CSU STANISLAUS
Honors capstone Conference

John Rogers Faculty Development Center
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12:00-6:30pm
Sponsored by the University Honors Program

California State University Stanislaus

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Arnold Webb (English), Ellen Bell (Anthropology), Janey Youngblom (Biology), Chris Nagel (Philosophy), Jim Tuedio (Philosophy), Tom Carter (Cognitive Studies), Jason Winfree (Philosophy), As’ad AbuKhalil (Political Science), Michael Tumolo (Communication Studies), Darren Hutchinson (Philosophy), Helena Janes (Teacher Education), and Tim Held (Library).
Seniors in the Honors Program are encouraged to tackle complex problems using methods and knowledge drawn from relevant disciplines. Honors Program faculty and research mentors offer critical feedback and guidance along the way. The main objective is for students to explore, gather and analyze information effectively, and to reflect on the implications of what they have discovered. Group discussions help to promote thoughtful questioning. The goal is to communicate knowledge, judgments, and original perspective on the basis of careful inquiry, exploration and analysis.
**Featured presentations:**

*Senior Capstone Research projects*

11:45-12:00  Refreshments and Capstone Research Poster Displays (Juniors)

12:00-12:20  Natalie Hammond: “Effects of Iconicity on American Sign Language Acquisition and Retention”

  Faculty Mentor: Dr. Jane Howard (Psychology)

12:20-12:40  Adrielle Kent: “Santa Maria del Fiore: A Conceptual Context for Understanding Dome Construction During the Italian Renaissance”

  Faculty Mentor: Dr. James Tuedio (Philosophy)

12:40-1:00  Dana Whetstone: “Singapore’s Mathematics Textbooks: One Key to Their Success in Mathematics Achievement”

  Faculty Mentor: Dr. Elmano Costa (Teacher Education)

1:00-1:20  Amanda Heinrichs: “What a Heroine Can Do: Examining Literary Cultural Myths in Karen Joy Fowler’s Sister Noon”

  Faculty Mentor: Dr. Margaret Winter (English)

Faculty Mentor: Dr. Stephen Routh (Political Science)

1:40-2:00  Break for Posters and Refreshments

2:00-2:20  Sarah Lamas: “The Glass Ceiling: Progress for Women in Organizations over the Last Decade”

Faculty Mentor: Dr. Edward Hernandez (Management)

2:20-2:40  Jackson Leverone: “Critiquing the Music Industry Through the Lens of Philosophy”

Faculty Mentor: Dr. Chris Nagel (Philosophy)
2:40-3:00  Grant Langlois: “The Influence of Hyperconjugation on Molecular Conformation”
          Faculty Mentor: Dr. Michael Drake (Chemistry)

3:00-3:20  Hannah Carlson: “Enclosed Women: Finding “A Room Of One’s Own” in Late Nineteenth Century Literature”
          Faculty Mentor: Dr. Susan Marshall (English)

3:20-3:40  Break for Posters and Refreshments

3:40-4:00  Grady Maguire: “E-Commerce: Forecasting Emerging Trends”
          Faculty Mentor: Dr. Tzu-Man Huang (Finance)

4:00-4:20  Dan Neisess: “Do We Need a Reevaluation of Peace in Light of Nietzsche’s Analysis of Nihilism?”
          Faculty Mentor: Dr. Chris Nagel (Philosophy)

4:20-4:40  Cari RayBourn: “‘The People’ in the Beginning”
          Faculty Mentor: Dr. Tony Perrello (English)
4:40-5:00  Meloney West: “The Stress Response: What Are You Letting Stress Do To You?”

Faculty Mentor: Dr. Dawn Strongin (Psychology)

5:00-5:20  Break for Posters and Refreshments

5:20-5:40  Emily Renteria: “Harm Reduction and Syringe Access in Stanislaus County: Options and Obstacles”

Faculty Mentor: Dr. Darren Hutchinson (Philosophy)

5:40-6:00  Stephanie Wurz: “An Investigation of Coordinated School Health and Safety Programs in Elementary Schools in Stanislaus County”

Faculty Mentor: Dr. Shawna Young (Kinesiology)

6:00-6:20  Rose Beam: “The Economic and Health Benefits of Biodiesel Use and Production: A Case Study at CSU Stanislaus”

Faculty Mentor: Dr. James Tuedio (Philosophy)

6:20-7:00  Refreshments
ABSTRACTS OF SENIOR CAPSTONE Presentations

Effects of Iconicity on American Sign Language Acquisition and Retention

Natalie Hammond

Communication is vital to personal and interpersonal growth. The presence of considerable deficiencies in communication is one of the key factors in determining whether an individual is on the autism spectrum. This presents an enormous challenge and about 30% to 40% of these people will not acquire speech. The use of American Sign Language has become more prevalent in treatment programs for various populations, including those with autism, as both an alternative communication system and a way to improve speech. In this study, the researcher will examine the impact of iconicity (how much a sign looks like what it represents) on sign acquisition and retention. The researcher expects that signs that are highly iconic will be acquired more easily and retained better over time than those that are less or non-iconic. If so, further studies should be done to find if similar differences exist in populations of individuals that have yet to develop an effective communication system. It has been suggested that some individuals with autism may find it difficult to understand the correlation between words, concepts, and objects. Though this is not the only issue with such a complex topic, such research could have implications for those seeking a way to foster communication development in children with such difficulties by using a system that provides a higher level of iconicity early on and then branching out with that knowledge as much as possible.

Santa Maria del Fiore: A Conceptual Context for Understanding Dome Construction During the Italian Renaissance
Adrielle Kent

When Florence sought to establish its dominion among their rival neighbors to the north, they chose to erect the largest dome ever built, unsupported by visible buttressing. An intense interest in Classicism and ancient Greek and Roman architectural principles drove the Opera del Duomo to desire a grand spherical dome. Many architects had been working on the Duomo since 1296, beginning with a floor plan by Arnolfo di Cambio. But the Opera del Duomo did not plan ahead when it came to building a dome for the cathedral. They built an octagonal opening 143 feet across, confident some great mind would come along and find a way to build a dome atop the abyss. Although a dome, when built right, is quite stable, this aesthetic choice transcends practicality and enters the realm of the philosophical. In the early 15th century, Filipo Brunelleschi solved several architectural enigmas that had eluded artisans for hundreds of years, an achievement which spurred a wave of dome construction in Europe and later the United States. By discerning the concepts that inspired this work of art, we gain a better understanding of the culture of Renaissance Florence and important aspects of Western culture as a whole. While it is unclear precisely where such inspiration originates, great works of art would not be possible without the key ideas that inspired them. One idea from one individual does not usually start an artistic movement. It takes many ideas influencing a culture and brought to fruition by an individual to produce a work of art. By investigating the creative process that made the dome of Santa Maria del Fiore possible, a better understanding of Brunelleschi’s thought process as an artist, and perhaps the artistic thought process itself, can be more readily construed.

Singapore’s Mathematics Textbooks: One Key to Their Success in Mathematics Achievement

Dana Whetstone

Since 1995, Singapore has consistently ranked among the top nations on the Trends in International Mathematics and Science Study, while the United States has ranked lower than many industrial countries. In 2005, a study funded by the U.S. Department of
Education compared mathematics teaching in elementary schools in the U.S. and Singapore. They found that Singapore’s system for teaching mathematics is superior to practices in the U.S. The study cites several advantages of Singapore’s framework, including the rigor of their textbooks, as key to their success. This presentation compares textbooks from Singapore and the U.S. Singapore’s textbooks incorporate multistep, application-based problems and pictorial demonstrations of abstract mathematical ideas. In addition, students are taught a heuristic, known as the bar method, used throughout their mathematics experience and applicable to most problems. Further, Singapore textbooks cover topics in depth, with an average of only 15 topics per grade. Conversely, U.S. textbooks often lack focus, covering twice as many topics on average; nor do they feature representational modeling or problems requiring multiple steps, aspects central to the success of the Singapore framework.

**What a Heroine Can Do: Examining Literary**

**Cultural Myths in Karen Joy Fowler’s *Sister Noon***

Amanda Heinrichs

In her article “What Can a Heroine Do? Or Why Women Can’t Write” Joanna Russ discusses how the literary “myths” or “plot patterns” employed by writers of the Western European tradition simply are incompatible with female protagonists. Consequently, according to Russ, women for the most part have been limited to writing the Love Story, which traditionally has been seen as less serious, or of less literary merit, than the male-centered myths that populate the canon. Using this article as a framework, I have constructed a character study examining the contemporary historical-fiction novel *Sister Noon* by Karen Joy Fowler to explore how it is able to break out of the cultural myths that Russ identifies as being the only ones available to women. By structuring my paper as a character study of the novel’s three central female characters, I hope to discover what kind of story each woman is telling, and to suggest new literary myths that better fit these characters. In this way, I aim to look deeply into how this novel constructs a divergence from classical Western European literary myths, as well as how Fowler treats the social and gender issues that implicitly accompany such a story.
Crossing Georgia: An Analysis of the Russia-Georgia War of 2008

Isaac William Farhadian

On August 7, 2008, war broke out between Georgia and Russia in response to the secession of the breakaway regions of Abkhazia and South Ossetia. The conflict, which is now often called the Five Day War, cost the lives of over eight hundred and fifty people, resulted in a massive exodus of innocent civilians, and made once-thriving villages and towns into unrecognizable battlegrounds for the two warring nations. In order to understand the context of this interregional conflict, this research will investigate and examine the following areas: international responses to the war; Russian politics since the collapse of the Soviet Union; and the direct consequences of the war. This study will investigate multiple references from European, Georgian, Russian, and American (U.S.) sources. This examination will be based off official investigations, interviews, newspapers, journal articles, and declassified files. My primary source of information is the Independent International Fact-Finding Mission on the Conflict in Georgia (IIFFMCG), which was established by the Council of the European Union.

The Glass Ceiling: Progress for Women in Organizations over the Last Decade

Sarah Lamas

My research will focus on the idea of the “glass ceiling”, an invisible barrier preventing women from advancing in organizations. My hypothesis is that the glass ceiling still exists and there has been little progress for women over the last decade. Theories on the topic include the Economic Theory of Glass Ceiling, the Psychoanalytic view of the Glass Ceiling, and the Sex-role Stereotypes Theory. Statistical evidence based on comparisons in the areas of pay, promotions, and access to training/development demonstrates that women are disadvantaged. Various equal employment opportunity laws have been passed that aid to fight discrimination against women, including the Civil Rights Act of 1964, the Glass Ceiling Act, the Equal Pay Act, and the Pregnancy Discrimination Act. Affirmative action is a way to fix the statistical problem presented and is in some cases
court ordered. Findings through research confirmed the hypothesis that the glass ceiling still exists and there has been little progress for women over the last decade. Recommendations and suggested research are also presented.

**Critiquing the Music Industry**

**Through the Lens of Philosophy**

Jackson Leverone

The music industry is more than a means of access to music. It is a system of forces that impacts all aspects of musical experience. As such, it is vulnerable to a critical analysis of the factors that contribute to the "workings" of this system. My analysis problematizes the music industry under the influence of Guy Debord’s critique of the “spectacle” and Martin Heidegger’s concept of “machination.” My account is supported by philosophical and musicological evidence and observation. Through these lenses, my analysis addresses the perversion of music within the music industry by first applying Debord’s observations to the marketplace of music and Heidegger’s critique of technology to the history and impact of recording technologies, and then exploring the possibility of unperverted music and the authenticity of its experience. This treatment of the modern conditions that act upon our experience of music seeks to open up a broader understanding of music in its relations to context and listener -- a set of relationships too often taken for granted.

**The Influence of Hyperconjugation on Molecular Conformation**

Grant Langlois

Since the late 1950s, Valence Shell Electron-Pair Repulsion (VSEPR) theory has been the dominating qualitative model used in chemistry to determine how simple molecules conform to, or how they are oriented in, three-dimensional space. This model bases its conjectures upon the repulsive nature of electron pairs surrounding an atom and therefore their tendency to adopt orientations that place them as far apart as possible. VSEPR theory has been used for decades to explain the “staggered” conformation of ethane, as pictured:
However, in 2001 a landmark paper was published that completely overturned this notion; a phenomenon known as hyperconjugation was the main influence responsible for ethane’s conformation. In order to investigate the importance of this phenomenon as a general rule for the determination of three-dimensional orientation, a more complicated derivative of ethane was investigated. Its conformational preference was determined in order to provide an account of hyperconjugation’s influence upon the molecule and of other molecules as a whole.

Enclosed Women: Finding “A Room Of One’s Own” in Late Nineteenth Century Literature

Hannah Carlson

Domestic space has been a prevalent theme in literature throughout history as a result of women authors writing about their lives confined within the domestic sphere. Their experiences of enclosure within the home manifest into literary works where female protagonists are depicted within mentally and physically enclosed spaces. Gilbert and Gubar argue that a woman must break out of her confinement to find her identity and to be a writer, while Virginia Woolf asserts that women must create a space of their own to be successful. Based on analytical readings of “A New England Nun” by Mary Wilkins Freeman, “The Story of an Hour” by Kate Chopin, and “The Yellow Wallpaper” by Charlotte Perkins Gilman, it is obvious that the different theories of space correspond with each other and are both applicable. In order for a woman in the nineteenth century to find her identity, she must first find her own space, one that is not governed by a man or imposed by society. Finding and maintaining that space, however, requires a sacrifice. These stories depict women who sacrifice companionship, their sanity, and their lives for inner freedom and their own space.
E-Commerce: Forecasting Emerging Trends

Grady Maguire

Rapidly outpacing the growth of traditional retail sales, e-commerce sales have shown dramatic year over year growth for the past decade. This development shows no sign of slowing down; rather, it appears to be gaining momentum. As the market changes, so should the methods of research. In order to analyze the new trend, my analysis combines traditional s-curve economics with current demographic research to produce a significant forecast of future market conditions. The staggering results may provide insight into buying patterns of future years. My results will clarify how the emerging economic trend will reshape American culture for future generations.

Do We Need a Revaluation of Peace in Light of Nietzsche’s Analysis of Nihilism?

Daniel Neisess

The concept of peace is often seen as the ultimate vestige of the ideals of goodness in the world. Religious and non-religious people alike have made appeals to peace as a foundation for living 'correctly' with one another. My research aims to investigate to what degree a discussion of peace could fit into the devaluation of values as presented in Nietzsche's analysis of nihilism. I primarily worked with Friedrich Nietzsche's texts The Genealogy of Morals and The Gay Science, and Colman McCarthy's Solutions to Violence and Strength Through Peace. Through my analysis it becomes more and more apparent that a traditional definition of peace is saturated with the same kinds of metaphysical values that Nietzsche suggests we separate ourselves from. In order to find some ground to even begin allowing for a discussion of peace, the concept needs to be simplified greatly. My analysis shows that either we need to let go of the concept of peace entirely in order to allow for the destruction of values, or that we use the simplified concept of peace provisionally as part of the process of revaluation.

“The People” in the Beginning
Cari RayBourn

I look at the creation myths of three California Native American coastal tribes that lived in close proximity to one another and engaged in various cultural exchanges. I will discuss language phyla, hunting practices and cultural beliefs of the Chumash Tribe, the Gabrielino-Tongva tribe and the Juaneno tribe. One might assume their respective creation stories would converge over time, but in fact they did not. I will elaborate on some key similarities and differences in their respective mythologies.

The Stress Response: What Are You Letting Stress Do To You?

Meloney West

What is stress doing to you? The word “stress” is enmeshed into our daily language to mean various things. We talk about the stress we have with our work, at home, in traffic. We talk about how stressed out we are and how various people, situations, and things make us feel this way. But what exactly is this thing we call “stress” and what exactly is it doing to us and our bodies? The body’s stress response is not a finite thing that is inherently good or bad for us. In fact, our role as viewers in our daily lives is more important to our physiological health than many people realize. What you do, feel, and think has a greater impact on you than what is actually happening in what we call “stressful situations.” And most shocking of all, you probably aren’t even aware of what stress is doing to your health.

Harm Reduction and Syringe Access in Stanislaus County: Options and Obstacles

Emily Renteria

Harm reduction philosophy is a life exercise, cultivating practices whose focus is geared
An Investigation of Coordinated School Health and Safety Programs in Elementary Schools in Stanislaus County

Stephanie Wurz

Within the last few decades, there have been growing health problems in American society, and California is among the states with the highest risk of health problems demographically. Children are especially at risk because they are heavily influenced by what they see in their school and in their community. In the school system, it is important that concepts in physical education, nutrition, health education, psychological services, health promotion, and even community involvement be available to students, not in factions, but as a complete, integrated whole. A coordinated school health and safety program addresses this goal but is not
often seen within community schools. For this study, a wide sampling of schools within Stanislaus County was taken to determine if a coordinated school health and safety program was being effectively implemented for their students. School principals from each of these sites were interviewed, and a comparison and summary of the interview notes were turned into data for Stanislaus County. This data was then analyzed and recommendations were given to improve the quality of an overall integrated program in every Stanislaus County elementary school.

The Economic and Health Benefits of Biodiesel

Use and Production: A Case Study at CSU Stanislaus

Rose Beam

People are beginning to recognize that human actions are affecting the environment, and are looking for solutions to mitigate these problems. However, it may seem like a daunting task, especially when there are large up-front costs for beginning a project. An ideal project would actually save money over the long term in addition to environmental benefits, and a biodiesel project at CSU Stanislaus can do just this. By using economic analysis, this study will show that after an initial investment of equipment, materials, and training time, there would be a return in less than three years, and save the campus many thousands of dollars thereafter. In addition, it examines the non-monetary benefits such as pollution reduction and educational prospects. Examining the multiple implications of producing biodiesel allows one to more accurately assess the viability of implementation.
HONORS PROGRAM
COMMUNITY STATEMENT

The Honors Program at CSU Stanislaus is a community of scholars bound together by vital principles of academic openness, integrity, and respect. Through focused study and practice involving exploration and discovery across a variety of disciplines, the Honors Program upholds these principles of scholarly engagement and provides students with the necessary foundations for further research and inquiry.

Our interdisciplinary curriculum is integral to this work, and is intended to facilitate creative understanding of the irreducible complexities of contemporary life and knowledge. Personal and intellectual honesty and curiosity are essential to this process. So, too, is critical openness to difficult topics and respect for different perspectives, values and disciplines. The Honors Program aims to uphold these virtues in practice, in principle, and in community with one another.