The nerves are phenotypically diverse and express a variety of neurochemical substances, including, neuropeptides and excitatory amino acids. The goal of this study is to determine the percentages of corneal nerves that express the plant isolectin, IB4. In the first set of experiments, the nerve tracer substance, wheat germ agglutinin (WGA), was applied to the corneal surfaces of 6 rats to label those neurons in the trigeminal ganglion that innervate the cornea. The ganglia were then perfusion-fixed, frozen-sectioned, and processed by fluorescence immunohistochemistry to determine the percentages of corneal-innervating neurons that bound IB4. The results showed that 275 out of 602 corneal-innervating neurons (45.7%) were IB4-positive. In a second set of experiments, the numbers of corneal nerves that bound IB4 were studied using rat corneal whole mounts. Two corneas were immunostained with antiserum against neurotubulin. Neurotubulin is a cytoskeletal protein that is ubiquitously expressed in all peripheral nerve fibers and its immunohistochemical detection provides an indicator of total corneal innervation density. One half of each cornea was then immunostained a second time for IB4 or the neuropeptide, CGRP. The results showed that most corneal nerves bound IB4, and that a substantial but smaller number expressed CGRP. The data will be quantified in future studies using image analysis software. Future work in our laboratory will investigate the trophic functions and regenerative potential of corneal IB4+ nerves in corneal health and disease.

WILLIAM A. EVANOUSKI, DEPARTMENT OF ENGLISH

## **Radical Realism and Feminist Theater**

The debate over the use of “realism” in feminist theater is well known. On one hand, the history of theatrical realism confirms its utility as an effective means of social critique, but on the other, its current usefulness for depicting feminine experience has become suspect, believed by some feminists to be perniciously false, a stale convention capable of producing narratives that only rehearse a version of reality constructed within masculinist hegemony. This paper proposes a “radical realism” as a means for rehabilitating and recovering realism for feminist purposes. By extrapolating from the logic of the “unities” (the epistemological rationale underlying theatrical realism, a point I argue), this paper will demonstrate how “radical realism” can be peculiarly successful in depicting the unique experience of women in the postmodern present. Clair Boothe’s *The Women*, and Irene Fornes’s *Fefu and Her Friends* share several symmetries and correspondences. Both plays deploy all women casts, are set historically in the mid-1930’s--though Fornes’s play was written in the late 1970’s--and portray an individual character’s desire and subjectivity against, and within, feminine subjectivity as a whole. This

paper will show, through a comparative analysis of Boothe's and Fornes's plays, that an evolved, postmodern view of the "unities" can refresh the conceptual formation of theatrical realism, respond to the charges of its critics, and serve the feminist project.

**TANICE FOLTZ, DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY**

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### **Drumming up a Global Community: Spirituality, Service, and Social Change**

This paper discusses the global drumming movement and examines three major foci: the creation of drumming communities, drummers' involvement in community service and drumming for social change. Drumming communities are formed locally and globally through participation in a specialized and general drumming list serves and by sponsoring and attending drumming events in the U.S. and abroad. One group, called drum circle facilitators (DCF), have a focus of community service, which Arthur Hull, father of the DCF movement, calls "rhythm evangelism." Drum circle facilitation provides drum circles for such groups as "at-risk kids" (children who live in high crime areas), the elderly, and the mentally and physically handicapped. Mr. Hull gives his facilitator Playshops™ around the world and thus increasing numbers of people are carrying on the "mission" of "rhythm evangelism."

As a community that is oriented toward social activism and change, local and global drumming efforts are held regularly with the purpose of bringing attention to current issues. For instance drumming actions are advertised on the Internet and gatherings held in response to the 2004 U.S. Presidential elections, the ongoing war on Iraq, and the Tsunami disaster of 2004 and the Hurricane Katrina. Other drumming actions are organized around environmental issues, stopping violence against women and children, and bridging racial and ethnic tensions. Data for this paper were collected over a three-year period using content analysis of electronic drumming list-servs, participant observation at drum trainings and gatherings, and personal communication.

**SCOTT GRIFFITH & JULIE PELLER DEPARTMENT OF CHEMISTRY**

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### **Photocatalytic Oxidation Methods for the Destruction of Cladophora along the Lake Michigan Shoreline**

The green alga that grows along the shorelines of Lake Michigan is called *Cladophora*, and in the past 5-10 years this alga has proliferated to an unsightly extent in some areas along the lake. While the growth of the alga was problematic in the 1960's and 1970's due to the greater use and levels of phosphorus in the water, the cause of its recent resurgence is not absolutely known. Strategies to control the escalation have not yet been devised and the invasive *Cladophora* contin-

ues to grow, in some cases, to the point of algal mats, large bioaccumulations of algae. The nontoxic, photocatalyst TiO<sub>2</sub> was chosen to affect the growth of *Cladophora*. Photocatalysis is an ecologically sound advanced oxidation process (AOP), proven effective in the oxidation of organic compounds. We have utilized the photocatalyst TiO<sub>2</sub> in conjunction with either natural sunlight or UV lamp light to successfully oxidize and damage the cells and cellular components of *Cladophora*. The TiO<sub>2</sub> is immobilized on glass beads, and contact must be made between the TiO<sub>2</sub> and the algae for the oxidative degradation. Visible algal color changes, UV-VIS spectral changes and microscopic images all clearly show the destructive compositional change in the algal that eventually leads to the death of the living organism. The cell wall of the algal cell is oxidized to the point where the cell leaks its contents, whereby making the cell unviable.

RANDI LYNN GUERNSEY, DEPARTMENT OF ENGLISH

**Francine Pascal and Judy Blume:**

**Easing the Transition from Childhood to Young Adulthood**

This project stems from an interview of a 23-year-old student regarding her childhood reading habits. Two authors whom she remembers as standing out the most are Francine Pascal and Judy Blume. Many critics disparage the work of these memorable authors for being popular and controversial. Blume's style and sexual explicitness are targeted, while Pascal is targeted for her repetitive and weary style. Nevertheless, both authors, in books such as Blume's *Are You There God? Its Me Margaret* (1970) and Pascal's *Sweet Valley High: Power Play* (1984), the latter part of the *Sweet Valley High Series*, address issues of significance to adolescent girls including sex, adulthood, peer pressure, and fitting in with family and friends. This transition from childhood to young adulthood may be a very difficult period in which adolescents cope with these issues. Authors like Francine Pascal and Judy Blume help to ease this transition. The Young Adult novel (YA) popularized in the last forty years has aimed at this market and its problems. This popular press, somewhat comparable to mass-market paperback books for adults, has succeeded by addressing the real and perceived needs of its teen and pre-teen readers. These authors are of great importance to young readers because the authors motivate them to read and allow them to relate to these books.

KATHERINE HANNIGAN, MARY JOHNSON, & COLLEEN RHODA,  
DEPARTMENT OF PSYCHOLOGY

**Young Children's use of Exploratory Procedures in Identifying  
Objects Varying in Temperature**

Studies of form perception in adults have emphasized the importance of active touch for form perception (e.g. Gibson, 1962; Heller, 1984; Klatzky and Lederman,

1993). Recent studies in children (e.g. O'Dell, 1999, 2000, 2004) have demonstrated that they use similar exploratory procedures (EPs) to adults when attempting to identify some objects. This study explores children's ability to identify objects varying in temperature and the strategies that they use to do so.

Thirty-three children (15 boys and 18 girls) participated. They ranged in age from 3 to 9 years old. 4 conditions were run, active palms, active fingers, passive palm and passive fingers. Ten trials were run for each condition ( \_ warm and \_ cool). During active trials the child was told to feel the object, and during passive trials the object was pressed into their hand.

Active touch trials yielded the same accuracy rates as passive touch trials. The data were grouped by age: 4-5 year olds (n=12); 5-6 year olds (n=13) and 8-9 year olds (n=8). No significant differences between the number of correct responses and developmental age were found. The average manipulation time for active trials was significantly longer than for passive trials. An analysis of manipulation time by age revealed that 5-6 year olds took significantly longer to manipulate objects for thermal discrimination than either 4-5 year olds or 8-9 year olds. Static Contact was the primary EP used in both the active conditions. A new exploratory procedure, tapping, was discovered during data analysis.

**ROBIN R. HASS BIRKY, DEPARTMENTS OF ENGLISH, WOMEN'S STUDIES AND THE OFFICE OF ACADEMIC AFFAIRS**

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### ***Pleasuralities: Discourses of Textual Pleasure***

Throughout a philosophical-rhetorical tradition running from Horace to Zizek, theoreticians redress the nature of pleasure and its relation to textual production and reception. Tracing the various iterations of pleasure as linked to humanity's cognitive and imitative capacities, I argue, we find *pleasuralities*, variant discourses of textual pleasure that locate pleasure in the cognitive space between word and meaning in both the invention and reception of the poetic, with "poetic" herein often broadly construed as "linguistic," thereby designating pleasure as a constitutive element of discourse itself. Such *pleasuralities* emerge, diverge, and re-converge in ancient, medieval, and modern theories of textuality such as Horace's conception of poetry as "created and discovered for the pleasure of the mind;" Plato's distinction between the utility and enjoyment of things; Aristotle's definition of "pleasure" as the soul's movement toward a normal state of being and positioning of enjoyment as linked to humanity's imitative drive, its didactic import, and the origins of the poetic; Augustine's insistence on legitimate pleasure as a wandering toward the divine within his delineation of the use and enjoyment of things; the psychoanalytic location of pleasure in the symbolic; Foucault's notion of pleasure/desire as a constitutive element of discourse; Heidegger's construction of "poeticizing;" and Barthes' distinction between textual "pleasure" and "bliss." Mapping the discourse(s) of pleasure from ancient philosophy and rhetoric through medieval sign theory, linguistic-rhetorical theory, and faculty psychology and into

modern semiotics, discourse theory, and psychoanalysis, I construct a theory of the pleasure of textualities and the textualities of pleasure—*pleasuralities*.

RICHARD HENGST, DEPARTMENT OF BIOLOGICAL SCIENCES,  
PURDUE NORTH CENTRAL

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### **Fossil Clues to Tyrannosaurid Physiology**

The “backbones” of large theropods such as *Tyrannosaurus rex*, and *Gorgosaurus libratus* pose an interesting problem: massive bodies and tails extending over great distances are supported only in the middle. Unlike engineered beams, these enormous backbones contain many flexible elements capable of multiple alignments. So, how was this unusually large body and tail supported? Support could be through active (muscle) or passive structures (connective tissue and skeleton) or a mixture of both. Muscle tires under gravitational load could have led to sagging while passive supports such as ligaments are lightweight but potentially restrict movement. Studies of dinosaur vertebrae show scars from all of ligaments observed in modern animals. To study this problem, tyrannosaurid bodies were divided into segments and the average weight calculated for each segment. Vertebrae were measured for structures resisting gravity in life. Conservative estimates of ligament properties indicate that the interspinous ligament alone was sufficient to support a tyrannosaurine “backbone” and had at least the safety factor of a human Achilles tendon. Bodies appear to be slightly more flexible than tails. Properties of a hadrosaurid’s vertebrae (*Maiasaura peeblesorum*) were analyzed for comparison and found to yield much lower safety factors which explain the frequent findings of tendon networks paralleling the neural spines of these animals. Ratios were calculated of areas devoted to vertebral support and proved to be similar in animals of substantially different sizes.

RICHARD HULL, DEPARTMENT OF ENGLISH

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### **Huckleberry Finn against Morality**

*Huckleberry Finn* is a critique of morality. Aristotle said it’s impossible to deliberately choose to do wrong. But Huck shows it’s not only possible but desirable. When right and wrong are wrong, it’s best to choose wrong. Huck rejects morality, and we applaud him for it.

VESNA **KILIBARDA**, MATHEMATICS AND ACTUARIAL SCIENCES

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CLYDE **WILES**, SCHOOL OF EDUCATION

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## **Gender Differences in Mathematics Achievement: Perspectives from a State Contest**

The purpose of this paper is to present an investigation of gender differences found in data from the Indiana State Mathematics Contest. Results from five tests, Pre-Algebra, Algebra I, Geometry, Algebra II and Comprehensive were considered over the period of several years. The subjects of this study were highly motivated, high achieving students who were dealing with complex content in settings that control for the variables “opportunity to learn” and “attitudes related to math avoidance/phobia”.

The most obvious and striking fact that the data reveal is that the mean for the boys always exceeds that of the girls and that the difference is significant at or beyond the .01 level for 17 of the 22 comparisons. Four of the five non-significant mean differences occur in lower level tests (three in AI, one in Geometry) and one in the Algebra II-test (written with control for gender differences in mind). The standard deviations for the boys exceed those of the girls for all but five of the tests (three of which are for the tests with non-significant mean difference). No relationship between item difficulty and gender was observed. Analyses of errors made by the boys and girls suggested that they were not approaching the problems the same way.

These results taken together with statistical factor analysis of the test data suggest item characteristics related to content, context, and item format that may be important in helping to make sense of gender related achievement differences.

ZORAN **KILIBARDA**, DEPARTMENT OF GEOSCIENCES

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STEVEN E. **BROWN**, INDIANA GEOLOGICAL SURVEY

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## **Lake Michigan glacial lobe fluctuations revealed in Valparaiso moraine**

An early spring excavation for the Valparaiso municipal sewage cut through the uppermost 30 feet of Valparaiso moraine along Indiana State Road 130 at N 41o28.684' W 87o05.185' and an elevation of 719 ft (498 m). The exposure revealed that this landform is composed of proglacial, subglacial, and ice marginal sediments. At the base of the road cut was fine grained thinly laminated sand with few gravels (unit 1) which extends up to 12 ft height. Numerous irregular lenses of poorly sorted pebbly coarse sand and gravel (unit 2) occur on top and throughout the unit 1. Most of the gravel clasts were made of well rounded organic-rich Devonian Antrim Shale. The most prominent unit in the cut was 4 foot layer of massive glacial till (unit 3). Clay and silt make up most of the till with few pebbles of dark metamorphic and igneous clasts and light carbonate grains. The base

of the till was marked by reddish iron-oxide layer of sandy gravel. Above unit 3 a gravelly diamicton (unit 4) extends to the top of the cut. Weathering and soil development made it brownish in color but the predominant clasts were organic rich black Antrim Shale. We interpret this sequence as an episode of the advance and retreat of the Lake Michigan lobe. Unit 1 represents fluvial deposit in front of the ice margin. Unit 2 indicates approaching glacial front, and unit 3 represents a subglacial environment. Unit 4 on top indicates retreat of the ice in a supraglacial environment.

**STEPHANIE KITE, JOE BLOCKLAND, & ZORAN KILIBARDA,**

**DEPARTMENT OF GEOSCIENCES**

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### **Textural analysis of sand from Fair Oaks Dune Field**

Eighty four samples were collected from Fair Oaks Dune Field and processed in lab to determine their grain size and mineralogy. Approximately 100 g of each sample was wet sieved through 25 micron mesh to separate fine fraction. Coarser fraction was oven dried and sieved for twenty minutes. One phi mesh interval was used to separate samples in eight size fractions. Fifty thin sections were made of bulk samples and separate size fractions and studied under petrographic and binocular microscopes to determine mineral composition and shape of the grains. Staining for K-feldspar and Plagioclase helped identify relative abundance of feldspars. Eolian sand samples were in medium sand (0.250 mm) mode and their mean was 0.255 mm. Interdune sand samples were also in medium sand mode (0.250 mm) but their mean was 0.278 mm. Coarsest sand was found in northeastern part of the dune field (0.625 mm) while finest samples were in southern (0.128 mm) and western (0.204 mm) part of the dune field. These data indicate most likely northeastern source of sand, even though modern fixed dunes indicate westerly wind direction during last episode of dune development. Feldspars are abundant in coarser size fractions while fine fractions abound in hornblende and opaque, iron rich minerals. Subangular grains and large amount of feldspars and hornblende indicate immature sand that did not experience long episodes of transport. Weathering of feldspars, hornblende and opaque minerals makes upper parts of dune sand yellowish-orange in color while at depths over 7m sand color is grayish.

**DAWN KNIPE AND KRISTIN HUYSKEN, DEPARTMENT OF GEOSCIENCES**

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### **Compositional Variation within the Ubehebe Volcanic Field and Implications for Eruptive Conditions**

Volcanic fields are the product of thermal and mechanical instabilities in the Earth's crust and mantle. The composition of the rocks they produce can vary widely and reflect changing conditions within the magma or differences in the sources being tapped. Identifying and understanding these compositional variations help to understand the geological processes that form volcanic fields and how

these processes change over time. The Ubehebe volcanic field is located in Death Valley, California. It consists of at least twelve craters within a 3 km<sup>2</sup> area. The volcanic field has been active for the last 3 million years and the most recent eruption was dated at 250 years ago. On a recent field trip, students and faculty from IUN recorded distinct differences in the overall appearance and character of rocks contained in different volcanic layers. The purpose of this study is to determine whether distinct compositional differences exist spatially and stratigraphically within this volcanic field. Samples were collected from three craters within the Ubehebe volcanic field and analyzed for differences in mineral, volatile, and xenolith content. Within each crater, volcanic units vary widely with respect to these characteristics. Some samples are almost devoid of crystals and highly vesicular, while others are rich in plagioclase, contain olivine, and have ample xenoliths. Although there is significant variation within the volcanic layers from individual craters, the variation is not systematic from crater to crater. Therefore, these differences most likely reflect local changes in pressure and temperature, and volatile content of the magma.

VICTORIA LACNY, DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

### **Reinvention of Tradition**

Culture is a tool that passes on patterns of human life through learned and shared behavior. Yet, what factors determine what aspects of culture will be passed on, maintained, and changed? During the 1800's East Indian laborers migrated to the Toledo District of Belize to work as indentured servants. Today their ancestors, a population of roughly five hundred, remain in this district and inhabit a small village named Forest Home. This village demonstrated ways in which previously migrating East Indian groups in Belize maintained and/or changed their cultural structures of family organization, residence, occupation, marriage, and foods in order to keep an ethnic presence amongst members of the more dominate society residing in the same district (Lenkeit, 2001; Beteille, 1965; Dumont, 1970; Ranguy & Staiano-Ross. 2003).

TAYLOR S. LAKE, DEPARTMENT OF COMMUNICATION

### **The Real Fullness of Her Nature: Mary Pickford and the Utopian Space of the Acting Body**

This paper analyzes silent film actress Mary Pickford's acting style within the context of contemporary acting discourse and constructions of embodiment. This paper argues the importance of the constructed "spaces" of embodiment (interior/exterior and the physical and nonphysical pathways in between) in acting discourse, articulated by the theater and film trade press, to an understanding of the relationship between changes in acting styles during this period and cultural constructions of "personality."

Contemporary models of embodiment had a profound influence on acting theories and practices in theater and film. The actor's most important tool was her "subjectivity" which was constructed around assumptions of the relationship between the interior self and the exterior surface of the body. During this period, a shift in emphasis occurred in the deployment of the binary of the expression/repression of inward emotions and thoughts onto the surface of the face and body to explain the acting process. Silent film actress and major film star Mary Pickford's acting style and critical reception of it indicates a shift in emphasis away from expressing/repressing thoughts and emotions appropriate to a "type" of character, toward the transparent revelation of an inner "personality." This shift in combination with changes in the narrative film apparatus, during this period, rendered the actor's body into a utopian space (constructed as authentic and real) for the transparent and "instinctual" revelation of personality. These two shifts in acting discourse in combination with changes in the narrative film apparatus during this period rendered the actor's body into a utopian space (constructed as authentic and real) for the transparent and "instinctual" revelation of personality.

XIAOQING DIANA LIN, DEPARTMENT OF HISTORY AND PHILOSOPHY

## **An Alternative Approach to Marxism in the 1930s: Feng Youlan and the Search for "Society"**

A notable debate in the Chinese intellectual circle over where Chinese society was to go, called the "social history debate," took place in the 1930s. The focus was on whether Chinese history was parallel to Western history or not. Many Chinese historians adopted the Marxist periodization of history into slave society, feudal society, and capitalist society, only differing in the actual dates of when slave or feudal society started in China.

Popular identification with Marxist historical materialism in the 1930s did not mean total agreements to it among those who accepted it. Here I want to explore the writings of Feng Youlan, a Chinese philosopher who accepted a Marxist historical materialist approach to society, represented in his sociological approach to values and ideologies, especially reflected in his *On New Things (xinshilun)*. But Feng maintained a neo-Platonic approach in his overall framework. Distinctions between the city and the country, a society based on the family unit or a larger social unit, for example, were used as more or less universal concepts that came prior to and determined social behavior. Feng focused on universal stages of history based on social relations and treated them as separable concepts from the actual life experience. Feng's could be seen as an alternative interpretation or utilization of Marx. This paper will be set against the background of the "social history debate" and the New Enlightenment Movement of the 1930s to highlight the rich complexity in Chinese intellectuals' acceptance of Marxism in the 1930s and these scholars' relationship to the other (liberal) schools of intellectual thought.

MICHAEL W. LONGAN, DEPARTMENT OF GEOGRAPHY, VALPARAISO UNIVERSITY

TED SCHULTZ, DEPARTMENT OF METEOROLOGY, VALPARAISO UNIVERSITY

## **A Regional Geography of Northwest Indiana on the Web**

Increasingly people, who have access to the Internet, come to know their own, and other places, by surfing the World Wide Web. This paper explores the “web region” of Northwest Indiana in order to understand who is representing the region online, how the region is represented, as well as differences in the ways that areas within the region are represented. Content analysis of 150 place-related web sites about Northwest Indiana reveals that local governments and chambers of commerce play a primary role in representing the region online and that place promotion for economic development and disseminating government information are primary aims of their sites. The region is represented as having small town values and big city advantages with a connection to the natural environment, but images of suburbia are rare. Few sites have features that encourage audiences to participate in political dialog or focus on place-based political activism. While no clear “digital divide” in terms of web content is visible, significant regional differences in the types of web sites present for places do exist. For instance places experiencing population loss are more likely to have sites promoting economic development as well as sites that emphasize history than do places that are gaining population. Among the most interesting but rare sites are ones created by individuals that present a historical and geographical portrait of the place where they live and that express a sense of topophilia or love of place.

ANJA MATWIJKIW, DEPARTMENT OF HISTORY AND PHILOSOPHY

## **The Ethics of Globalization**

Human rights are commonly claimed to constitute the conceptual and normative core of the idea of globalization. This is to say that the legitimacy of globalization depends upon the status of human rights. However, the transition from idea to reality poses certain challenges. For example, if it is true that human rights must be fulfilled in order to make sense at the ethical level, does it, then, follow that “globalization” imposes a Tyranny of Expectations? Are the expectations analogies to commands? Are commands incompatible with democracy? And, is democracy necessarily linked (conceptually and/or normatively) with globalization? While the paper offers answers to the challenges, the answers themselves are limited to the philosophical aspects of ethics. Proceeding on the basis of an analytical account of the central concepts at stake, such as “human rights” and “democracy,” the main task is to clarify the implications, rather than to engage in a substantive definition of the premises and conclusions that form part of the foundation of the human rights globalization project.

JOHN MORRIS, DEPARTMENT OF PHYSICS

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## **Bubbles of Higher Dimensional Spacetime**

Despite appearances, our universe may consist of more than four dimensions of spacetime. The hidden extra space dimensions may reveal themselves in some unusual ways. Here, we consider a possibility wherein the extra dimensions manifest themselves in the form of “dimension bubbles”, where the sizes of the extra dimensions can be radically different on the inside and the outside of a bubble. From our 4D perspective these bubbles could appear as microscopic particles with unusual properties or even as macroscopic astrophysical objects. Some of these bubbles (type I) tend to entrap massive particle modes while others (type II) expel them. When the size of the extra dimensions varies greatly between a bubble’s interior and exterior, the bubble wall becomes highly opaque to photons so that they become trapped, enhancing the bubble’s stability against collapse. Furthermore, in contrast to a previously conjectured “gravitational bag” soliton, the spacetime curvature for a fluid-filled dimension bubble is well behaved, with no appearance of a naked singularity at its center. Since a type I dimension bubble can absorb incident particles with enormous force, it can have a dramatic effect in a dense matter environment. In particular, a neutron star can capture a type I bubble, which proceeds to eat it from the inside-out. A black hole may be formed before the entire star is eaten, causing a core collapse stellar explosion and gamma ray bursts.

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CATHERINE NELSON, & BARBARA KURAL, VALPARAISO UNIVERSITY

CRISTINA CASAS, IU SCHOOL OF MEDICINE-NORTHWEST

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ROLI MANDHANA, MUNSTER HIGH SCHOOL

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## **Analysis of Plasma Membrane Calcium-ATPase Isoform Expression in Human RPE Cell Lines**

Calcium is an important intracellular second messenger that is critical to proper nerve function and bone growth. Plasma Membrane Calcium-ATPases (PMCA) are integral membrane proteins that play an important role in calcium homeostasis by expelling intracellular calcium ions against a strong concentration gradient. We predicted that PMCA isoform expression would vary: i) between primary and established human retinal pigment epithelial (RPE) cell lines and ii) with the time that cell lines spent in culture. To test these hypotheses total cellular RNA was isolated from two different cell lines: a primary RPE cell line and an established, spontaneously transformed cell line (ARPE19) at two different times in culture. Total RNA was subjected to reverse transcription-polymerase chain reaction (RT-PCR) and agarose gel electrophoresis to determine the expression of the four PMCA isoforms (PMCA1 - PMCA4, respectively). The results demonstrate that primary cell lines express PMCA1 and PMCA4 at both time periods examined, but that PMCA2 expression increases with time spent in culture while PMCA3 expression decreases as time spent in culture increases. ARPE19 cells consistently express PMCA1, PMCA2 and PMCA4; however, results for PMCA3 were incon-

clusive. Therefore, the results support the hypotheses and suggest that primary and established cell lines do not express the same PMCA isoforms. Furthermore, isoform expression appears to change as time spent in culture increases.

In addition to repeating these experiments, the results must be supported by protein expression studies using western blotting. Future experiments include determining how estrogen stimulation affects PMCA isoform expression in these two cell lines.

**KARL NELSON, DOMINIC ALBANO, DONNITA COUTEE, SASHO DOJCINOVSKI, REX HOOD, NANCY KIRK JANCARI, LEONARD KOSINSKI, & ALEXANDER VASILESKI, DEPARTMENT OF PSYCHOLOGY**

### **Response Time for a Computer-Administered Mood Instrument**

Although computerized testing has played a role in psychology for decades, the additional information available through this testing medium (e.g., response time; RT) has gone largely unaddressed and unanalyzed (Ryman, 1988). Areas of interest included: a) exploring relationships between mood RT when multiple items assess the mood, and b) the relationship between level of depression and RT on multiple mood scales. For this project, 222 IUN psychology students (female = 175, male = 47) completed the Automated Neurological Assessment Metrics (ANAM) to assess a variety of mood states and RTs for mood, and the Center for Epidemiological Studies Depression Scale (CES-D).

CES-D results suggested sample rates of depression in excess of 40%. This may have occurred because of personal interest. Students with mood disorders (e.g., major depression) probably volunteered at a much higher rate for a project presented as a mood study than those without such diagnoses.

ANAM results suggested a strong linear component to response times across subscale items. This implied that once participants made a decision regarding their current mood level (first item on a subscale), that subsequent choices occurred much more quickly and easily.

Although past research (Bonin-Guillaume et al., 2004), suggested slowed simple reaction times associated with depression, support for a relationship between depression and mood response time appeared mixed in our sample. A significant correlation appeared only between the CES-D and mean RT for depression ( $r = .22, p < .01$ ), but not for other moods. This suggested a much more limited impact of depression than previously considered.

CYNTHIA D. O'DELL, DEPARTMENTS OF PSYCHOLOGY AND WOMEN STUDIES

MARK SUDLOW HOYERT, DEPARTMENT OF PSYCHOLOGY

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## **Goal Orientation and Academic Success in Traditional and Non-Traditional Aged Female College Students**

One trend in American higher education is the steady increase in the number of non-traditional aged women pursuing lifelong learning on the college campus (Murray, 1977). These returning students bring different skills, experiences, and challenges with them than traditional aged students. They also differ with respect to motivational variables. This project examines the development of goal orientation as a motivational state in adult female learners.

Both traditional and non-traditional aged students enrolled in Introductory Psychology courses received extra credit for completing a battery of questionnaires measuring their achievement goal orientations, beliefs about intelligence, family history, and academic success. We also asked students for permission to examine university records of their academic performance. Additionally we conducted face-to-face interviews with a sample of the traditional and non-traditional aged female students who participated in the survey study to delve deeper into their motivations.

Women maintained significantly higher GPAs than men. Older students had significantly higher GPAs than traditional aged students. Older women maintained the highest grades. These differences are related to goal orientation. In our sample, students who rated themselves higher on learning goals achieved the most academic success. Female students endorsed a learning goal orientation more strongly than their male counterparts. Adult students had significantly higher learning goal scores than traditional aged students. Older women endorsed a learning goal orientation more strongly than any of the sub-groups. Performance goal orientation was not related to GPA. However, students who strongly endorsed performance goal orientation were more likely to exhibit irrational academic behaviors.

SCOOTER PÉGRAM, DEPARTMENTS OF MODERN LANGUAGES  
AND MINORITY STUDIES

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## **On our Own through Changing Seasons: Language and Cultural Shift among Young Haitian Females in Quebec**

Haitians are an integral part of the Québec mosaic. Since Québec is a Francophone society on a continent that is majority Anglophone, this cultural confusion sometimes results with immigrants' assuming multiple identities. The present paper examines how young Haitian females express their self-identity as a result of the surrounding environment in a way that differs from their male counterparts. It was found that young Haitian females possess multiple identities that cannot be deconstructed and reconfigured into a single set category, as they borrow from the cultures that surround them in forming a distinct cultural construct all their own.

**MAUREEN PETRUNICH, JANICE SMITH, JANUSHI DALAL, &**

**ATILLA TUNCAY, DEPARTMENT OF CHEMISTRY**

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## **Sonochemistry in Organic Synthesis: Nucleophilic Substitution Reactions of Alkynyl Iodonium Salts**

Ultrasound has been used recently and effectively in many organic reactions. The use of this technique has diminished reaction times and has increased product yields. Reaction products that are not accessible by conventional methods can be obtained using sonochemistry. Alkynyl iodonium salts have emerged as valuable reagents for organic synthesis in recent years. In this research project, the reaction of these iodonium salts with different nucleophiles using ultrasound is examined. In particular, reactions of the alkynyl iodonium salts using sonochemistry with diethylmalonate, alkynide, and selenide ions will be discussed.

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## **Heretical Monuments: The Contested Memory of a Medieval Heresy**

This paper analyzes various sites of memory in northern Italy that commemorate the history or legacy of a heretical group known as the Order of Apostles. Initially an orthodox and peaceful apostolic movement, the Order of Apostles thrived in medieval Italy from 1260 to 1307, when its apocalyptic leader, Fra Dolcino, and hundreds of followers were killed following a long and bloody crusade. In the centuries since the death of Dolcino, various monuments have been erected by both supporters and detractors, ranging from small plaques above the doors of mountaintop chapels, to town hall murals, to granite obelisks. This paper will explore how these monuments commemorate the history of Dolcino and the Order by situating them in their historical, especially political, contexts, which can often be quite contentious. For example, a plaque above a chapel dedicated to St. Bernard commends episcopal crusaders for destroying the Apostles and the threat they posed to the medieval Church, while just across the ridge sits another monument applauding the Apostles for making a principled stand against the perceived materialism of the Church. These monuments each serve different purposes and interests in the communities in which they reside, highlighting the fact that the history and memory of this medieval group is still contested almost seven centuries after their annihilation.

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## **The Contradictions of the Oompa-loompa(s): Marx, Freud, Postcolonial Theory and Charlie and the Chocolate Factory.**

I will look at the changing form of the Oompa-loompas through the history of Roald Dahl's narrative, *Charlie and the Chocolate Factory*. I will start from a Freudian position that takes *Charlie* for what it is (a fantasy-product) and move toward a Marxist position that takes the newest film as what it is (a commodity-product), articulating between Freud and Marx at each step along the way. I take this approach in attempt to explore how Freud and Marx continue to present challenging, productive material for postcolonial theory, which typically earns its salary in the analysis of situations similar to that of the Oompa-loompas. Though the story has the manifest form of a morality tale with *Charlie* at the center as its hero, I believe the key to understanding the 'political unconscious' of *Charlie* lies in the Oompa-loompas. If the narrative is a product of *Charlie's* unconscious—a fantasy or wish fulfillment, then the Oompa-loompas bear the largest burden of displacement/cathexis in the story. If the narrative is a product of the contradictions inherent to capitalism, then the blissful Oompa-loompas stand in contradiction to the enraged midget actors not hired for Tim Burton's film. Finally, if *Charlie* has a place in the logic of postcoloniality, the Oompa-loompas serve as the native informants who enable the dynamism of the colonialist. Only by grasping these three if/then statements as a totality can we adequately treat the text and begin to scrutinize the projects of children's fiction, along with the possibility of their volatility.

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## **Reading Brecht Reading Horace: On Pleasure and Use**

This essay takes as its starting point Brecht's "Briefe Uber Gelesenes" ("Letters On Things Read"), a poem written in Brecht's "little garden in Santa Monica" during World War II. The poem represents a site and scene of reading familiar to a Renaissance scholar such as myself: during a period of enforced, exilic idleness, the poet resorts to the garden, taking up his volume of Horace ("Epistles II, i" is cited below the title). I read Brecht's poem as both an approach to a classic text and an engaged and urgent reflection on the "classic" per se—that is, on what lasts and what it might be that the lasting preserves—particularly as those issues are confronted in an explicitly historically situated and politically motivated ("Brechtian") fashion. My purpose is to use a reading of the poem and its reading of Horace to articulate and reflect upon "some more general lesson," the presence of which Frederic Jameson suggests distinguishes the "method" and "usefulness" of Brecht's texts from other "great writers." However, both Jameson and Brecht's poem accentuate the pleasure of this kind of activity: "With pleasure I read," the second of the two brief epistles of Brecht's title begins, and I will address the question of the relationship between the pleasure of the "classic" and the historical circumstances and political tendentiousness that are often thought to be at odds with its lasting value.

**Agnes Nestor: An Activist for Women Workers**

Agnes Nestor (1880-1948) was a glove worker, trade union organizer and leader. Nestor was a member and officer of the Chicago and National Women's Trade Union Leagues as well as the founder of Glove Makers' Local Number Two. Nestor was devoted to the cause of organizing labor to include women workers and their needs. The oppressive conditions of the Eisendrath Glove Company in Chicago, where Nestor was employed, pushed her to take a leading role in the effort to better the lives of women workers.

This paper examines Nestor's writings in an effort to understand her militant political activism on behalf of women workers. Nestor took a leading role in organizing a walkout at the Eisendrath Glove Company. Her participation in the walkout, the strike, and the formation of the union fueled her acute sense of injustice and an understanding of the necessity for women workers to assert themselves and challenge those holding power over them. Nestor demonstrated her sensitivity to the special needs of women workers in her advocacy of separate women's locals and pushing for protective labor legislation. In 1909 Nestor led a successful lobbying effort against fierce opposition from Illinois businessmen limiting work for women to ten hours a day. Nestor's tireless work set and agenda for reform and devised a means of bringing about change for women workers.

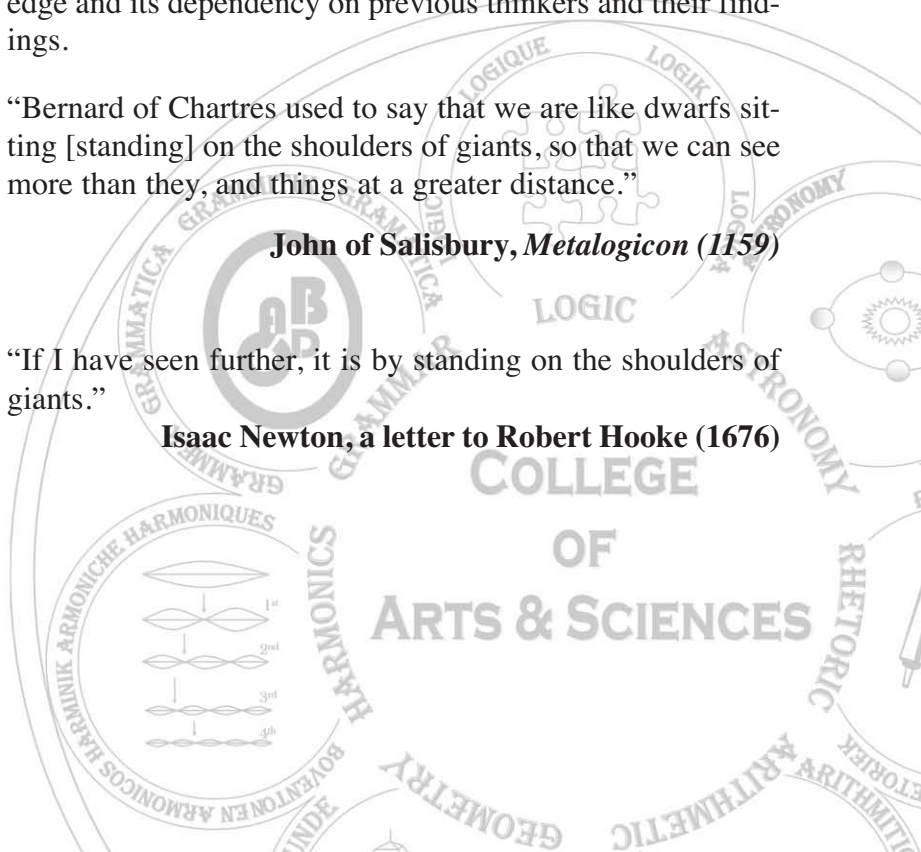
**T**he logo on the cover, a modern rendering of the Seven Liberal Arts, visually connects contemporary studies in the Arts and Sciences to ancient and medieval conceptions of higher learning, which often divided the liberal arts into the trivium (grammar, rhetoric, and logic) and the quadrivium (arithmetic, geometry, harmonics or music, and astronomy or cosmology). In the medieval period, theorists also frequently envisioned Philosophy as an overarching area of study linking all knowledge branches. The theme of this year's COAS Research Conference, "The Shoulders of Giants," deliberately alludes to a series of successive historical statements that assert both the advancement of knowledge and its dependency on previous thinkers and their findings.

"Bernard of Chartres used to say that we are like dwarfs sitting [standing] on the shoulders of giants, so that we can see more than they, and things at a greater distance."

**John of Salisbury, *Metalogicon* (1159)**

"If I have seen further, it is by standing on the shoulders of giants."

**Isaac Newton, a letter to Robert Hooke (1676)**



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