OPENING THE MIND

The 2006 Wofford College Community of Scholars
The Community of Scholars was made possible by the vision and generosity of the Fullerton Foundation Gaffney, South Carolina

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Wofford College is committed to a quintessential undergraduate education within the context of values-based inquiry. As a learning community, we are united by the unfettered pursuit of knowledge and the creative search for truth.
# Table of Contents

Introduction ................................................................................................................................... 3

Vanessa Lauber ’07 ........................................................................................................................ 5  
“Literary Degenerates”: Perceptions of Female Power and Productivity and the Failure of New Women Writers

Sarah McClure ’08 ....................................................................................................................... 7  
*Feminine Identity, Class, and Accomplishment: The Woman at the Piano in Nineteenth-Century Art*

Katherine Aul ’08, Art History .................................................................................................... 9  
*Tradition and Community: The Art and Architecture of J. Frank Collins*

Dr. Peter L. Schmunk, Department of Fine Arts ......................................................................... 11  
*Music in the Private Realm: Representing the Experience of Music in Nineteenth-Century French Art*

Dr. Karen H. Goodchild, Department of Fine Arts .................................................................... 13  
*The Artistic Rivalry between Agnolo Bronzino and Giorgio Vasari*

Dr. Laura Barbas Rhoden, Department of Foreign Languages ................................................. 15  
*Ecocritical Perspectives on Latin American Fiction*

Marion Smith ’07 ....................................................................................................................... 16  
*Homerizing? Justifying Blood and the Politics of Archaeology*

Dr. Deno P. Trakas, Department of English .............................................................................. 19  
*Greeks of the Upstate*

Achini Bandara ’09 ..................................................................................................................... 21  
*Purification and Crystallization of N-Formyltetrahydofolate synthetase form Moorella thermoactica*

Thom Kay ’08 ............................................................................................................................ 22  
*A Mill Story: Documentary Film*

Wilson Peden ’07 ....................................................................................................................... 24  
*Places Off the Map*

Ivy Farr ’07 ............................................................................................................................... 25  
*Coming to America: A Study of Southern Culture Through Immigration*

Lindsey Gates ’07 ..................................................................................................................... 27  
*New Perspectives on Mexican Immigration Issues through the Written Testimonies of Illegal Migrants in ‘La migra me hizo los mandados’*

Dr. Christine S. Dinkins, Department of Philosophy ............................................................... 29  
*Women Writing Doctoral Dissertations: Shared Stories from Across the Disciplines*

Research abstracts ....................................................................................................................... 33

List of projects by student and collaborating professor ............................................................... 45
Wofford College received a grant from the Fullerton Foundation to create a faculty/student research program. Recognizing that scholarly pursuits should be both individual and communal, we created a cross-disciplinary summer community of scholars who focused within their academic disciplines while remaining alert for connections and insights from other fields.

Students undertook projects in a variety of disciplines, including the sciences, the humanities, and the social sciences. As the summer progressed, Fellows will in turn make reports at weekly luncheons or dinners. Early in the Fall semester students presented results of their research at a public forum.

This book contains highlights and abstracts of the research completed during the 2006 Community of Scholars session.
“Literary Degenerates”: Perceptions of Female Power and Productivity and the Failure of New Women Writers

Vanessa Lauber

2006 Community of Scholars Award for Distinguished Scholarship

Drawing from fiction and non-fiction writing of the New Woman writers of fin-de-siècle Britain, such as Mona Caird and Ella Hepworth Dixon, this paper examines the nature of the extensive criticism aimed at these female activists who wished to see a reevaluation of traditional Victorian gender roles.

Reinforced by late nineteenth century fears of degeneration, those roles dictated that women find their power by exercising their supposed moral superiority within the domestic realm, producing the next generation of ideal British citizens. The New Women, wishing to expand the realm of female power beyond the home, often sought a voice for those demands through their writing.

Mona Caird wrote extensively in periodicals during the 1880s and 1890s, criticizing the institution of marriage, for which she was accused of threatening to rent the very fabric of society. Caird’s promotion of education for women as a means to achieving female independence reinforced a widely supported belief that the feeding of the intellect starved the uterus, threatening the role of women as caretakers of the home.

Because New Women fiction writers wrote on topics of contemporary social interest that posed such a threat, many critics dismissed them for failing to achieve standards of high aesthetics. Ella Hepworth Dixon’s 1893 novel, The Story of a Modern Woman highlighted the difficulties facing unmarried female writers, who were largely constrained by standards of feminine production.
If not producing children to strengthen society and increase the population, literary women were expected to produce works of enduring aesthetic value, and in their failure to do either, New Women writers were relegated to the unproductive periphery of society. The paper argues that the efforts of the New Women writers to expand avenues of female power failed to move beyond the confining demands of female productivity, thus limiting their success during the height of the activity; the time for the reforms that they advocated lay in the future.

Although my project focused primarily on New Woman fiction and the critical written response to it, the accompanying cartoon serves as visual representatives of that response, which decried, mocked and denounced the apparent attack on established order, including gender-based definitions of power.

*Punch — Vol. 108, p. 282 (1895)*
Feminine Identity, Class, and Accomplishment: The Woman at the Piano in Nineteenth-Century Art

Sarah McClure ’08

2006 Community of Scholars Award for Distinguished Scholarship

Music in the Feminine Sphere

Despite the fact that masters of the subject were until recently male, certain aspects of music have often been considered feminine. Its associations with emotion, interior spaces and relative physical inaction render it less appropriate for males than females. The lack of a concrete product from the action of music-making also placed it strongly in the feminine sphere as it was thought that men’s activities should serve a distinct purpose, namely to produce some sort of measurable commodity. Even musical professionals, music teachers and dancer masters, as well as composers and famous performers, were looked upon as sort of social anomalies that did not fit the ideal standards of manhood.

Piano music has typically had an especially feminine association, as it is an instrument which is almost necessarily played indoors, and allows one to retain a proper ladylike position unlike, say a cello. Very little strength is required to produce a sound, and though it may not be terribly pleasing, little skill as well. With the rise of the middle class and the invention of the smaller and more affordable upright piano, the piano became a fixture in every home that could afford one. The daughters of the bourgeois family, with a surplus of time and a need to fill it with an appropriately feminine activity, became the primary players of the domestic piano.

Prelude from “Journal des Femmes,” circa 1838, is typical of images found in ladies magazines. Note the soft color palette and the rounded forms. Billowing dresses, flowing curtains, flowers and bows surround the women at the piano. Their delicate, dainty forms with cinched waists and china-doll complexions identify them as the feminine ideal of the time. Both woman have impossibly long necks, sloping shoulders and tiny feet.
The theme of the woman at the piano in the nineteenth century was strongly enmeshed not only in society itself but in the world of art as well. Many things led to the prominence of the piano in the home. The rising middle-class had, for the first time, disposable income and, in hopes of imitating their social betters, they rabidly purchased the newly created upright pianos. This surplus of pianos led to a need for someone to play them, and those most suited were the daughters of the middle-class. With time on their hands and a need to fill it with an appropriately feminine activity, the piano became, as it was once said, “the ladies’ hashish.” Numerous social mores further insured that, at least for the amateur, the piano was almost exclusively for females. Some skill at the piano became a necessary part of a lady’s education and yet, for the sake of modesty, retained its amateurish quality. As piano playing was so prevalent, and so strongly associated with femininity, an artistic convention of portraying women at the piano developed. For the Impressionists in the latter part of the century, their social relationships influenced their art and vice versa, making the image more true to life than ever before. They portrayed most often, women whom they knew and interacted with in real life, and who were more than mere amateurs on the piano. For the ladies they depicted, the piano was part of their lives and something they possessed true skill at, not simply a marker of their femininity and artists such as Manet, Toulouse-Lautrec and Degas painted them, not as ideal of that femininity but as real women actually playing the piano. By tracing the history of this image, not only in the work of established artists, but in advertising and illustrations as well, we can more fully appreciate the degree to which the impressionists changed the image and made it their own.

Edgar Degas’ portrait of *Marie Dihau at the Piano* from 1869 shows just how much the Impressionists changed the idea of women at the piano. Gone are the bows, flowers and pastel colors. Marie, clothed in black and blue sits with her back to the viewers and looks over her shoulder as if interrupted during her playing. The look on her face seems to express displeasure at this. Marie is an attractive women but painted realistically, not as an ideal of womanhood. Her head is framed by the sheet music on the stand giving it a place of importance and suggesting a more serious approach to music than in more conventional works where the piano itself is little more than a prop. Marie did in fact play the piano very well, and Degas himself heard her often at social gatherings.
Tradition and Community:
The Art and Architecture of J. Frank Collins

Katherine Aul, Art History

My research project investigated the architectural endeavors of James Frank Collins, a prominent Spartanburg architect between 1910-1940. Collins designed many important residential, commercial, and civic buildings in Spartanburg, many of which are still standing today. He was also a talented artist in several media including watercolors, ceramics, and woodworking. Collins was also very involved with the Spartanburg community with memberships in the Rotary Club, several Masonic societies, the Artists’ Guild, the Symphony Orchestra, the Historical Society, and the First Presbyterian Church. My research demonstrates how this participation in the community allowed Collins to form relationships with a number of the city’s wealthiest businessmen and politicians, many who became his patrons. As such, this research not only offers insight into the life and accomplishments of an important member of Spartanburg history, but also into the cultural constructs and society that was Spartanburg in the early half of the twentieth century. The information gathered will be arranged in a research paper, a museum exhibition of Collins’s artwork and architectural works to be displayed at the Spartanburg Arts Center this fall, a museum catalog including an abbreviated version of my research paper, and a website connected with the Spartanburg Arts Center offering access to my paper and images of all of Collins’ works.

The Masonic Temple

Located in downtown Spartanburg, the Masonic Temple was built in 1936 as a meeting place for various Masonic societies. The building’s style is best described as Eclectic Classicism because while it contains classical design elements, such as columns, triglyphs and metopes, the majority of the building isn’t based on any ancient model.

576 Otis Boulevard

This Georgian Style house was built for James “Jimmy” Byrnes in 1927 and is one of several homes Collins designed in the Converse Heights neighborhood. The Georgian Style is typified by the incorporation of classical detailing, such as columns and dental molding, both of which are incorporated into the design of this house. Collins also created a strong sense of balance and symmetry in overall arrangement of house’s exterior components and structure by designing it as though it were on a grid.
The Coca Cola Bottling Company

The Coca Cola Bottling Company, built in 1936, was at one time one of the largest Coca Cola bottlers in the South. The building’s design is a prime example of Collins’ favor for the use of simple symmetry and subtle decorative details, such as dental molding and stonework, which add character to the building’s exterior. This watercolor landscape is one of numerous rural scenes Collins painted throughout his artistic career. Much like his architecture, Collins produced paintings grounded on the foundations of symmetry and order. One can see this in the way he arranged the trees to frame the small farm in the center, creating a focal point.

Watercolor Landscape

This watercolor landscape is one of numerous rural scenes Collins painted throughout his artistic career. Much like his architecture, Collins produced paintings grounded on the foundations of symmetry and order. One can see this in the way he arranged the trees to frame the small farm in the center, creating a focal point.
Music in the Private Realm: Representing the Experience of Music in Nineteenth-Century French Art

Dr. Peter L. Schmunk, Department of Fine Arts

The spread of mass culture in the early nineteenth century, along with contemporary critical discourse on the merits of the different arts, gave to music a cultural prestige unprecedented in its prior history. On the one hand, musical experience was more widely available than ever before, through the establishment of public concert halls and subscription series of concerts, through the manufacture and sale of large numbers of pianos to middle-class consumers, and through the widespread publication of sheet music and periodicals devoted to musical culture. On the other hand, a new conviction emerged in the nineteenth century that expression, rather than imitation, was the proper aim of a work of art and that superior art works were those that elicited from an audience the strongest emotional responses. German writers, especially, singled out music as the paradigmatic expressive art and the “norm against which to measure the relative expressive value of all other forms of art.” Other commentators variously esteemed music as “the most romantic of the arts” (E.T.A. Hoffmann), “higher than thought” (Delacroix), and “the art of the century” (Taine).

In these circumstances, painters participated in developments in musical culture as never before. Many artists attended concerts, frequented evening salons where music was played and discussed, purchased instruments, and acquired some degree of musical literacy. Responding to the influence of music in their own art, they painted visual tributes to the art of music and appropriated musical terms in the titles of their paintings. The emergence of nonrepresentational visual art in the early twentieth century is, at least in part, a response to the model of abstract instrumental music.

Degas, Manet Listening to His Wife Play the Piano, c. 1868-69.

A gift from the artist to Manet, which was subsequently mutilated by the recipient and then angrily reclaimed and repaired by Degas, this painting is nonetheless a revealing portrayal of the psychology of musical reception. Musical experience is represented here as a moment of domestic intimacy. Manet may be daydreaming rather than actively listening, nonetheless his sprawling pose and distant gaze convey the wandering thought, the reverie, that music often provokes.
My research this summer was devoted to an investigation of the portrayal of musical experience – performing, listening, composing – in works by nineteenth-century French artists and writers. With the assistance of Sarah McClure, I sought to compile an inventory of images which portray different kinds of musical experience and, thus, to document the significant quantity and variety of these images in the art of the time. So that they might provide materials for further study, these images were then organized into appropriate categories according to activity, venue, and type of performance. Secondly, I explored in depth the portrayals, both visual and literary, of musical activity in the domestic realm, usually centered around the ubiquitous piano. This study will find final form in a journal article in progress on the representation of musical experience in the art of Degas and the novels of Zola.

Daumier, “An orchestra in a very distinguished house, amusing itself with the fantasy of playing an operetta,” published in *Le Charivari*, April 20, 1858, lithograph, 268X210 mm.

In a caricature that could be taken as an illustration of the musical performances in Zola’s novel *Pot-Bouille*, Daumier parodies the practice of evening concerts in middle-classes homes. The “orchestra” is a disparate assortment of instruments and the performers variously befuddled, passionately engaged, or indifferent to the musical experience. A cat undermines the pretense of the performance by basking in the heat of the makeshift footlights placed on the floor to illuminate the sheet music.

Conclusion

For most of the artists examined in this study, the representation of musical experience arose out of their own interests and social habits. They painted such subjects not in fulfillment of commissions or in conformity with the academic and institutional ideals of the time, but because they chose to portray their friends and relatives and the leisure pursuits in which they themselves found pleasure and meaning. These paintings are thus an expression of the growing intellectual independence of artists and the tendency for their art to be drawn out of their own life experience. While these progressive-minded artists might on occasion reinforce conservative social and political attitudes, as Renoir exemplifies, they more often portrayed musical experience in novel and challenging ways, by associating men rather than women with the piano and the domestic realm or by depicting women as serious, capable performers. Degas’s images, grounded in personal experience, record his particular friendships and his fascination with the spectacle of performance and the psychology of reception. This is no negative judgment implied, only the artist’s curiosity and pleasure in the sound and sight of musical experience. Zola’s satiric commentary, in contrast, seems to reflect a personal discomfort with the prominence of music and its influence on the other arts and a distaste for vapid discourse about an art that was unengaged with the social issues of the day. In their focus on musical experience, both Degas and Zola were affirming their commitment to modernity, and both could assume that their audiences would recognize themselves in the circumstances portrayed.
Giorgio Vasari (1511-74) included a biography of fellow-painter Agnolo Bronzino (1503-72) in his 1568 book *The Lives of the Most Eminent Painters, Sculptors, and Architects*. On the basis of this text, it has been assumed that there was little rivalry between the two artists even though both were working for the Medici court in Florence. This project reassesses the relationship between the two by reading Vasari’s praise for Bronzino’s work in light of the artistic goals Bronzino himself professed.

Bronzino and Vasari were the two most important painters in Florence in the mid-sixteenth century. Both were self-avowed followers of Michelangelo’s difficult, drawing-based style. Followers of Michelangelo made works which emphasized the body in movement, and the artist’s skill in depicting difficult poses.

One often finds figural “quotes” from Michelangelo’s works in the works of his followers. Here, for instance, Venus’ pose in Bronzino’s *Exposure of Luxury* (Fig. 2) is a quote from the figure of Mary in Michelangelo’s *Holy Family* painting known as the *Doni Tondo* (Fig. 1). Viewers who recognized this borrowing would also note Bronzino’s daring in portraying the chaste mother of God as the lascivious Goddess of Love.

Both Bronzino and Vasari also attempted to follow the painter, sculptor, architect and poet Michelangelo by becoming proficient in more than one art. Bronzino, who, like Michelangelo, was praised as being ‘both the Apollo and the Apelles’ of his day, wrote poetry and was an early member of the Florentine Literary Academy, to which Michelangelo also belonged. Vasari, an architect as well as a painter, consciously cultivated literary fame by writing a widely-read...
collection of biographies of Italian artists known as The Lives of the Most Eminent Painters, Sculptors, and Architects. It is this book which provides most of the known biographical knowledge about his chief artistic rival, Bronzino.

At first glance, the biography written by Vasari about Bronzino seems positive, and so it has not been noticed that Vasari records Bronzino for posterity as an artist who only excels in the minor modes of art and literature. Regarding his painting, Vasari says Bronzino is best at painting portraits from life, works such as the Portrait of Eleanora of Toledo and her son Giovanni shown here (c. 1545, Fig. 4).

Fig. 5 Bronzino, Martyrdom of St. Lawrence, c. 1525-26

In the Renaissance, portraits were less-highly regarded than history paintings (images with a didactic aim from religion, myth or allegory), and, in addition, painting from life was not as valued as creating works with a great deal of imaginative and refined idealism.

Works like the Exposure of Luxury or the Martyrdom of St. Lawrence (Fig. 5), however, show that Bronzino executed major commissions in the most exalted genres throughout his career, a fact Vasari spends little time discussing. Reading Bronzino’s poetry about his own artistic desires further clarifies Bronzino's wish to be a painter, like Michelangelo, of high themes.

Excerpt from Bronzino’s poem in praise of Duke Cosimo, written in the 1560’s to gain re-admission to the Florentine Academy.

To you [Duke Cosimo, in the poem figured As the sun] as to their own trusted
Abode
The Arts, and the glorious Muses
Come from all inhabited shores
So that you might honor them.
So Tuscany’s worth, which had fallen
Behind,
Lives again, reborn through you.

**Conclusion**

Ultimately, Vasari writes a biography of Bronzino which leaves him for posterity as a master of only minor modes of art such as life-like portraiture and burlesque verse. A close reading of Bronzino’s poetry and an examination of his painting, however, shows that these were not the works of which he was most proud or for which he wished to be remembered. Clearly, Vasari attempted to secure his own fame in Florence by denigrating the works of his main rival, and his denigration was made easier by the increasingly censorious artistic atmosphere of Counter Reformation Italy.
Ecocritical Perspectives on Latin American Fiction

Dr. Laura Barbas Rhoden, Department of Foreign Languages

My Summer 2006 Community of Scholars research is an important part of my on-going book project using ecocriticism to analyze literary texts from Latin America. The project looks at contemporary Latin American novels that depict key moments of environmental transformation and crisis in the region.

My ecocritical reading of this literature explores the intersections of politics, economics, and culture in creating environmental crisis and change in the Americas. I analyze the ways in which texts imagine the natural world and the place of humans in it, especially as these relationships changed during different historical moments. An important aspect of the study is an analysis of the forces (national and global, economic and political) that have altered the culturally distinct populations and biologically diverse territories of Latin America since independence.

Globalization has imperiled the environment upon which Latin American and global society depends. Working thoughtfully together, we can shape a positive globalization. We cannot afford to take the chance of not trying.”

Trouble in Paradise: Globalization and Environmental Crises in Latin America by J. Timmons Roberts and Nikki Demetria Thanos. New York:

A closer look at “Paradise”

The image to the left shows the landscape around Managua, Nicaragua. The vision is beautiful at first glance. But the volcano-ringed lake is contaminated with industrial waste, agricultural run-off, and raw sewage. Endemic poverty and public health catastrophes plague the residents of Managua, while the economy of the country as a whole depends upon ecologically-destructive practices in agriculture and aquaculture for export. Such problems provide ample fodder for writers interested in revealing the problems of the region and capturing readers’ imaginations in hopes of shaping a better future for all.
Homerizing? Justifying Blood and the Politics of Archaeology
Marion Smith

War and the Limits of Beauty

Was it indeed the beauty of Helen’s face that launched a thousand ships as Christopher Marlowe claimed in Doctor Faustus? Despite the absurd simplicity of this phrase, such seems to be Homer’s explanation of what appears to be the, or a, Trojan War. Regardless of who or what “Homer” was, the Iliad shapes perceptions of Troy and its destruction and has developed into one of the most captivating and persistent roots of collective Western culture.

The Iliad offers more information on the Trojan War than any other ancient source; however, it is primarily fiction and was written centuries after the war. Soon after Homer, critiques surfaced. Aristotle claimed that “Homer most of all has taught the rest of the poets how to lie.” The Greek word Ὄμηροζεν, literally “to Homerize”, can mean “to lie”. The great literary talent of Homer is worthy of praise; but, in an effort to understand the cause of the Trojan War, Homer’s account cannot be trusted.

Ancient Texts and Artifacts

My research has focused most of all on the explanation for the war. What caused the Mycenaeans, led by Agamemnon to attack Troy? Ancient accounts and modern archaeology point to a primarily economic cause. Despite the famed beauty of Helen, the lure of empire, expansion of trade and elimination of a competitor were far more inspiring motives for Agamemnon and the pre-Greeks.

In attempting to gain an accurate picture of late Bronze Age Troy and a possible war, it is helpful to identify contemporary perceptions of Troy and the war. It becomes obvious that Homer’s justification for Agamemnon’s military expedition is incongruous with classical perceptions of what caused the Trojan War.

Egyptian accounts (c. 1340 BC): The Egyptians did not believe that Helen was at Troy but that Agamemnon did not believe Priam’s claims, or did not care, and attacked anyway.
Hittite accounts (c. 1400 BC): According to Hittite accounts the Mycenaens were systematically attacking throughout the Anatolian provinces by 1250 BC. The accounts point to a war in c. 1280 BC over a city called Wilusa, or Troy. This city was described as a significant regional power in western Anatolia and was a pivotal player in the trading networks of the late Bronze Age. The accounts hint that the Mycenaens wished to gain control of the Hellespont.

Herodotus (c. 480-429 BC): Believed it to be absolutely ludicrous that the war was attributed to Helen. The “rape of women” was very common and unlikely to be the cause of a massive military expedition.

Aeschylus (525–456 BC): His poem about the return of Agamemnon reveals that the collective understanding of the Trojan War was seen to be less just than Homer had claimed, i.e. not to redeem Helen and maintain honor. Though Agamemnon unified the pre-Greeks, the Mycenaens, he did so through hubris and greed and thus required fatal justice in Greek tragedy.

Thucydides (455-400 BC): Highly critical of Agamemnon and claims the Trojan War was a “primitive” attack propelled by intimidation and greed. Thucydides uses the distasteful picture of the Mycenaean attack as a parallel for criticizing his contemporary Athenians and their role in the Peloponnesian War.

**Field Archaeology**

Much of the discussion over Troy revolves around the methodology of current excavations and the interpretation of archaeological evidence from past digs. Having no background in archaeology, I looked for a way to quickly learn about both analytical archaeology (reconstructive interpretation) and field methodology (obtaining artifacts/evidence necessary for interpretation). To fulfill this objective, I spent the month of June 2006 participating in the archaeological excavation of the Roman Fort at Yotvata, about forty-five kilometers north of the Red Sea in modern-day Israel. My work at Yotvata familiarized me with the methodology of field archaeology and provided me with the knowledge necessary to follow the archaeological debates taking place over Troy.

Excavating an intact 4th century oil lamp in the Roman Fort at Yotvata
The relative obscurity, great expense and international character of archaeology make it a uniquely fraught academic discipline. Funding is of great importance as are the international legalities of excavations. Such considerations should not, but in reality may, influence the interpretation of archaeological evidence.

Manfred Korfmann, German archaeologist and pre-historian, is the director of the ongoing excavations (including the summer 2006 season) at Troia, Turkey. He is credited with sparking the current series of debates over the realities of ancient Troy. Korfmann’s methodology and motives have been called into question recently.

Korfmann has been accused of misinterpreting the evidence which he claims support the existence of a “lower city.” Dieter Hertel and Frank Kolb have been highly critical of Korfmann’s excavations. They claim that “there is no archaeological evidence for at least 95% of the buildings. The result [of the lower city] resembles more an archaeological Disneyland than a reconstruction.”

Hertel and Kolb continue to claim that Korfmann’s entire thesis of Troy as a large, wealthy Anatolian city between pre-Greece and the Hittite Empire is influenced by current political considerations. One such criticism involves Korfmann’s identifying pottery found in Troy as “Anatolian” in an attempt to shade Troy’s identity as less “Western” and, therefore, more popular with the Turkish government and regional funding agencies.
Greeks of the Upstate
Dr. Deno Trakas, Department of English

Since my grandfather was the first Greek to settle in Spartanburg (in 1900) and brought over many relatives and compatriots, he is considered the founder of the Greek community here, and the Hub City Writers Project has asked me to write a book about him and the other Greeks of the Upstate. This project gave me a perfect excuse to take a trip to Greece, where I visited relatives and friends in Arahova, the village where so many Upstate residents came from. A few of the highlights of my trip are pictured here.

My father’s father and mother, Nicholas Trakas and Joanna Harakas, were born in Arahova, Greece, a village in the southern province of Sparta whose name means “place of the walnut trees.” The Harakas house is the highest on the hill, next to the clock tower, and the Trakas house is just below it and to the left. The village was destroyed by the Germans during WWII but has been rebuilt and is an attractive spot in the foothills of Mt. Parnon, between Tripoli and Sparta.

The plane trees of Arahova that, according to legend, were planted by Menelaus over 3000 years ago when he brought his troops here to pray to Artemis before leaving to fight the Trojans, who had abducted his wife, Helen (“the face that launched a thousand ships”). Nota Ramantanin of Spartanburg might be a descendant of Helen since Nota’s grandmother grew up in the same village as Helen.
My cousin V asili, bedridden by a stroke, with his wife Dimitra at his side.

Gus Diamaduros and friends drinking coffee at a kafeneion at the plateia. Gus said the caption should read “Hard working men.”

The village built this replica of the famous Karyatides of the Erechtheion on the Acropolis. The Karyatides are modeled after the women of the village.

Maybe next summer I’ll be able to visit my mother’s family in Xanthi, in northern Greece. Her parents, Gus and Irene Patterson, came to Spartanburg in 1930; Gus ran the Montgomery Sandwich Shop, which was located cater-corner to the Montgomery building.
Purification and Crystallization of N-Formyltetrahydrofolate synthetase from *Moorella thermoatrica*

Dr. Ramin Radfar, *Department of Chemistry* and Achini Bandara ’09

**Abstract**

The focus of the summer 2006 research was primarily structural study of the substrate bound N-Formyltetrahydrofolate Synthetase (FTHFS). Tetrahydrofolate and its derivatives are biologically active forms of folic acid. Folic acid is a water-soluble form of B-vitamin that is crucial to the human body during periods of rapid cell divisions due to its highly active role in the DNA synthesis pathway. Lack of substantial folic acid is one of the major reasons of anemia during pregnancies, neural tube disorders in newborn babies, and may even play a role in the development of certain cancers. In the laboratory, bacterial cells containing FTHFS producing gene are grown at optimal conditions and then harvested during centrifugation. Following extraction of crude protein from the cells and its purification, concentrated protein was used to set up crystallization screens. Saturated ammonium sulfate precipitant solution and purified protein were used in a hanging drop vaporization method for obtaining crystals. The achievements of the summer include testing of a new method of protein extraction, experimentations on methods of optimizing cell growth, and improving on the affinity column purification procedure.

By crystallizing the substrate bound FTHFS we are able to study the enzyme’s ability to bind certain substrates as well as the control mechanisms it exerts over the rate of this reaction. Findings could benefit the areas of cancer and neural tube disorder research.

**Future Goals:**
1. Optimizing growth and purification procedures
2. Optimizing crystallization conditions
3. Studying crystal structure of the substrate bound FTHFS
4. Studying any allosteric properties of the substrate bound FTHFS
A Mill Story: Documentary Film

Thom Kay ‘08

Film Goals

Spartanburg County has been the home of textile mills for well over 100 years. The mills shaped Spartanburg’s economy and culture, providing jobs for thousands as well as a camaraderie amongst citizens.

Within the past decade, many of the mills have shutdown, and the workers have had to find new jobs. My goal was to tell their stories.

Mike Farr

Mike Farr, the father of fellow Community of Scholars student Ivy Farr, worked in the textile mills for twenty years. He was able to provide an insightful and entertaining interview full of his experiences at Inman Mills.

Locked in at Inman Mills
Interviewing Process

The most difficult aspect of creating a documentary film like mine was filming successful interviews. For my interview to be successful, I studied interviewing styles and methods that would enable me to get the most out of my time with the interviewee. One main obstacle which I had to overcome was the difference between common conversation and useful film conversation. It was important for me to have the interviewee speak in complete sentences without depending on my interaction, because I wanted to remain out of the film.

Filming

By far the most enjoyable part of creating a documentary film, particularly about something like the mills, is finding footage to mix with interviews. The old mills all over Spartanburg County provide a plethora of opportunities for great shots. In order to capture the beauty of the mills, I tried to film at each of them both during sunrise and sunset so that I could have different lighting choices during editing.

From inside a burned out mill tower  Remains of Glendale Mill
Places Off the Map

Wilson Peden

History/Creative Non-fiction

There just aren’t many blank spaces left on the map. In America, our country is carefully mapped out and divided into states, counties, cities, towns, districts—we are documented and detailed down to the smallest level. But there are some places left that refuse to be categorized by county lines and government zonings; these places are defined by other things, cultural phenomenon and the shared history of the inhabitants. These are the places I research and document.

I have spent my summer telling the stories of these places and the people who live there. As a historian, I delve into the economic, social, and political pasts of these areas; as a creative writer, I try to capture the lives of the people who live there and my own experiences in these places. In the Greenville-Spartanburg area, I visited the Dark Corner and Possum Kingdom, farming communities from the nineteenth century that have remained rural and isolated. In Pickens, I talked to and played music with members of the large amateur bluegrass community of Upstate South Carolina.

And in Mississippi, I took a drive through the Delta region and stood on the banks of the river and felt the pulse of the blues. Everywhere I go, I try to find a relationship between the historical research I conduct in the archives and the contemporary experience of life in that place.

Over the last ten weeks I have completed eighty-five pages of what I hope to turn into a completed manuscript, a collection of essays about cultural communities in the Southeast. During the spring I will be working to finish the collection and looking into publication.
Coming to America: A Study of Southern Culture through Immigration

Ivy Farr

It has been impossible to ignore all the media attention being paid to immigration since President Bush’s speech on the topic in May of 2006. But instead of focusing on how the United States has kept and will keep immigrants out of our country, my research this summer focused on the positive impact that immigration has had on Spartanburg County. As I began thinking of people living in Spartanburg who are not originally born in the United States, I realized that we have a wealth of culture and diversity even in our own small town. Many immigrants are well-respected and well-known members of our community and their experiences have contributed immensely to what Spartanburg is today.

What follows is a collection of the experiences had by fifteen immigrants of various ages from several different countries who came to settle in South Carolina. Each person provided me with his own story of the journey made to come to the United States, his impressions upon arrival, his opinion of the immigration issue as it is today in America, as well as a description of the life he has forged since arriving in Spartanburg.

John Lefebvre, Canada

“I remember the exact day that I became a ‘Born-Again Southerner’. It was in 1994 on 83 Queens Street in Charleston. That’s where I ordered Cheese Grits and Shrimp for the first time. The second time I knew I was becoming assimilated was when I could detect Alanis Morissette’s Canadian accent.”

Katerina Andrews, Greece

“The more recently one has immigrated to the country, the more difficult it is for them to get along, especially when they don’t speak the language. The more language you know, the more money you can make.”

Leonor Reid, Mexico

“I call the United States my home. I don’t feel like it is my home in Mexico. We were taught to be critical of the United States. We learned that it was an imperialist country and that it would take advantage of undeveloped countries. Of course, I was young then and I later understood more.”
Aleksandr Moroz, Belarus “

We thought America was like heaven—that there was money on the trees and that you always get what you want. Television and the media didn’t help with that image. We didn’t see people in America working so hard on TV.”

Sandy Chen, China

“Security is the biggest issue that plays a role when people decide to come to America. There are wars all over with people trying to kill off entire races, but that won’t happen in this country.”

Nga Nguyen Simpson, Vietnam

“I never felt deep down that I had to adapt. The décor in each country changes, but I never had to build a completely new life.”

Achini Bandara, Sri Lanka

“We need to stop gibbering about who’s going to be the next world power and help the less-developed nations. Their countries aren’t lacking anything. If the developed nations put enough into it, people from other countries won’t even want to come here.”

Cosmas Chivandire, Zimbabwe

“America has one of the best immigration policies ever. The laws are fine; they just need to be enforced. But now instead of enforcing the laws, they want to make new ones. America has done a great job with immigration so far. I don’t know why they’re screwing it up at this point.”
New Perspectives on Mexican Immigration Issues through the Written Testimonies of Illegal Migrants in *La migra me hizo los mandados*

Lindsey Gates

My 2006 Community of Scholars project entitled “New Perspectives on Mexican Immigration Issues through the Written Testimonies of Illegal Migrants in *La migra me hizo los mandados*” contributes to current debates on the controversial topic of illegal Mexican immigration in the United States. Mainstream media in the United States generally highlights illegal immigration’s economic and social consequences on American citizens, with little reference to important issues affecting immigrants themselves. Since most illegal immigrants living in the United States do their best to keep their identities concealed for fear of deportation, their doubts, fears and criticisms normally go unvoiced in the public arena. Prepared as a scholarly paper in the field of literary and cultural studies, my project analyzes select undocumented Mexican immigrants’ testimonies compiled in Alicia Alarcón’s 2002 *La migra me hizo los mandados* (translated in 2004 as *The Border Patrol Ate My Dust*). I consider these testimonies through the lens of border scholar Gloria Anzaldúa’s theories on the historical and present-day relationship between Mexico and the United States. I probe especially the psychological and social consequences of immigration as depicted in literature. Among the concepts I address are attitudes of immigrants toward the United States and toward Mexico before and after immigration; risks and dangers of illegal immigration compared with consequences of remaining in Mexico; immigrants’ attitudes toward Mexican and U.S. officials; attitudes toward assimilation into American culture and the necessity of immigrants to learn English; the increased vulnerability of female immigrants during the border crossing and afterward as undocumented workers; as well as other issues important to the illegal immigrant and vital to the discussion on U.S. immigration policy.

Alicia Alarcón’s book contains testimonies from nearly thirty immigrants from all across Latin America. Some are lighthearted and humorous while others are devastatingly sad. The stories I chose to focus on are written by young and old, male and female,
with varying levels of formal education and their own unique personalities and value systems. The one quality which unites the immigrants is that they are all from Mexico. Narrowing the stories by country of origin allowed me to focus some of my research on the Mexican government’s role in immigration and to apply Gloria Anzaldúa’s theories on the complicated history between Mexico and the United States. The six immigrants whose stories I chose to analyze are:

- **Martín**, a young man who leaves his mother and siblings to cross the border with his father in 1979, just before the 1980s Mexican economic crisis. Martín reveals shortcomings of the corrupt Mexican government.

- **Teresa**, a young woman who reluctantly flies to Los Angeles using an expired passport to meet her mother there. Although devoutly religious, she protests against the inaction of the Roman Catholic Church in Mexico.

- **Fabiola**, recently married, who crosses over to join her husband in Los Angeles. Her story reveals perceptions of the U.S. in Mexico and their shortcomings in reality.

- **María**, a woman who travels with a group of men and is frequently abused along her journey, exposing the increased vulnerability of undocumented female immigrants.

- **Rosa María**, an undocumented factory worker who is deported after a raid by the Border Patrol. She reveals the fear of immigration agencies and deplorable sanitation of some immigrant towns in the Southwest which, amazingly enough, are still better than the alternative of remaining in Mexico.

- **Heriberto**, a family man who explains that it is not always easy to return to Mexico after living for some time in the United States, even if the migrant originally plans to do so.
Women Writing Doctoral Dissertations: Shared Stories from Across the Disciplines

Dr. Christine Sorrell Dinkins, Department of Philosophy

Many books on the market provide a how-to approach to dissertation writing without considering the context in which such work takes place. Other books do consider this context, but in a predominantly negative way. Authors speak of “surviving” one’s dissertation or “coping” with the process. Our book-in-progress is intended as a meaningful and helpful alternative to these books. In sharing stories of real women writing or having completed dissertations, we have three goals:

• To preserve the voices of the people who lived these stories, that they may share their experiences with others
• To offer lessons and advice for women readers embarking on the dissertation process
• To allow women to read about others’ experiences so they might see they are not as alone as they may feel and learn from what others have done in similar situations.

Through a process of interviews and analysis, we identified at least four themes shared by many of the women interviewed: The mystery of the dissertation process and product, the isolation and frustration throughout the dissertation experience, and the transformation – both negative and positive – of personal relationships with partners, friends and family.

Mystery of the Process

Participants found that they wanted more guidance and direction from advisors and institutions. The dissertation became a vague, amorphous, unwieldy mass, and even the most careful or practical approaches were stymied when the writers were hit with their own lack of understanding of the process or the goals for the end product. “All the right steps in the world won’t get me there. I’m just seeing all the branches and not seeing what it is that holds them up. I don’t know how else to put it.”

“I just wanted to know, “is this what a chapter is? Is that how you make an argument? Do you organize it that way?” That’s all I wanted!”
**Frustration**

Frustration resulted from the mystery of the process: “There were all these rules that emerged spontaneously as you’re going through the process. There was no one real good place to look to see what all the rules were. So that was very, very frustrating for me because I had set up a timeline that I couldn’t meet because of unexpected things that I didn’t know.” Frustration also resulted from other factors such as pressure-to-finish and the need to balance writing time with family and other obligations. “My family wasn’t particularly supportive; they were sick of it. They’d had it. They pretended to be supportive, but then they’re like, ‘What’s for dinner?’ You’re in a zone of writing, writing, writing, writing, writing, writing... 6:30, 6:45, 7:10...and they’re like ‘Mommy, mommy, what’s for dinner?’ You’re like ‘God, nothing! I don’t care if I ever eat again...I’m gonna really crank out this chapter.’”

**Why women?**

We did not originally intend the book to be written about women for women. As we interviewed male and female participants from diverse disciplines, a pattern began to emerge. Men and women had, by and large, strikingly different concerns, experiences, frustrations and transformations during and after the dissertation process. For example, many of the women struggled with balancing their roles as mothers with the time their dissertation work demanded. Women also seemed more troubled and even disoriented by a lack of communication or solid relationship with their advisors. In looking back on their dissertation experience after completion, several of the women also commented on the change and growth of personal relationships, whereas the men observed little of this change. Aware of the dangers of generalizing for all women, we decided that women’s stories could be a valuable resource to other women. As more and more women enter the higher levels of academia, this book seeks to make some of their voices heard as their stories are shared.

**Isolation**

Isolation throughout part or all of the process was an experience shared by all participants. “What I’d end up doing is taking days off of work to go to work alone somewhere to write. It was all so isolating.”

“*I’m digging a deeper and deeper hole for myself, and now I have all these additional holes I have to get myself out of! It’s like a virus that’s replicating itself into other areas of my life, and so I’m not only stuck in the hole I’m trying to get out of with the dissertation, but also the hole in the way I’m living my life.*”

“You have to work alone most of the time; you don’t get as much feedback as you want. Nobody else knows what you’re talking about. It’s a bizarre thing. It’s a process that involves all your faculties. I think it involves your whole being.”
Transformation of Relationships

Though the dissertation process involved strained and in some cases lost relationships, many participants found that their closest relationships – with partners and families – were transformed in positive ways. “I took my daughter and my sister to the beach for 5 days, got a beautiful place on the water, and basically I said to them, ‘You guys have to entertain each other and I’m gonna write all day, but we’re going out someplace really nice for dinner.’ My daughter went boy-watching with my sister, and they went on the water, they did just fun things. What was supportive was having them there; my sister would come in every couple hours and she’d say, laughing, ‘Are ya done yet?’ So, if you read my acknowledgement page in dissertation, it says thank you to my sister who really did support me a lot, and now I can finally say “Yes, I am done.”

“My partner was saying to me, “I’m sick of you doing this Ph.D.” Because I was totally obsessed. And there was some alienation from my friends. I do think it’s an absolutely transformative time in my life, every which way. Intellectually, emotionally, socially. There are conversations that I can’t have anymore because I want to have ones that are more meaningful. A realignment of relationships has been necessary to do this Ph.D.”

Conclusion

The themes featured here, along with two or three others, will serve as the basis for chapters in the book. Relevant stories and comments will be woven together with commentary from the authors. All of the participants in this research thus far have reported that the opportunity to tell their stories has been cathartic, rewarding, and affirming. The authors of this book have, in turn, learned much and will continue to learn more from the participants.

This Study was co-authored by Jeanne Merkle Sorrell, R.N., Ph.D., of George Mason University
Research Abstracts

AN EXTENSIBLE FRAMEWORK FOR THE MATHEMATICAL MANIPULATION OF MUSIC
Elom Abalo

2006 Community of Scholars Award for Distinguished Scholarship

The goal of this project was the creation of an extensible sound manipulation architecture using Mathematica. The two essential phases were the implementation of a structure to play sounds, and a system for the exploration of granular synthesis.

The results of the first phase include: a function to define a sound whose frequency transitions smoothly from one frequency to another, a set of sound envelope functions to shape the waveforms, a function to combine a list of sounds according to their positions in time thus producing harmony, a function to set the tempo and determine the durations of standard notes, and finally an overall function which applies all the previous operations on a list of strategically placed parameters. The output of the last function is then fed into one of Mathematica’s built-in function for conversion to sound.

The granular synthesis phase consists of a function to define a very short sound or sound grain to which a sound envelope is applied, a function to create many grains with different characteristics while positioning them in time, a function to superpose these grains taking into account their overlapping thus creating a new sound object called a cloud, and finally a function to take in the specifications of many clouds to output a compiled list which can be played using Mathematica’s built-in sound functions. Most of the functions used in granular synthesis are borrowed or derived from those created earlier in the first phase. Other secondary functions helping in the visualization of the sound objects, although not necessary in the process of sound production, are also provided.

TIERRA DEL FUEGO IN LITERATURE: PEOPLE, PLACE, AND EMPIRE
Trey Antley

In 1830, Captain Fitzroy of the HMS Beagle purchased or kidnapped a boy named Jemmy Button in exchange for pearl button. Until Silvia Iparraguirre writes in her Tierra del Fuego in the 1990’s, the only accounts of the man named Button belonged to the official histories of the British empire. Silvia Iparraguirre’s historical novel acts as a counter-discourse to Charles Darwin’s 19th Century Voyage of the Beagle and other texts from official histories—those that give its attention to leaders, an overview of events, and an analysis of underlying trends—written by those with power (Sims 524). Indigenous peoples worldwide had a particular disadvantage in recording history. If they wrote at all, it was unlikely English, French, or Spanish—languages of empire—or kept in an archive or library. The people with geo-political power could then choose which version to endorse and place in textbooks.

In response to such a tradition Iparraguirre presents a detailed personal story of the man who was Jemmy Button in 19th Century Tierra del Fuego and beyond. Since the 1830s, British texts with bias toward the imperial enterprise and Eurocentric ideologies have dominated documentation of the experiment of civilizing Button and three other Fuegians. Tierra del Fuego tells the story of this historical event free of the charged language used by Darwin in his harsh descriptions of the land and people. It exposes imperial suppositions without demonizing the British or glorifying the indigenous, thereby constructing a provocative alternative history through fiction.
**THE ARTISTIC AND ARCHITECTURAL ACCOMPLISHMENTS OF FRANK COLLINS**

Katherine Aul

My research project investigated the architectural and artistic endeavors of J. Frank Collins, a prominent Spartanburg architect between 1910-1940. Collins designed many important residential, civic, and commercial buildings in Spartanburg, many of which are still standing today. He was also a talented artist in several media including watercolors, ceramics, and woodworking. Collins was also very involved in the Spartanburg community with memberships in the Rotary Club, several Masonic societies, the Artists’ Guild, the Symphony Orchestra, the Historical Society, and the First Presbyterian Church. My research shows that this participation in the community allowed Collins to form relationships with a number of the city’s wealthiest businessmen and politicians, many who became his patrons. As such, this research not only offers insight into the life and accomplishments of an important member of Spartanburg history, but also into the cultural constructs and society that was Spartanburg in the early half of the twentieth century. The information gathered will be arranged in a research paper, a museum exhibition of Collins’ artistic and architectural works to be displayed at the Spartanburg Arts Center this fall, a museum catalog including an abbreviated version of my research paper, and a website connected with the Spartanburg Arts Center offering access to my paper and images of all of Collins’ works.

**THE CRYSTAL STRUCTURE OF N-FORMYLTERAHYDROFOLATE SYNTHETASE**

Nimalka A. Bandara

The focus of my research was primarily structural study of the substrate bound NFormyltetrahydrofolate Synthetase (FTHFS). Tetrahydrofolate and its derivatives are biologically active forms of folic acid. Folic acid is a water-soluble form of B-vitamin that is crucial to the human body during periods of rapid cell divisions due to its highly active role in the DNA synthesis pathway. Lack of substantial folic acid is one of the major reasons of anemia during pregnancies, neural tube disorders in newborn babies, and may even play a role in the development of certain cancers. In the laboratory, bacterial cells containing FTHFS producing gene are grown at optimal conditions and then harvested by centrifugation. Following extraction of crude protein from the cells and its purification, concentrated protein was used to set up crystallization screens. Saturated ammonium sulfate precipitant solution and purified protein were used in a hanging drop vaporization method for obtaining crystals. The earlier part of the summer was spent growing several batches of bacterial cells, but several weeks passed before optimal growth was achieved. The latter third of the summer was spent purifying the extracted protein using Heparin Agarose and Phenyl Sepharose affinity columns. The achievements of the summer include the testing of a new method of protein extraction, experimentations on methods of optimizing cell growth, and improving on the affinity column purification procedure. Ten weeks has proved to be certainly too short a period to successfully complete this project, but significant headway has been made such that future progress of the project will face much fewer hurdles.
ECOCRITICAL PERSPECTIVES ON LATIN AMERICAN FICTION
Dr. Laura Barbas Rhoden, Department of Foreign Languages

My Summer 2006 Community of Scholars research is an important part of my on-going book project using ecocriticism to analyze literary texts from Latin America. The project looks at contemporary Latin American novels that depict key moments of environmental transformation and crisis in the region.

My ecocritical reading of this literature explores the intersections of politics, economics, and culture in creating environmental crisis and change in the Americas. I analyze the ways in which texts imagine the natural world and the place of humans in it, especially as these relationships changed during different historical moments. An important aspect of the study is an analysis of the forces (national and global, economic and political) that have altered the culturally distinct populations and biologically diverse territories of Latin America since independence.

AGE DIFFERENCE IN WORKING MEMORY: EXAMINATION OF FOCUS SWITCHING IN VERBAL AND VISUO-SPATIAL DOMAINS
Dr. Kara L. Bopp, Department of Psychology
Mary-Catherine McClain and Leandra Parris

The current study explores the executive control process of focus switching in order to attempt to identify the factor underlying age-related differences in working memory. A new and unique paradigm, Repetition-Detection, is manipulated to require participants to switch their focus of attention in analogous verbal and visuo-spatial domains. The results suggest age-insensitivity to focus switching. Age differences in working memory might be driven by declines in storage, rather than by specific executive control processes.

THE DETECTION AND GENERALIZATION OF LINOLEIC ACID AND OLEIC ACID IN RATS IS DEPENDENT ON THE TASTE SYSTEM
Cameron Corbin

The ability of rats to detect free fatty acids has been experimentally tested. In two-bottle preference tests, avoidance of linoleic acid (LA) has been shown to be extinguished after transection of the chorda tympani nerve (CTX), but not after the removal of the sublingual maxillary salivary gland (SLGX). Using the Davis Rig, one day of conditioned taste aversion (CTA) and 8s stimulus presentations showed a threshold of detection at 88 μM for LA, no aversion to oleic acid (OA), and no generalization between OA and LA. When the presentation length was extended to 30s, there was clear evidence for the detection of LA at 44, 88, and 176 μM and a generalization between OA and LA. The aversions were eliminated when the chorda tympani nerve was cut.

Using the previous data, the current study uses a modified paradigm to test the effect of CTX on the ability to detect LA and OA and to determine whether a stimulus generalization exists between LA and OA. The 19 male Sprague-Dawley rats which were conditioned with 100 μM LA showed avoidance at concentrations of 20, 50, 75, and 100 μM LA prior to CTX; the 20 rats conditioned with 100 μM OA showed aversion to 50, 75, and 100 μM OA and to 50 and 100 μM LA. After the cutting of the chorda tympani nerve, the previous avoidances were eliminated. The chorda tympani nerve has been shown to play a vital role in the detection and avoidance of linoleic acid and oleic acid.
The Ability of Rats to Detect and Avoid Oleic Acid following Conditioned Taste Aversion Pairing

Meaghan Crawley

Previous research demonstrates that the components of dietary fats, known as free fatty acids, can be detected by the taste system. The immediate recognition of free fatty acids by the taste system drives the ingestion of dietary fats. Research suggests that differences exist between male and female taste sensitivities. The current study examines the differences between male and female rats in the detection of free fatty acids following a conditioned taste aversion. The results demonstrate that female rats conditioned to oleic acid exhibit signs of extinction on the second day at around 75 uM concentration. Males in this condition do not exhibit signs of extinction until the third day at 75 uM. However, females conditioned to linoleic acid begin to show evidence of extinction on the second day at a lower concentration of 20 uM. Also, females conditioned to oleic acid avoid lauric acid as well, whereas females conditioned to linoleic acid show no avoidance of lauric acid. These results imply that male and female rats treat these substances differently, suggesting differences in taste threshold between males and females. Evidence of the detection of dietary fats by the taste system and exploring sex differences in this detection may allow for future development of tastants similar to dietary fat without the caloric content.

Coming to America: Interview with Immigrants of Spartanburg

Ivy Farr

It has been impossible to ignore all the media attention being paid to immigration since President Bush’s speech on the topic in May of 2006. But instead of focusing on how the United States has kept and will keep immigrants out of our country, my research this summer focused on the positive impact that immigration has had on Spartanburg County. As I began thinking of people living in Spartanburg who are not originally born in the United States, I realized that we have a wealth of culture and diversity even in our own small town. Many immigrants are well-respected and well-known members of our community and their experiences have contributed immensely to what Spartanburg is today.

What follows is a collection of the experiences had by fifteen immigrants of various ages from several different countries who came to settle in South Carolina. Each person provided me with his own story of the journey made to come to the United States, his impressions upon arrival, his opinion of the immigration issue as it is today in America, as well as a description of the life he has forged since arriving in Spartanburg.

Women Writing Doctoral Dissertations: Shared Stories from Across the Disciplines

Dr. Christine Sorrell Dinkins, Department of Philosophy

Many books on the market provide a how-to approach to dissertation writing without considering the context in which such work takes place. Other books do consider this context, but in a predominantly negative way. Authors speak of “surviving” one’s dissertation or “coping” with the process. Our book-in-progress is intended as a meaningful and helpful alternative to these books. In sharing stories of real women writing or having completed dissertations, we have three goals:

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Through a process of interviews and analysis, we identified at least four themes shared by many of the women interviewed: The mystery of the dissertation process and product, the isolation and frustration throughout the dissertation experience, and the transformation – both negative and positive – of personal relationships with partners, friends and family.

NEW PERSPECTIVES ON MEXICAN IMMIGRATION ISSUES THROUGH THE WRITTEN TESTIMONIES OF ILLEGAL MIGRANTS IN LA MIGRA ME HIZO LOS MANDADOS

Lindsey Gates

Mainstream media in the United States generally highlights illegal immigration’s economic and social consequences on American citizens, with little reference to important issues affecting immigrants themselves. Since most illegal immigrants living in the United States do their best to keep their identities concealed for fear of deportation, their doubts, fears and criticisms normally go unvoiced in the public arena. Prepared as a scholarly paper in the field of literary and cultural studies, my project analyzes select undocumented Mexican immigrants’ testimonies compiled in Alicia Alarcón’s 2002 La migra me hizo los mandados (translated in 2004 as The Border Patrol Ate My Dust). I consider these testimonies through the lens of border scholar Gloria Anzaldúa’s theories on the historical and present-day relationship between Mexico and the United States. I probe especially the psychological and social consequences of immigration as depicted in literature. Among the concepts I address are attitudes of immigrants toward the United States and toward Mexico before and after immigration; risks and dangers of illegal immigration compared with consequences of remaining in Mexico; immigrants’ attitudes toward Mexican and U.S. officials; attitudes toward assimilation into American culture and the necessity of immigrants to learn English; the increased vulnerability of female immigrants during the border crossing and afterward as undocumented workers; as well as other issues important to the illegal immigrant and vital to the discussion on U.S. immigration policy.

AN INVESTIGATION INTO GASOLINE PRICE VARIABILITY IN A LOCAL MARKET

Stephanie Goddard

This article investigates gasoline prices in a local market by examining some of the factors thought to influence them. Using a cross sectional and a longitudinal data collection, the study finds that, as expected, the price of crude oil has the largest affect on gasoline prices, with increasing crude oil prices reflected in higher gasoline costs. Additionally, factors such as location on a major road and proximity to an interstate highway also play a role in determining what gasoline prices a station offers. Stations located on roads with higher daily traffic rates report higher gasoline prices than those on less-traveled roads while stations closer to an interstate highway report higher prices than those further away. Furthermore, stations with higher gasoline prices are more likely to have higher in-store prices. However, a number of factors considered in this study proved to have little impact on gasoline prices such as: brand of fuel, nearby competitors, services offered, day of the week, and holiday travel. It is expected that gasoline stations have little freedom in raising the price of gasoline because of the overall price increases in recent years; consumers are now much more sensitive to gasoline costs because of the sharp price increase. While ownership of a station was considered, the factor was discarded because a majority of the stations had independent owners. Also included in this report is a brief explanation of how crude oil is refined into gasoline and a discussion on the global demand for crude oil and its impact on prices.
**THE ARTISTIC RIVALRY BETWEEN AGNOLO BRONZINO AND GIORGIO VASARI**

Dr. Karen H. Goodchild, Department of Fine Arts

Giorgio Vasari (1511-74) included a biography of fellow-painter Agnolo Bronzino (1503-72) in his 1568 book The Lives of the Most Eminent Painters, Sculptors, and Architects. On the basis of this text, it has been assumed that there was little rivalry between the two artists even though both were working for the Medici court in Florence. This project reassesses the relationship between the two by reading Vasari’s praise for Bronzino’s work in light of the artistic goals Bronzino himself professed.

**“MILL STORY:” A DOCUMENTARY FILM**

Thom Kay

Spartanburg County has been the home of textile mills for well over 100 years. The mills shaped Spartanburg’s economy and culture, providing jobs for thousands as well as camaraderie amongst citizens. Within the past decade, many of the mills have shutdown, and the workers have had to find new jobs. The original intention of making a documentary film about the mills of Spartanburg was to learn about the town and pass along my findings to the viewer. As the film progressed, it became clear that the best way to tell about the mills was to have individuals who had worked in the mills tell their stories.

The most difficult aspect of creating a documentary film like mine filming successful interviews. For my interview to be successful, I studied interviewing styles and methods that would enable me to get the most out of my time with the interviewee. One main obstacle which I had to overcome was the difference between common conversation and useful film conversation. It was important for me to have the interviewee speak in complete sentences without depending on my interaction, because I wanted to remain out of the film.

Mike Farr, the father of fellow Community of Scholars student Ivy Farr, worked in the textile mills for twenty years. He was able to provide an insightful and entertaining interview full of his experiences at Inman Mills. I hope to continue with more interviews during the academic year.

**“LITERARY DEGENERATES:” PERCEPTIONS OF FEMALE PRODUCTIVITY AND POWER IN THE FAILURE OF THE NEW WOMEN WRITERS**

Vanessa Lauber

2006 Community of Scholars Award for Distinguished Scholarship

Drawing from fiction and non-fiction writing of the New Woman writers of fin-de-siècle Britain, such as Mona Caird and Ella Hepworth Dixon, this paper examines the nature of the extensive criticism aimed at these female activists who wished to see a reevaluation of traditional Victorian gender roles. Reinforced by late-nineteenth century fears of degeneration, those roles dictated that women find their power by exercising their supposed moral superiority within the domestic realm, producing the next generation of ideal British citizens. The New Women, wishing to expand the realm of female power beyond the home, often sought a voice for those demands through their writing. Mona Caird wrote extensively in periodicals during the 1880s and 1890s, criticizing the institution of marriage, for which she was accused of threatening to rent the very fabric of society. Caird’s promotion of education for women as a means to achieving female independence reinforced a widely supported belief that the feeding of the intellect starved the uterus, threatening the role of women as caretakers of the home.
Because New Women fiction writers wrote on topics of contemporary social interest that posed such a threat, many critics dismissed them for failing to achieve standards of high aesthetics. Ella Hepworth Dixon’s 1893 novel, The Story of a Modern Woman highlighted the difficulties facing unmarried female writers, who were largely constrained by standards of feminine production. If not producing children to strengthen society and increase the population, literary women were expected to produce works of enduring aesthetic value, and in their failure to do either, New Women writers were relegated to the unproductive periphery of society. The paper argues that the efforts of the New Women writers to expand avenues of female power failed to move beyond the confining demands of female productivity, thus limiting their success during the height of the activity; the time for the reforms that they advocated lay in the future.

EXAMINING AGE-RELATED DIFFERENCES IN WORKING MEMORY AND THE EFFECTS OF PROACTIVE INTERFERENCES IN VERBAL AND VISUO-SPATIAL TASKS

Mary Catherine McClain

The current study explores Proactive Interference (PI) in working memory (WM) in order to attempt to identify what factor(s) produce the underlying age differences typically found between younger and older adults in WM performance. The study is unique in that it provides direct evidence of the buildup versus a lack of PI within a WM task. The Bopp Repetition Detection task (2001) was used in both verbal and visuo-spatial domains, which required participants to detect a repeat in a series of stimuli in order to manipulate PI in two conditions, a interference condition (PI build-up) and a non-interference condition (lack of PI build-up). The major findings show that a) PI influences WM performance in both age groups; b) there does not seem to be a specific age-related deficit between age and proactive interference; c) interference strongly effects accuracy in two locations in the verbal domain but not in the visuo-spatial domain; d) focus switching may be a sufficient cause for the age deficits presently observed. These results are consistent with other PI accounts of WM, and validate that interference plays an important role in the relation between WM span and other tasks.

“A FEMININE ACCOMPLISHMENT: PORTRAYALS OF WOMEN AT THE PIANO IN THE ART OF THE NINETEENTH-CENTURY

Sarah McClure

2006 Community of Scholars Award for Distinguished Scholarship

The idea of the woman at the piano in the nineteenth century was strongly enmeshed not only in society itself but in the world of art as well. As piano playing was so prevalent, and so strongly associated with femininity, an artistic convention of portraying women at the piano developed. Such an image may seem far from controversy, but has many important social and even political associations. Early images were typically very conventional showing women as little more than decoration or ideal of femininity. Renoir later revived this conventional depiction at the end of the century creating paintings full of softness and feminine beauty. For the majority of the impressionists in the latter part of the century, their social relationships influenced their art and vice versa, making the image more true to life than ever before. They portrayed most often, women whom they knew and interacted with in real life, and who were more than mere amateurs on the piano. For the ladies they depicted, the piano was part of their lives and something they possessed true skill at, not simply a marker of their femininity and artists such as Manet, Toulouse-Lautrec and Degas painted them, not as ideal of that femininity but as real women actually playing the piano. By tracing the history of this image, not only in the work of established artists, but in advertising and illustrations as well, we can more fully appreciate the degree to which the impressionists changed the image and made it their own.
Purification and Expression of the Human $\gamma$-Enolase

Keith Munns

The human $\gamma$-enolase protein has been speculated as being a contributing cause to heart disease. The protein must be made available in its purest form in order for new drugs to be developed to prohibit the harmful behavior. In my research, the protein was purified from inclusion bodies through the use of a nickel resin affinity chromatography column. Luria Broth (LB) was used as a medium for the culturing of Escherichia coli (E. coli) bacteria. The cell wall of the bacteria was broken through the use of sonication. Centrifugation was utilized to separate the protein from other particles based on the density of the protein. A variety of buffers, some containing imidazole, were used to determine the best quantity of each to yield the purest form of the protein. Gels were run in order to determine which trials yielded the purest form of the human $\gamma$-enolase protein. A vast difference between the purity of protein was observed according to the concentrations of imidazole used in the purification process. The trials were repeated until an exact concentration method of imidazole was determined to provide the most pure protein.

Working Memory & Aging: Metamemory and Strategy

Leandra Parris

The current study examined metamemory and the effect of strategy manipulation. Bopp's (2003) Repetition-Detection task was used which required a repeat to be found in a series. Two groups were tested. A no-strategy control group completed the task without strategy instructions. The strategy group used four strategies to complete the task. A prediction and postdiction questionnaire was given in order to examine the subject's ability to predict and recall their performance using each strategy. Data analysis indicated no difference in accuracy between the strategies with the exception of the fast strategy for younger adults. The strategies did not affect the older adults' performance. Participants were extremely poor at both predicting and postdicting their performance using the given strategies.

Places off the Map

Wilson Peden

There just aren't many blank spaces left on the map. In America, our country is carefully mapped out and divided into states, counties, cities, towns, districts—we are documented and detailed down to the smallest level. But there are some places left that refuse to be categorized by a county lines and government zonings; these places are defined by other things, cultural phenomenon and the shared history of the inhabitants. These are the places I document.

I have spent my summer telling the stories of these places and the people who live there. As a historian, I delve into the economic, social, and political pasts of these areas; as a creative writer, I try to capture the lives of the people who live there and my own experiences in these places. In the Greenville-Spartanburg area, I visited the Dark Corner and Possum Kingdom, farming communities from the nineteenth century that have remained rural and isolated. In Pickens, I talked to and played music with members of the large amateur bluegrass community of Upstate South Carolina. And in Mississippi, I took a drive through the Delta region and stood on the banks of the river and felt the pulse of the blues. Everywhere I go, I try to find a relationship between the historical research I conduct in the archives and the contemporary experience of life in that place.

Over the last ten weeks I have completed eighty-five pages of what I hope to turn into a completed manuscript, a collection of essays about cultural communities in the Southeast. During the spring I will work on finishing the collection and looking into publication.
**Effect of Benzodiazepines on Taste Sensations in Rats**

Dr. D. W. Pittman, *Department of Psychology*

The objective of this project is to identify the site of action of benzodiazepines on taste sensations. Behavioral gustatory research demonstrates that benzodiazepines, a class of anti-anxiety drugs, increase the “liking” of taste stimuli in a rodent animal model. Specific increases in rats’ licking responses to sweet and salty solutions have been shown following systemic administration of benzodiazepines.

Benzodiazepines produce their anxiolytic effects through GABA(A) receptor agonism which involves the activation of a channel allowing chloride (Cl-) influx into neurons. Our research project measures the taste sensations evoked in the peripheral afferent gustatory pathway, the chorda tympani nerve, as well as in the centrally located parabrachial nucleus of the brain stem in response to stimulating the tongue with sweet, sour, salty, and bitter chemicals both prior to and following systemic administration of the benzodiazepine, chlordiazepoxide (CDP).

**Caroline Norton and the Legal Standing of the Nineteenth-Century Englishwoman**

Dr. Anne B. Rodrick, *Department of History*

This project has culminated in a book proposal to be submitted for consideration in Bedford-St. Martins’ “Bedford Series in History and Culture.” Caroline Norton, a woman of the English upper classes, married her husband George in 1827. The stormy and unhappy marriage produced three sons and continuous acrimony, mostly over lack of money. After a failed attempt to convince a jury that leading politician Lord Melbourne had engaged in adultery with Caroline, George shut the doors against his wife and moved the children out of her reach. Caroline, faced with the reality that under English law she “did not exist” as an autonomous individual and therefore had no legal rights to her children or even to her own earnings as a writer, began a lifelong pursuit of changes in the legal code. In 1839 her efforts helped frame the law that allowed wives to petition for custody of their young children in the case of marital separation, and in 1857 England passed laws making it possible under limited circumstances for women to sue for divorce in civil court. Caroline’s decision to make her own personal life a catalyst for legal reform was a painful one, coming as it did in the midst of a failed marriage and in the context of women as private rather than public individuals. This proposed book will take selections from Caroline Norton’s writings on marriage, infant custody, and divorce and supplement them with a wide variety of other primary documents, including her correspondence with Lord Melbourne, debates within the parliamentary House of Commons over proposed reforms, and commentary from contemporaries, both supporters and detractors of Caroline’s efforts. The resulting volume will be a teaching tool that can be used in a variety of courses to introduce students to issues of gender, law, justice, and politics.
MUSIC IN THE PRIVATE REALM: REPRESENTING THE EXPERIENCE OF MUSIC IN NINETEENTH-CENTURY FRENCH ART

Dr. Peter L. Schmunk, Department of Fine Arts

The spread of mass culture in the early nineteenth century, along with contemporary critical discourse on the merits of the different arts, gave to music a cultural prestige unprecedented in its prior history. On the one hand, musical experience was more widely available than ever before, through the establishment of public concert halls and subscription series of concerts, through the manufacture and sale of large numbers of pianos to middle-class consumers, and through the widespread publication of sheet music and periodicals devoted to musical culture. On the other hand, a new conviction emerged in the nineteenth century that expression, rather than imitation, was the proper aim of a work of art and that superior art works were those that elicited from an audience the strongest emotional responses. German writers, especially, singled out music as the paradigmatic expressive art and the “norm against which to measure the relative expressive value of all other forms of art.” Other commentators variously esteemed music as “the most romantic of the arts” (E.T.A. Hoffmann), “higher than thought” (Delacroix), and “the art of the century” (Taine).

In these circumstances, painters participated in developments in musical culture as never before. Many artists attended concerts, frequented evening salons where music was played and discussed, purchased instruments, and acquired some degree of musical literacy. Responding to the influence of music in their own art, they painted visual tributes to the art of music and appropriated musical terms in the titles of their paintings. The emergence of nonrepresentational visual art in the early twentieth century is, at least in part, a response to the model of abstract instrumental music.

VISUAL NARRATIVE STYLES IN MATHEMATICS AND COMPUTER SCIENCE EDUCATION

Joseph D. Sloan, Department of Computer Science

A significant portion of pedagogical material in computer science and mathematics consists of inherently sequential narrations. Such narrations include proofs, algorithms, problem solutions, and problem solving schema. This project seeks to investigate, understand, and identify ways to effectively use visual materials as narrative tools in these disciplines. It is a multi-year, multidisciplinary, proof-of-concept project in computer science and mathematics education. The project can be described as a series of overlapping stages:

1. Review results from cognitive psychology and educational theory relevant to the effective use of illustrations in pedagogical narratives.
2. Review general graphic design principles and practices, particularly with respect to the results from the previous stage.
3. Review publishing practices and guidelines as they relate to this project.
4. Examine both representative and innovative mathematics and computer science texts with respect to the preceding stages with the goal of identifying exemplar practices and viable models for visually oriented narrations.
5. Identify and master appropriate technologies and techniques for creating visually-oriented narrative materials.
6. Develop a set of best practices guidelines for effectively using visual materials in narratives in mathematics and computer science.
7. Develop, use, and evaluate sample materials consistent with these best practices guidelines.
8. Review progress, disseminate results, reassess the project, and proceed accordingly.
Conditioned Taste Aversion Threshold of Free Fatty Acids in Obese-Prone and Obese-Resistant Rats

Kimberly R. Smith

2006 Community of Scholars Award for Distinguished Scholarship*

Free fatty acids such as linoleic, oleic, and lauric acid are the chemical components of dietary fat. We have previously shown that these chemicals can be detected by taste cues. Two inbred strains of rats, an obese-prone strain (OM) and an obese-resistant strain (S5B), have shown a difference in diet preference such that OM rats prefer a high-fat diet while the S5B rats prefer a high-carbohydrate diet. The OM rats overeat and become obese whereas the S5B rats are able to regulate their food intake and maintain a normal body weight. We hypothesized that there would be a difference in the taste sensitivity of the OM rats and the S5B rats based on the differences of their dietary preferences. In order to determine the OM and S5B rats’ taste threshold for linoleic acid (LA), the rats were conditioned to avoid linoleic acid by inducing gastric distress after ingesting 100 μM LA. The ability to detect and avoid free fatty acids was tested with short 15s presentations of taste solutions consisting of 50 and 100μM oleic acid, 100 μM lauric acid, and Linoleic Acid ranging from 5-100 μM. An ANOVA determined any significant differences in licking behavior. The OM strain was found to be more sensitive to linoleic acid than the S5B strain. Both OM and S5B females were more sensitive than their male counterparts. These differences in taste sensitivity provide evidence that genetics may play a role in the underlying variability in taste preferences.

Homerizing? Justifying Blood and the Politics of Archaeology

Marion Smith

The Iliad offers more information on the Trojan War than any other ancient source; however, it is primarily fiction and was written centuries after the war. Soon after Homer, critiques surfaced. Aristotle claimed that “Homer most of all has taught the rest of the poets how to lie.” The Greek word Ὄμηροζεν, literally “to Homerize”, can mean “to lie”. The great literary talent of Homer is worthy of praise; but, in an effort to understand the cause of the Trojan War, Homer’s account cannot be trusted.

My research has focused most of all on the explanation for the war. What caused the Mycenaeans, led by Agamemnon to attack Troy? Ancient accounts and modern archaeology point to a primarily economic cause. Despite the famed beauty of Helen, the lure of empire, expansion of trade and elimination of a competitor were far more inspiring motives for Agamemnon and the pre-Greeks.

Much of the discussion over Troy revolves around the methodology of current excavations and the interpretation of archaeological evidence from past digs. Having no background in archaeology, I looked for a way to quickly learn about both analytical archaeology reconstructive interpretation) and field methodology (obtaining artifacts/evidence necessary for interpretation). To fulfill this objective, I spent the month of June 2006 participating in the archaeological excavation of the Roman Fort at Yotvata, about forty-five kilometers north of the Red Sea in modern-day Israel. My work at Yotvata familiarized me with the methodology of field archaeology and provided me with the knowledge necessary to follow the archaeological debates taking place over Troy.
Maximizing Expression and Purification of Human γ-Enolase

Nikil Swamy

Enolase (2-phospho-D-glycerate hydrolase; EC 4.2.1.11) is a catalyst in the glycolytic process interconverting 2-phospho-D-glycerate (PGA) and phosphoenolpyruvate (PEP). It is exhibited in all vertebrates in three tissue-specific isoforms, of which γ-enolase is one and is known as neuro-specific enolase (NSE), expressed primarily in neurons. Human NSE is a major brain protein that constitutes between 0.4% and 2.2% of the total soluble protein of brain, depending on the region. Because of this composition NSE is commonly used as a clinical marker for neuronal and neuron-endocrine cells. The amount of this enzyme present is much more than is need for its catalytic function and therefore it is likely that NSE plays a role in still yet unknown pathways. There is reason for further exploring the relationship between form and function as related to NSE.

Expression of the isozyme γ-enolase with a C-terminal Histidine-tag was induced using Escherichia Coli as the model organism. Starting with a proven recipe for the Lauria Broth growth medium, content of various ingredients were manipulated to produce maximum yield of E. Coli. Alternatively, a second growth medium, Terrific Broth was tested and proved to be a better medium for the culturing of E. Coli. In testing the Lauria and Terrific Broths the optimum point for addition of the inducing agent IPTG was determined to be around 0.55 A and 0.85 A respectively. Although complete purification of the target enzyme has been unsuccessful, progress has been made in purifying the collection of γ-enolase using a HIS-select Nickel resin affinity gel. Standard Electrophoresis techniques were utilized in examining the content of the fractions collected from the affinity column.
“Ecocritical Perspectives on Latin American Literature”

Dr. Laura Barbas Rhoden, *foreign languages*

Trey Antley, “Tierra del Fuego in Literature: People, Place, and Empire”
Lindsey Gates, “La Frontera in Recent Hispanic Literature and Film”
Loren Hyatt, “The function of family groupings as NGOs in Mexico and Argentina”

“Age-Related Differences in Working Memory: Exploration of Focus-Switching”

Dr. Kara Bopp, *psychology*

Mary-Catherine McClain, “Age-Related Differences in Working Memory: The Effect of Interference”
Leandra Parris, “Age-Related Deficits in Working Memory: Strategy differences”

“Living and Learning: Stories of Dissertation Writing”

Dr. Christine Dinkins, *philosophy*

Thomas Kay, “The effects of textile mill closings on the culture of Spartanburg: a documentary short film”

“The Artistic Rivalry between Agnolo Bronzino and Giorgio Vasari”

Dr. Karen Goodchild, *art history*

Katherine Aul, “The Artistic and Architectural Accomplishments of Frank Collins”

“The Role of the Brain Peptide, Galanin, on Neural Signals Related to Ingestion of Dietary Fats and Alcohol”

Dr. David Pittman, *psychology*

Cameron Corbin, “The Ability of rats to form taste aversions to linoleic and lauric acids”
Meaghan Crawley, “The Ability of rats to detect and avoid oleic acid following conditioned taste aversion pairing”
Kimberly Smith, [funded through SCICU]

“Purification and Crystallization of N-Formyltetrahydofolate Synthetase from Moorella thermoautica”

Dr. Ramin Radfar, *chemistry*

Nimalka Bandara, “The Crystal Structure of N-Formyltetrahydrosulfolate Synthetase”
Keith Munns, “The purification and isolation of proteins from inclusion bodies”
Nikil Swamy, “The effects of environmental parameters on internal mechanisms of cell expression”

“Early Victorian Feminism and Caroline Norton’s Letter to Queen Victoria: A Documentary History”

Dr. Anne Rodrick, *history*

Vanessa Lauber, “New Woman, New Marriage?”
Wilson Peden, “Growing up in the Upstate”
“Music in the Private Realm: Representing the Experience of Music in Nineteenth-Century French Art”

Dr. Peter Schmunk, art history,

“Visual Narrative Styles in Mathematics and Computer Science”

Dr. Joseph Sloan, computer science,
Stephanie E. Goddard, “Sources of Gasoline Price Variability in Local Markets”

“Greeks of the Upstate”

Dr. Deno Trakas, English,
Ivy Farr, “A Study of Southern Culture Through Immigration”
Marion Smith, “Homerizing? Justifying Blood and the Politics of Archaeology”
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