

2007 S3: Matt Altenritter

RISK OF PREDATION TO STREAM INVERTEBRATES BY FISH ACROSS A GRADIENT OF HABITAT COMPLEXITY

We examined the role of habitat complexity and prey density on fish predation of stream invertebrates. We hypothesized that: 1) risk of predation to invertebrates would decrease as habitat complexity increased, and 2) predation effects would be proportional to prey density. In a field experiment, the number of amphipods (*Gammarus pseudolimnaeus*) consumed by mottled sculpins (*Cottus bairdii*) was compared between cages differing in densities of invertebrates (10 or 30 individuals/cage) and sizes of leaf packs (0, 1, 5, and 10 g). Sculpin cages were stocked with one mottled sculpin, and control cages were not stocked with a sculpin. The experiment had a full-factorial design. We found that the proportion of prey remaining in a cage increased with leaf pack size. In the absence of sculpins, the proportion of prey remaining did not change. The proportion of prey remaining was not influenced by the prey stocking density, suggesting the predation was proportional to prey density. Our results suggest that leaf packs provide refuge habitats from predation for stream invertebrates and that larger leaf packs are better refuge habitats than smaller leaf packs.

Faculty Mentor: Carl Ruetz

2007 S3: Sara Black and Catherine McCulloch

TEACHING MUSIC THROUGH PERFORMANCE IN BAND: A CRITICAL ANALYSIS OF MUSICAL CONCEPTS IN MAJOR BAND REPERTOIRE.

Professional music educators have long stressed the study of specific, quality repertoire as the most important goal of public school music. Numerous opinion-based articles from the last 20 years, however, have advocated that students must receive a comprehensive musical education which should include the study of musical concepts. In 1994, the Music Educators National Conference (MENC), as part of the Consortium on National Arts Education Association, completed "The National Standards for Arts Education" which solidified the central role of the study of musical concepts in a well-rounded music education. Through the study of musical concepts, students gain a deep understanding of the foundations not only of the music they are currently studying, but the principles and properties inherent to all music. The problem faced by most music educators is that lists of quality repertoire exist but the specific musical concepts that can be taught in each work are not identified. Many public school educators lack a broad knowledge of music repertoire and therefore select music solely according to published repertoire lists of "good music" with little or no thought to what musical concepts can be taught.

This project sought to bridge the gap between the study of repertoire and the study of musical concepts by identifying which of 12 musical concepts can be taught in over 400 pieces of standard band literature. Quantitative analysis of the results along with implications for music education are discussed.

Faculty Mentor: Kevin Tutt

2007 S3: Dan Boozer

REVERSE TRANSCRIPTION-POLYMERASE CHAIN REACTION (RT-PCR) ANALYSIS OF HISTIDINE DECARBOXYLASE TRANSCRIPTION IN DROSOPHILA MELANOGASTER

Histamine is a biogenic amine that is used as a neurotransmitter in both vertebrates and invertebrates. Histidine decarboxylase (HDC) is the enzyme that synthesizes histamine using histidine as a substrate. Mutations in the HDC gene of *Drosophila melanogaster* cause blindness and other functional defects in the fly. Sequence analysis of 5' and 3' cDNA ends identified through 5' and 3' RACE (Rapid Amplification of cDNA Ends) has suggested that there are alternative transcript initiation and polyadenylation sites for the histidine decarboxylase transcription unit. Using these findings, as well as mRNA sequence information previously obtained, primers were developed to analyze the alternative HDC transcripts. Messenger RNA was isolated from fly heads and used as a template for RT-PCR analysis. The results confirm the existence of multiple transcripts with initiation and splicing sites that were previously not identified. RT-PCR results also provide evidence to support the presence of a second polyadenylation site at the end of the HDC mRNA. Analysis of these alternative transcripts, using RT-PCR and Q-PCR approaches, will provide further insight into transcriptional regulation of HDC by examining the levels of the transcript and tissue specificity.

Faculty Mentor: Martin Burg

UPDATE:

Dan presented at the National *Drosophila* Research Conference April 2-6, 2008 in San Diego, CA.

2007 S3: Sarah Bridwell

RESTORING URBAN RIPARIAN HABITAT: DO MANIPULATIONS AFFECT THE BEHAVIOR AND ABUNDANCE OF AVIAN SEED DISPERSERS

Ecological Restoration is a process in which humans attempt to restore a previously natural area and to reverse damage done by mankind. Areas such as these are very

important in urban ecosystems. Our experimental site is one of these restoration sites in which we are attempting to determine how much impact the modifications have on the behavior of various avian species. The plots in both the control and experimental areas have 2 different habitat types; upland, consisting mostly of weedy plants, and lakeshore, riparian habitat with woody plants. Observations of bird behavior in the 80 plots are conducted in thirty-minute sessions, four plots being the focus in each session, by 2 observers (one for upland and the other for lakeshore plots). Data analysis will be performed thoroughly after fall observations have been taken and we will compare rates of bird visitations and specific behaviors among different plot types (i.e., perch, fence, both, none/control) and also between experimental and control areas. Our analyses will allow us to detect large and small-scale responses to the perches and fences that had been installed. We observed a total of 43 species in the Pimple Lake watershed, 16 of which have visited the study site briefly, and 6 that have centered their activities in the area. Three species reproduced in the area including song sparrows (*Melospiza melodia*), red-winged blackbirds (*Agelaius phoeniceus*) and spotted sandpipers (*Actitis macularia*) but their territories have appeared to be unaffected by the structures. Visitation rates for example were increased in the experimental plots versus the control plots, especially in the lakeshore plots.

Faculty Mentor: Jodee Hunt

UPDATE:

Sarah presented at the Midwest Fish and Wildlife Conference December 9-12, 2007 in Madison, WI.

2007 S3: Heidi Collins

MARIE-JEANNE RICCOBONI AND GEORGE SAND: THE FEMININE VIEW OF LOVE AND MARRIAGE IN THEIR NOVELS OF THE 18TH AND 19TH CENTURY

Female authors in the period surrounding the French Revolution were expanding the Enlightenment's call for equality to include women, a population who had been largely ignored by their male counterparts. Through a close reading of their works, this study will look at two of these authors, Marie-Jeanne Riccoboni (1713-1792) and George Sand (1804-1876), to gain a better understanding of the changing views of love and marriage in pre- and post-revolutionary France. Although their novels are of a high quality and were best-sellers in their time, until recently these works have been largely ignored by a male-dominated critical establishment. Both authors address the problems surrounding marriage a major cause for the subjugation of women providing insight into the views of both the authors and their readers, and addressing the difficulties women faced balancing marriage, duty to their families, love, and independence. Riccoboni, writing before the revolution, warns readers of the problems with love and marriage due primarily to man's dishonesty. Sand, writing after the revolution and the reign of Napoleon, creates romantic heroines that are more in touch with their own emotions and needs. Sand proposes that a platonic friendship grown to a passionate love will produce a happy marriage.

Faculty Mentor: David Eick

UPDATE:

Heidi presented at the Southeastern American Society for Eighteenth Century Studies Conference February 14-17, 2008 in Auburn, AL.

2007 S3: Joseph Crowley and Elizabeth Tekautz

QUEER BEIJING: AN ETHNOGRAPHY

Using semi-structured and unstructured interviews, this study presents an ethnographic picture of queer life in China's capital, Beijing culminating in a case study of a transgendered woman. To date, no ethnographies of queer life in Beijing have been published (only two conference presentations are referenced in the literature). Therefore, a look at queer life in Beijing therefore offers a unique opportunity to see how an emergent yet marginalized population lives in one of the world's largest, most powerful cities.

Ranging in ages from nineteen to fifty from a variety of backgrounds, informants discuss the challenges and opportunities faced by Beijing queers. Topics include concerns about familial and societal pressures to marry and reproduce, stresses associated with living closeted lives, and fears of retribution if their sexual orientation is revealed. Additionally, the paper illustrates how Beijing offers queers opportunities not available elsewhere in China, with the possible exception of Shanghai, including a burgeoning sense of community, numerous queer-related establishments (restaurants, cafés, bars, etc.), and nascent attempts to organize for social justice. We explore at length individual lives straddling public and private divides. The fundamental purpose of this paper is to contribute to the literature and provide a starting point for additional research and analysis.

Faculty Mentor: Greg Mahoney

2007 S3: Hannah Gaff

POOR THEATRE, BIOMECHANICS, AND ALIENATION - OH MY!: BRIDGING THE INTERCULTURAL DIVIDE IN THE MODERN PERFORMANCE OF ANCIENT GREEK TRAGEDY

A central challenge in modern productions of ancient Greek tragedy is that contemporary audiences do not possess the cultural competence that was integral to the original ritual context of Greek drama. This project explores how a contemporary audience can tap into its experience with ritual processes in order to inform its response to Greek tragedy. Scholarship on the reception of tragedy has been largely historical in the sense that scholars describe and interpret particular instances of dialogue between antiquity and modernity - how individual translators, theatrical practitioners, and artists interpret ancient Greek drama. By contrast, this project approaches that dialogue of cultures as an emergent process in the crucible of performance, the theatre itself. Drawing from physical approaches to performance proposed by theatrical practitioners who reinvented the actor-audience interchange (including Jerzy Grotowski, Vsevolod Meyerhold, and Antonin Artaud), the project will generate a style of theatre that overcomes cultural dissonance between contemporary audiences and the original context of ancient Greek tragedy. The ultimate outcome of the project is the performance of an adaptation of Aeschylus Furies (created during the comprehensive workshop phase of the project), on December 7, 8, and 9 at Grand Valleys Louis Armstrong Theatre. The project will then evaluate how successfully the intercultural strategies for producing The Furies, established a ritualized theatre environment in which the audience is engaged. A paper discussing the outcomes of the project will be presented at the American Society for Theatre Research meeting in November of 2007.

Faculty Mentors: Ian Borden and James Wells

UPDATE:

Hannah's project has been published in THE MERCURIAN, vol. 1, no. 3

Hannah presented at the American Society for Theatre Research Conference November 15-18, 2007 in Phoenix, AZ.

2007 S3: Emily Jones

PULSED OSCILLATING MASS SPECTROMETER

The mass spectrometer is a widely used analytical instrument that identifies chemical substances by their weight. There are many types of mass spectrometers in use today, including quadrupole and time of flight. A new type of mass spectrometer, the pulsed oscillating mass spectrometer (POMS), was developed in 2005. We have built a POMS and are characterizing and improving its performance. POMS instruments appear to be advantageous for their simplicity of operation and their unique compactness compared to other types of mass spectrometers. We will show how the POMS instrument works and what we have done to improve its limitations.

Faculty Mentor: George McBane

2007 S3: Katelin Krummrey

CONFORMATIONALLY RESTRICTED AMINES AS REGULATORS OF TAAR ACTIVITY²

T1AM, a metabolite of the thyroid hormone, has previously been shown to be a potent agonist (activator) of the trace amine associated receptor (TAAR). Activation of TAAR in mice yields rapid physiological effects that include a decrease in body temperature, metabolism, and cardiac drive. Regulating the activity of the TAAR could have a profound impact on the lives of those afflicted with thyroid disease. We examined several compounds that share structural similarities to that of T1AM, and could therefore elicit similar TAAR activity. This project dealt specifically with the common drug Apomorphine. We found that R(-)-Apomorphine exhibits dose dependent activation of TAAR (EC₅₀ = 440 nM) however its enantiomer (mirror image) S-(+)-Apomorphine was shown to be an antagonist (inhibitor) for TAAR. Several more amines that represent conformationally restricted or stereospecific analogs of T1AM were also examined.

Faculty Mentor: Matt Hart

2007 S3: Rachel Kubiak

MAPPING THE ACTIVE SITE OF AMPC BETA-LACTAMASE

Antibiotic resistance has emerged as the leading public health crisis of the 21st century. The most prevalent resistance mechanism to commonly prescribed β -lactam antibiotics like penicillin is the β -lactamase. These enzymes break apart the lactam ring that is crucial for the antibiotic to be effective. One way to overcome this resistance is to block the activity of this enzyme. Boronic acids are a class of molecules known to inhibit the activity of the class C β -lactamase AmpC. Inhibition is achieved through specific interactions between the boronic acid and amino acids in the active site of AmpC, thus preventing the destruction of the β -lactam. In this study, we chose four boronic acids that differed in size and chemical functionality to investigate specific molecular interactions in the active site of AmpC. Each boronic acid was tested experimentally for inhibition of AmpC in kinetic assays to determine IC₅₀ and KI values, which indicate how effective a molecule is at blocking AmpC activity. All inhibitors were co-crystallized in complexes with AmpC, and electron density for these inhibitors was visualized using X-ray crystallography. Data obtained from these complexes provides information on binding site interactions in the active site and may be useful for future drug discovery against AmpC.

Faculty Mentor: Rachel Powers

UPDATE:

Rachel presented at the 234th American Chemical Society Fall National Meeting and Exposition August 19-23, 2007 in Boston, MA.

2007 S3: David LeGault

AN ANALYSIS OF THE LITERATURE OF WORK IN MICHIGAN WRITING

Very little research has been focused on finding a direct connection between work-related literature and Michigan writers. The project looked to accomplish this through several steps. First, a definition of work related literature was established through books written on the subject of American work literature. Secondly, a comprehensive literary analysis of notable contemporary Michigan authors was undertaken in the hopes of finding the correlation between certain themes and the geographic region from which the writers came. After closely reading Michigan fiction, nonfiction, and poetry, the next step involved direct questioning of writers in hopes of gaining further insight into their writing process. This was accomplished through interviews and a look at writers correspondences with Michigan author Jim Harrison. After this analysis was completed, the project identified several themes vital to Michigan writing. These included: using vocation as a means of defining characters; the use of industrial imagery or pollution as a means of showing the bleakness of society; and the camaraderie between workers as a means of survival. Although every book analyzed was not necessarily about work or even Michigan, these themes undoubtedly appeared in each novel or collection of shorter work. After this was established, the project looked to apply these key ideas to my own writing, resulting so far in a published interview, a forthcoming book review publication, as well as two creative nonfiction essays about industry and Michigan: an exploration of my personal connection to the Mackinac Bridge, and a look at the pet death industry.

Faculty Mentor: Ander Monson

2007 S3: Adam Lepley

AFFECTS OF WEIGHT LIFTING AND BREATHING TECHNIQUE ON BLOOD PRESSURE AND HEART RATE

During anaerobic exercise, blood pressure and heart rate have been shown to increase significantly above published normative values. Previous authors have suggested that exercise during Valsalva breathing (bearing down on a closed glottis) blood pressure may reach dangerous levels. The utilization of this technique, along with individuals not knowing of underlying cardiovascular risk factors may result in catastrophic events potentially leading to death. This investigation has attempted to identify blood pressure and heart rate differences that exist during two different breathing techniques while performing commonly used methods of weight lifting. METHODS: Seventeen recreationally active subjects volunteered to participate in this study (8 male, 9 female). Each subject, after satisfactorily completing a health history questionnaire, was tested to determine his or her estimated 1 rep max in the chest press and double leg press exercises. After an instruction on the two breathing techniques, each subject performed 10 repetitions at a metronome set at 40 beats per minute. There were 2 days of testing,

one day for each lift which involved 2 sets, 1 with each breathing technique. Resting, during exercise, and 1 and 5 minute post exercise measurements were recorded for both heart rate and blood pressure. Subjects did not start their second set until full recovery of blood pressure and heart rate and at least 5 minutes rest. RESULTS: Average values during lift were as follows, reported with the hold breath values first and controlled breathing values second. Systolic pressure:157.9, 142.4; Diastolic pressure:93.1, 88.2; Heart rate:88.4, 83.3., These values, along with peak, and 1 and 5 minute post exercise values were compared across lift and breathing technique. The hold breath technique posted higher, but statistically insignificant values for systolic blood pressure (sig. value of 0.399), diastolic blood pressure (sig. value of 0.594), and heart rate (sig. value of 0.715). CONCLUSION: It was hypothesized that subjects taking part in a resistance training exercise would significantly increase their blood pressure and heart rate if using a holding breath breathing technique. Previous studies have shown that a Valsalva maneuver, (bearing down on a closed glottis) has significantly increased blood pressure and heart rate. The hold breath technique utilized in this study produced intermediate elevations in heart rate and blood pressure, implying that it may be a safe technique to be used by those at risk for a cardiovascular event.

Faculty Mentor: Brian Hatzel

UPDATE:

Adam presented at the American College of Sports Medicine Conference May 28-31, 2008 in Indianapolis, IN.

2007 S3: Erick Lindsey

SYNTHESIS OF MODIFIED 2'-DEOXYNUCLEOSIDES BY SONOGASHIRA COUPLING

Pd catalysis has allowed for the modification of nucleosides, which are of great importance to the chemical and biological industries. The Sonogashira coupling reaction is of specific interest due to the products possessing various medicinal properties, such as chemotherapeutic agents. An efficient catalytic system has been developed for the coupling of bromobenzene and phenylacetylene. The effect of different ligands, amines, Pd-species, and solvents were investigated. The effect of CuI on the reaction was also investigated. This optimum system was then applied to the coupling reaction of 6-bromo-2deoxyadenosine and various terminal alkynes.

Faculty Mentor: Felix Ngassa

UPDATE:

Erick presented at the 235th National Meeting of the American Chemical Society April 6-8, 2008 in New Orleans, LA.

2007 S3: Dave Redding

RAISING EFFICACY THROUGH CIVIC EDUCATION

What fosters civic engagement? It depends on how you define civic engagement and civics in particular. Through my research on this project I have expanded my definition of civics to include all social interactions within a community. Under this definition it can be argued that everyone engages civically on a daily basis, whether it be driving on the road or surfing the internet. Based on participant observation of two state-sponsored civic education seminars, an extensive review of current civic education research, analysis of civic education texts, and interviews with local civic educators, I have concluded that much of what is taught in civics today focuses primarily on the particular branch of civics involving government (i.e. law and politics). I believe that if the content of civic education is expanded to include daily civic interactions, students will become more aware of how they engage in these actions and will be able to improve the quality of their civic participation. This will hopefully generate more positive feelings toward quality civic interaction, which can foster civic engagement.

Faculty Mentor: Kevin den Dulk

2007 S3: Kelly Rizzo

THEORY AND PRACTICE: HINDEMITH'S PIANO SONATA #2

During the early 1900s, Germany housed a composer by the name of Paul Hindemith. This man became known throughout the music world as a leading composer and music theorist as well as a talented performer and conductor. In 1927 Paul Hindemith began teaching at the Berlin Musikhochschule as professor of composition. It was here he felt that he could not teach his pupils how to write good music, but only teach them how to deal with certain musical concepts. He felt he could not teach one how to be inspired, to find purpose for writing and how to write melodies and compositions from the heart. At this time he started to research and ended up writing a trio of books called *The Craft of Musical Composition*. The first book of this series revolves around Hindemith's own theoretical practices. These theories are based on acoustical findings that relate to the overtone series and, what Hindemith calls combination tones. Through this he establishes a hierarchy of related tones and intervals that lead to his own methods on classifying chords, figuring chordal analysis, proper harmonic movement and structure, and guidelines for melodic writing. While writing his book, Hindemith continued to compose, and during the peak of his book writing, he wrote three piano sonatas. More specifically, Piano Sonata No. 2 written in G is the shortest and least intense of his three piano sonatas. Even though critics of Hindemith protest that his theories are not evident in his music, research and observation have confirmed that the practices and theories of Hindemith's writing are evident and come alive in his second piano sonata.

Faculty Mentor: John Schuster-Craig

2007 S3: Meagan Stewart

MODULATION OF POTENTIAL NEUROPROTECTIVE COMPOUNDS FOR GLAUCOMA IN A RETINAL GANGLION CELL CULTURE SYSTEM

Retinal ganglion cells (RGCs) are responsible for transmitting visual information from photoreceptors in the retina to visual centers in the brain. Previous research on these cells has exposed their vulnerability to glutamate-induced excitotoxicity, resulting in apoptosis. However, activation of nicotinic acetylcholine receptors (nAChRs) located on RGCs has been shown to protect them from an apoptotic fate. In this study, we attempted to further exploit the protective effects of activated nAChRs by applying a drug modulator in combination with a nAChR agonist to isolated retinal ganglion cells. The cells were then challenged with glutamate and exposed to treatments of various concentrations of agonist and modulator for 3 days. Cell viability was determined with a fluorescent dye. As is the case with much research, our seemingly straightforward protocol has created some inconsistent results. Therefore we have been conducting some troubleshooting to identify the cause before would can consider this project successful. However, its success will potentially lead to more effective treatment(s) of glaucoma.

Faculty Mentor: David Linn

2007 S3: Kate Veltman

MOLECULAR REGULATION OF THE DIAPHANOUS-RELATED FORMINS

Diaphanous-related formins (DRFs) are a conserved family of proteins that are found in a wide variety of species, ranging from slime mold to yeast to humans. DRFs are known to play an essential role in the movement and division of cells, as well as in the maintenance of cellular shape. Because these processes are so important to cell integrity, it is imperative to understand the mechanism in which these proteins are regulated in cells. It has been shown that DRFs normally exist in a “closed” inactive state, facilitated by the binding of two regions of the protein, the Diaphanous Autoregulatory Domain (DAD) and Diaphanous Inhibitory Domain (DID). The binding of an important cellular signaling protein, Rho GTPase, serves to “open” and activate the DRF protein. However, recent studies have shown that, while necessary to the regulation of DRFs, Rho GTPase binding is not sufficient to fully activate the protein. Our laboratory has hypothesized that phosphorylation, a widespread method of cellular signaling, may be required to fully activate the protein. In the search for potential DRF phosphorylation sites, undergraduate students in the laboratory identified 8 possible amino acid residues that have a high probability of being phosphorylated. Using site-directed mutagenesis, we have generated mutations that would mimic both “on” and “off” phosphorylation states at these specific sites. In addition, we have discovered that the DRF protein is phosphorylated by the specific kinase, p21-activated kinase (PAK).

Through the use of in vitro kinase assays, our results show that PAK phosphorylation occurs at the DRF amino acid serine-150. We have also used cellular microinjection to monitor the expression of the mutant DRF proteins in a human cervical cancer cell line to fully visualize the effect of the activated and inactive proteins. This is the first time that it has been definitively shown that any DRF is phosphorylated; however, further studies are needed to address whether the phosphorylation of serine-150 by PAK plays an integral role in DRF regulation.

Faculty Mentor: Brad Wallar

UPDATE:

Kate presented at the Annual Meeting of the American Society for Biochemistry and Molecular Biology April 6-9, 2008 in San Diego, CA.

2007 S3: Arti Walker

ANTI-TELOMERASE INHIBITORS AS POTENTIAL NOVEL ANTIBIOTICS

Increasing resistance by certain bacterial species has made it imperative that novel antibiotics be tested and used to help alleviate the rise of resistance to penicillin-based antibiotics. The most virulent strain of resistant bacteria that is commonly acquired via a nosocomial infection (one that is acquired while in the hospital), is Multi-Resistant Staphylococcus Aureus (MRSA). The main focus of our experiment has been to test known telomerase inhibitors and their derivatives for potential antimicrobial activity. Telomerase is an enzyme that catalyzes the elongation of the telomeres, the ends of eukaryotic chromosomes. Disk Diffusion tests, along with tests for the minimum inhibitory concentration (MIC) when appropriate, were performed on the following organisms: *Bacillus subtilis*, *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Streptococcus pyogenes*, *Streptococcus pneumoniae*, *Enterococcus faecalis*, *Klebsiella pneumoniae*, *Micrococcus luteus*, *Proteus vulgaris*, *Aspergillus fumigatus*, *Candida albicans*, *Candida parapsilosis*, *Candida krusei*, *Candida glabrata* and *Mycobacterium smegmatis*. Of the six telomerase derivatives tested, one compound, BIBR1532 {(E)-2-(3-(naphthalene-2-yl)but-2-enamido)benzoic acid}, showed inhibition against *S. aureus*, *S. pneumoniae*, *M. luteus*, and *B. subtilis*. Initial tests for MIC have shown it ranging from 0.157mg/ml-0.63 mg/ml (for all organisms). Since BIBR1532 inhibited the growth of normal *S. aureus*, it is likely that it will inhibit MRSA; thus this compound will be tested on MRSA. The results produced in this experiment show that it is worthwhile to continue the search for novel antibiotics. These compounds can be found in nature, or as in our case, synthetic antibiotics can already exist.

Faculty Mentor: Roderick Morgan

UPDATE:

Arti presented at the 108th ASM General Meeting June 1-5, 2008 in Boston, MA.

2007 S3: Devin White

THE POLITICAL RHETORIC OF ST. JOHN CHRYSOSTOM

St. John Chrysostom is today remembered as one of the finest rhetoricians of the ancient world. Chrysostom's oratorical skill and facility with the Greek language was such that his grammar and syntax itself often became a vehicle for the larger philosophical point outlined in his speeches. His early oration "De Sancta Babyla Contra Julianum et Gentiles" ("Babylas" hereafter) is a prime example.

In "Babylas" Chrysostom discusses the often contentious relationship between church and state, particularly the relationship between bishops and emperors. Emperors, he ultimately posits, must submit themselves to the bishops charged with their pastoral oversight.

Chrysostom highlights this claim with one especially well contrived sentence. In it he provides a long and striking description of the emperor and his retinue, but he presents this description in the accusative case (the case which denotes the direct object of the verb). Babylas, the bishop, is described very simply and sparsely, but is nevertheless the subject of the verb. Thus, though we may have expected the roles to be reversed, the emperor, in all his pomp, is the one acted upon, and Babylas, the humble bishop, is the actor. The emperor is therefore both philosophically and grammatically subordinate to Chrysostom's protagonist, Babylas. Such a close reading of a single sentence serves to highlight why Chrysostom earned the epithet "Chrysostomos," or "Golden Mouth."

Faculty Mentor: Charles Pazdernik

2007 S3: Amy Wolner

WHEN PEOPLE SPEAK

"When the People Speak" brings awareness to individuals, exploring and sharing their attitudes about, approaches to, and concerns with life in downtown Grand Rapids, MI. Through the thoughts of the participants the character of the downtown is revealed. The project aims to bring the audience into contact with people of different backgrounds with whom they might not normally converse. Subjects to be interviewed were selected in an attempt to create a representative sample of downtown life. Interviews were digitally recorded and transcribed. The transcriptions were utilized in the composition of the eleven narratives. Subjects were photographed and black and white prints were made. The collection of narratives and photographs are presented in their final form through a web cast.

Faculty Mentor: Kurt Bullock