

Schedule for Student Research Symposium 2018

[Last Updated 3-9-2018]

8:00 - 10:00 • Breakfast on the “plaza” Simpson Boulevard

A complimentary breakfast buffet will be open to all students and guests of the SRS in the Cafeteria with seating on the boulevard.

8:00 - 10:15 • Registration..... Bean Scene Patio

A registration tent will be setup on the patio for students and guests to register their attendance and participation in the SRS. All registered attendees will receive a chance to win a SRS'18 t-shirt throughout the day.

9:00 - 10:00 • Egg-Drop Contest & ODL Events Bean Scene Patio

Egg-Drop Session Coordinator: Prof. Michael Austin, *Assist. Prof. of Physics*
ODL Session Coordinator: Prof. Amy Smallwood, *Assoc. Prof. of Outdoor Leadership*

10:20 - 11:20 • Opening Plenary Session.....Grant Center

Plenary Address, Dr. Joe Wyse, President, Shasta Community College
“The Concept of ‘Place’ in Career Pathways: A Personal Perspective Presented through One Life Story”

11:30 - 12:45 • Session Block A

SRS Session #1 Discussion Panel:

“The Human Body as ‘Place’: Point of Care Medicine” LaBaume-Rudat #204

Session Moderator: Prof. Misty Smith, *Assist. Prof. of Nursing*

- ❖ Nicole Faulknor and Aubrey Cronk
“Early Warning System Checklist for Delirium in Elderly Cardiac Surgery Patients”
- ❖ Jennifer Leaf, Patrick Earl, and Amy Shepard
“Proposal for High Flow Nasal Cannula Therapy in Treating Acute Respiratory Failure”
- ❖ Christopher Smith and Bethany Shortt
“The Benefits of Kangaroo Care in the NICU”

SRS Session #2 Discussion Panel

“Concepts and Uses of a ‘Place’ in Biblical Literature”..... LaBaume-Rudat #201

Session Moderator: Dr. Bill Griffin, *Assoc. Prof. of Ministry and Bible*

- ❖ Joseph Fritz
“The Compass of Scripture: Ascent, Descent, Exile and Return, Themes for Navigating the Axis Mundi”
- ❖ Jared Neusch
“Figural and the Rediscovery of Christocentric Hermeneutics”
- ❖ Garrett Struwe
“Wrath and Love in Revelation”

SRS Session #3 Discussion Panel

“‘Place’ as a Construct of Individual and Community Identities” Grubbs #123

Session Moderator: Dr. Timothy Orr, *Assist. Prof. of History*

- ❖ Sarah Blumert
“Online and Face-to-Face: Places of Self in Americanah”
- ❖ Drake MacLaren
“Early Formations of German National Identity in the Renaissance and Reformation”
- ❖ Kelsey Reibsamen
“The Spanish Armada and England’s Protestant Nationalism, 1588-1603”

12:45 - 1:30 • Lunch Break

Lunch is on your own.

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1:30 - 2:30 • Session Block B

SRS Session #4 Discussion Panel

“The Human Body as ‘Place’: Therapeutic Interventions” LaBaume-Rudat #204

Session Moderator: Prof. Seth Abrahamson, Assoc. Prof. of Mathematics

- ❖ Kirk Hamar, Sabrina Mantei, and Shannon McKenna
“Analgesic Treatment of Children with Orthopedic Emergencies: Opiates vs Nonsteroidal Anti-inflammatory Drugs”
- ❖ Christine Vivit
“Communicating Love: A Nurse's Mission”

SRS Session #5 Discussion Panel:

“Environmental Impacts on Redding, California’s ‘Place’” LaBaume-Rudat #201

Session Moderator: Dr. Brian Hooker, Assoc. Prof. of Biology

- ❖ Julianna Gilson
“Results of Microcosm Studies Using Native Cultures from Acid Mine Drainage”
- ❖ Rachel Last
“Metagenomics of Microbial Communities in Acid Mine Drainage”

SRS Session #6 Discussion Panel: “Fictional Short Stories” Grubbs #123

Session Moderator: Dr. Brian Larsen, Assoc. Prof. of English

- ❖ Sarah Blumert
“Shakespeare in Traffic”
- ❖ James Davis
“What Sara Said”
- ❖ Janet Spoon
“Dirty Deeds Done on Spoon Lane”

2:45 - 4:00 • Session Block C • Simpson University Faculty Presentations

SRS Session #7 Discussion Panel..... LaBaume-Rudat #204

Session Moderator: Dr. Nicole Kenley, Assist. Prof. of English

- ❖ Dr. Craig Cook, Dean, School of Education
“The Birth of the Basketball Court: Bodies in Time and Space”
- ❖ Dr. Timothy Orr, Assist. Professor of History
“The Power of Place: Exile and Execution in the Life of Reginald Pole”
- ❖ Prof. Amy Smallwood, Assoc. Professor of Outdoor Leadership
“Place as Encounter: The Sacred, the Sublime, and the Everyday”

SRS Session #8-A Discussion Panel LaBaume-Rudat #201

Session Moderator: Dr. Jennifer Costillo, Assist. Prof. of Psychology

- ❖ Prof. Megan Grover, Assist. Professor of Anatomy and Physiology
“Assessment of Vitamin A Toxicity among Adults as Well as the Effectiveness of Plumpy Doz Nutrient Supplement in Correcting Anemia among Young Children of the Rohingya Refugees in Bangladesh.”
- ❖ Dr. Rebecca Swartzman, Assist. Professor of Nursing
“Mental Wellness a Place of Mind”

SRS Session #8-B Discussion Panel Grubbs #123

Session Moderator: Dr. Michelle Stinson, Assoc. Professor of Old Testament

- ❖ Dr. Dan Pinkston, Professor of Theory and Composition
“Electric Blues Death Rattle: Wisdom Literature and Ecclesiastical Visions in U2's ‘Pop’”
- ❖ Dr. Reg Watson, Clinical Training Director
“Investigating the Place of Same-sex Orientation and Same-sex Oriented People in the Church of the Nazarene”

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4:15 - 5:15 • Session Block D

SRS Session #9 Discussion Panel:

“Appreciating the Diversity of ‘Place’” LaBaume-Rudat #201

Session Moderator: Dr. David Rice, *Assist. Prof. of Biology*

- ❖ Chloe Lynch
“Fostering the Lives of Non-Minor Dependents”
- ❖ Chloe Wright
“Were You There?: Investigation of a Great African-American Spiritual”

SRS Session #10 Discussion Panel:

“Evolutions in the Market ‘Place’” Grubbs #123

Session Moderator: Prof. Wally Quirk, *Assist. Prof. of Business*

- ❖ Joseph Taveras, Nicole Morse, Michael Munn, and Daisy Rodriguez
“Changes in Economic Exchange or Click and Order vs. Brick and Mortar - The Evolution of the Market Place”

SRS Session #11 High School Division Presentations:

“Place: The Final Frontier” LaBaume-Rudat #204

Session Moderator: Dr. Brian Hooker, *Assoc. Prof. of Biology*

- ❖ Nathaniel Stack, Hannah Blum, Jacob Akana, Max Schalo, Seth Rehmann, Colby Huskey, Finn Cave, Isaac Sorrells, Taylor White, Ryan Place, and Benny Quiroz
“Project KnightWolf: Shasta High School and Shasta College Students Building a Micro-satellite to Conduct Scientific Research of the Low Earth Orbit (LEO) Environment”
- ❖ Nathaniel Stack, Chloe Koschnick, Noah De Los Santos, Taylor White, Connor Arel, Ryan Meline, Colton Melhase, Jacob Akana, Jacob Huskey, Colby Huskey, and Hannah Blum
“Project SKOUT (Shasta's Kinect Observing Underground Terrain): Development of a Rover, Incorporating Current Readily Available Technology to Map Underground Locations Untouched by Natural Light”

5:30 - 7:00 • Banquet (by invitation only) Humphrey-Collard Room

Banquet for symposium presenters and faculty mentors.
Winners of the Stanley Clark Student Research Awards

Sessions and Abstracts for Student Research Symposium 2018

[Updated 3-11-2018]

NOTE: Please be aware that sessions are held concurrently throughout the day in three different venues. Sessions 1, 2, and 3 are held from 11:30 am to 12:45 pm. Sessions 4, 5, and 6 are held from 1:30 pm to 2:30 pm. Sessions 7, 8A, and 8B are held from 2:45 pm to 4:00 pm. Sessions 9, 10, and 11 are held from 4:15 pm to 5:15 pm.

11:30 – 12:45 SRS Session #1

Discussion Panel: “*The Human Body as ‘Place’: Point of Care Medicine*”LaBaume-Rudat #204

Session Moderator: Prof. Misty Smith, *Assist. Prof. of Nursing*

Title: “Early Warning System Checklist for Delirium in Elderly Cardiac Surgery Patients”

Presenters: Nicole Faulknor and Aubrey Cronk

Faculty Mentor: Misty Smith

Abstract: The aim of this study is to identify an early warning checklist based on risk factors that influence the development of delirium in older adult cardiac surgery patients. Delirium is considered a true medical emergency and places the patient at risk for harm and long-lasting neurological impairment. Delirium can include manifestations such as sudden changes in cognitive function, alterations or disturbances in memory or attention, and having irrational or paranoid thoughts or hallucinations (Ignatavicius & Workman, 2016). This study will utilize an experimental research design, which provides a structured setting utilizing a randomized single blind trial consisting of a control group and an experimental group. Expected outcomes of this research include reduced severity and incidence of postoperative delirium, earlier recognition of delirium risk factors, and more positive patient outcomes.

Title: “Proposal for High Flow Nasal Cannula Therapy in Treating Acute Respiratory Failure”

Group Presenter: Jennifer Leaf, Patrick Earl, and Amy Shepard

Faculty Mentor: Misty Smith

Abstract: The purpose of this proposal is to present a study to compare high flow nasal cannula therapy (HFNCT) and non-rebreather mask therapy within an Emergency Department (ED) setting. Problem Statement: There is limited research about the benefits of HFNCT in comparison to non-rebreather mask therapy. Research Design: This study will involve a quantitative approach to conduct a comparative, descriptive, retrospective chart review. Findings: The proposed findings will support the hypothesis that HFNCT helps prevent intubate in patients with acute respiratory failure (ARF). The findings will hopefully show that HFNCT is as effective as non-rebreather mask therapy. Recommendations: Additional research will be required to support the findings on the effectiveness of HFNCT and improve standards of evidence-based patient care.

Title: The Benefits of Kangaroo Care in the NICU

Two Presenter: Christopher Smith and Bethany Shortt

Faculty Mentor: Misty Smith

Abstract: Background: In this proposed study, there are two different approaches to care within the NICU; kangaroo care (KC) and standard care (SC). KC involves newborns being placed on the chest of the mother (or close family members), and is associated with improved neonatal health outcomes. SC is an approach which involves a controlled environment of an incubator in the clinical setting. Aim: The aim of this research paper is to explore the benefits of early implementation of kangaroo care (KC) in neonatal intensive care units (NICU) compared to the standard care model. Population/ Sample: The target population for the study will be male and female neonates admitted into the NICU, who are within the first thirty days of extrauterine life, and meet the inclusion/exclusion criteria. An estimated 100 neonates will be included in the sample size. Methodology: Subjects will be randomly divided into a control group and a comparison; where neonates in the control group will be treated with SC, and the comparison group will receive KC. Health records, including vital signs and cardiopulmonary parameters of the subjects, will be used to determine significant changes in health outcomes between the two groups. The Neonatal Index of Parental Satisfaction (NIPS), a Likert-style scale survey, will be used to measure parent satisfaction. Results: If KC is found to make a significant positive impact on the neonates included within the study, further research would be needed to increase implementation in the NICU setting.

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11:30 – 12:45 SRS Session #2

Discussion Panel: “Concepts and Uses of a ‘Place’ in Biblical Literature”LaBaume-Rudat #201

Session Moderator: Dr. Bill Griffin, *Assoc. Prof. of Ministry and Bible*

Title: “The Compass of Scripture: Ascent, Descent, Exile and Return, Themes for Navigating the Axis Mundi”

Presenter: Joseph Fritz

Faculty Mentor: Jack Painter

Abstract: When turning to the theme of place toward Scripture, words like Eden, Temple, Jerusalem, the Promised Land, Heaven and Earth all come to mind. From the beginning of Genesis till the end of Revelation we see great movement, both real and metaphorical, between many places. From Adam and Eve going east out of the place of paradise; to Israel's exile and return from Babylon; to Jesus's wandering ministry between Galilee and Judea, which culminates in his going up to Jerusalem to die. Of course it doesn't end there, Christ is raised up from that realm of the dead below; he rises further still from that place whence came the Logos to dwell among us. What's more, Christians are told not only will Jesus descend a second time, but will even raise mankind to that place of union with the Trinity for which it was originally destined. In this paper we will see how geography and movement come together in the Bible to show how mankind was once in a place near unto God, yet found itself exiled to an outer darkness beyond the camp of creation as it were, until the movement of God himself, down and out, brings mankind back in and up toward union with him once again. And from there 'further up and further in', as a certain great author once put it.

Title: “Figural and the Rediscovery of Christocentric Hermeneutics”

Presenter: Jared Neusch

Mentor: Leron Heath

Abstract: The cross of Jesus and His resurrection from the grave stand irremovably fixed at the nucleus of the Christian life. Paul, a well-studied Jew, says of himself, "I determined to know nothing among you except Jesus Christ, and Him crucified" (1 Cor 2:2). Although the cross is virtually ubiquitous in the life and theology of the Christian, the singular focus of this presentation will be how the cross informs one's reading of the Scriptures. In this presentation I would first establish Jesus as the originator of the Christocentric Hermeneutic, and how the New Testament authors received and passed on this hermeneutic in their writings. I will then examine a figural approach to reading and interpreting these texts - a method established and moved forward by Erich Auerbach, Hans Frei, and Richard Hays. Finally, I will propose that a careful reexamination of Israel's Scriptures in light of Christ, although a practice inaugurated many hundreds of years ago, remains potent and penetrating for contemporary church and society. Whether serving to remind western Protestants of a spiritual heritage that predates Acts or challenging the justification of violence in the name of a violent God, a hermeneutic that requires followers of Jesus to consistently shift their gaze back towards and through the cross will lead the church into greater and greater truth.

Title: Wrath and Love in Revelation

Single Presenter: Garrett Struwe

Mentor: Jack Painter

Abstract: Say the phrase 'wrath of God' and the first book of the Bible the average person thinks of is Revelation. Images of cataclysmic wars, famines, and natural disasters flash in front of their mind's eye as they assume that wrath is God's pent-up anger finally being released to destroy the earth and end history. The idea that accompanies these visions is that the love of God has no place in the wrath of God. God loved the world by sending His Son and causing the gospel to spread throughout, but one day God will put off His loving countenance, roll up His sleeves, and angrily clean up this mess we call 'earth'. This perspective usually goes hand in hand with a doctrine that says that God's preeminent attribute is power. God is all-powerful, and therefore He is loving when He is pleased and wrathful when He is perturbed. There is no wrath in His love nor love in His wrath. However, if we take what is written in 1 John 4:8 seriously, that "God is love," then we may conclude that wrath is actually an outworking of the love of God. A particular interpretation of the book of Revelation along with the theological contribution of Romans 1 shows that God's wrath is observable in both the freedom God has granted humanity to continue pursuing sin to the fullest extent of its corruption and the absolute determination of God to destroy evil, both of which are rooted in God's love.

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11:30 – 12:45 SRS Session #3

Discussion Panel: “‘Place’ as a Construct of Individual and Community Identities” Grubbs #123

Session Moderator: Dr. Timothy Orr, *Assist. Prof. of History*

Title: “Online and Face-to-Face: Places of Self in *Americanah*”

Presenter: Sarah Blumert

Faculty Mentor: Nicole Kenley

Abstract: Present day Western culture is gradually trying to reconcile the long-perceived dichotomy between online content and the world of literature. As an example, in the last several years, many people who earn their living producing YouTube videos started writing books, ranging from essays detailing their personal stories to collections of poetry. In this way, online content and literature became interdependent upon one another, opening up new opportunities for participants in both fields. Previous to this trend, however, *Americanah*, a 2013 novel by Chimamanda Ngozi Adichie, explored the possibilities of literary hybridity through including posts from the protagonist's blog, "Raceteenth," throughout the text. By integrating such a casual medium into an otherwise serious novel, Adichie allows the reader more intimate access to her protagonist's thoughts and actions, as the content of Ifemelu's blog posts are not always reflective of her actions in everyday life. Literary theorist Frederic Jameson, in his piece, "Postmodernism and Consumer Society," discusses questions that are directly relevant to an analysis of Adichie's text, specifically pertaining to postmodernism, parody, and pastiche. In this presentation, I will be arguing that, through the use and inclusion of Ifemelu's blog posts, Adichie not only creates a postmodernist text, but produces different "places" for Ifemelu's various forms of self to exist; her actual, real-life thoughts and actions are contrasted with the version of herself she creates and presents online. This duality serves as a self-created pastiche of Ifemelu's character, impacting the way society and culture are read in the text, as well as how they are perceived outside of it.

Title: “Early Formations of German National Identity in the Renaissance and Reformation”

Presenter: Drake MacLaren

Faculty Mentor: Timothy Orr

Abstract: "What is Germany? All of us sane people would answer with something along the lines of ""a German speaking nation east of France and west of Poland."" It may seem like a silly question today but before the emergence of the modern idea of the nation state in the Enlightenment, the idea of what a nation is was a lot more muddled. In medieval Europe national identities were also far more localized, people were often identified by what city, town, or province they came from. A person travelling from their home town to another in the same political sphere would still be called an outsider. That said, the foundations for many modern nations in Western Europe were in place by the end of the thirty years war and the treaty of Westphalia save for two exceptions, Germany and Italy. Germany was only superficially unified by the Holy Roman Empire, as its Emperor was not always German in origin and it was inherently tied to Rome at the very least in its creation. The land would eventually be divided by the rise of the Prussian kingdom in the eighteenth century and it would not be until 1871 that a truly German state and named Germany would be created. And thus again we come back to this question ""What is Germany?"" or more accurately: What was Germany before unification? I believe that the foundations of the German state and national identity were present during the late medieval renaissance period and Reformation, even if they are not as conventional as the rather clear political foundations of other states such as France, England, and Spain."

Title: “The Spanish Armada and England's Protestant Nationalism, 1588-1603”

Presenter: Kelsey Reibsamen

Faculty Mentor: John Ayabe

Abstract: This paper focuses on the idea of nationalism in a place. The research focuses on the event of the Spanish Armada and how it effected England in 1588-1603. The paper argues that the victory over the Spanish navel attack led to a Protestant nationalism. This result can be seen primarily through looking at primary sources that show unity in battle victory, propoganda, and the religious mentalities of the sixteenth century. This research adds to the defense of nationalism existing pre-eighteenth-century and challenges the way nationalism is defined.

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1:30 – 2:30 SRS Session #4

Discussion Panel: “The Human Body as ‘Place’: Therapeutic Interventions”LaBaume-Rudat #204

Session Moderator: Prof. Seth Abrahamson, *Assoc. Prof. of Mathematics*

Title: “Analgesic Treatment of Children with Orthopedic Emergencies: Opiates vs Nonsteroidal Anti-inflammatory Drugs”

Presenters: Kirk Hamar (Lead), Shannon McKenna, Sabrina Mantei

Faculty Mentor: Misty Smith

Abstract: The purpose of this study is to show that nonsteroidal anti-inflammatory drugs (NSAIDs) are more effective than codeine in treating long-bone fractures in pediatric patients ages six to twelve years old. Design: The design of the study is an experimental design consisting of two similar groups of pediatric patients with long-bone fractures. One group will receive NSAIDs and the other group will receive codeine. Setting: Participants will be selected from the emergency department (ED) of four Northern California Hospitals: Mercy Medical Center, Enloe Medical Center, Sutter Roseville Medical Center, Kaiser Foundation Hospital. Each hospital gets a considerable amount of ED visits annually. Sample size: The target population will include adolescents ages 6 to 18 years of age. The recruitment and selection of the subjects will be a homogenous sample population. Results: NSAIDs are just as effective if not more effective in the treatment of pediatric patients with long-bone fractures. They do not lead to dependency and have fewer systemic side effects. NSAIDs are better tolerated and have less risk than codeine and should be used as the first-line of treatment in the emergency department before codeine or other pharmacological management.

Title: “Communicating Love: A Nurse's Mission”

Presenter: Christine Vivit

Faculty Mentor: Rebecca Swartzman

Abstract: Nurses have the privilege of openly showing love and compassion to those they serve; however, if one is unaware of the possible implications that their words or actions portray, practicing nursing becomes a challenge. The aim of this research is to determine how nurses show love and compassion to their patients in a cultural context that is significantly different from their own. Within this research, there is an emphasis on making connections with patients via cultural sensitivity and properly communicating within the cultural context to create a welcoming and trusting relationship between the nurses and their patients. In order to achieve cultural competency, appropriate preparation is necessary to be successful. Preparation may include comprehension of social norms, working knowledge of the local language, and identifying prevalent concerns in order to successfully provide solutions. In nursing school, students are taught that nursing is a profession of caring for others holistically, and the purpose of this paper is to determine how to approach patients within their cultural setting and convey a genuine concern for their well-being.

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1:30 – 2:30 SRS Session #5

Discussion Panel: “Environmental Impacts on Redding, California’s ‘Place’”.....LaBaume-Rudat #201

Session Moderator: Dr. Brian Hooker, *Assoc. Prof. of Biology*

Title: “Results of Microcosm Studies Using Native Cultures from Acid Mine Drainage”

Single Presenter: Julianna Gilson

Faculty Mentor: Brian Hooker

Abstract: Iron Mountain Mine is a U.S EPA Superfund site located nine miles from Redding, California. When active, the facility was used to mine gold, silver, copper, iron, and iron pyrite. Weathering of the mine facility causes a reaction between rainwater and iron pyrite which leads to the production of sulfuric acid. Because of sulfuric acid accumulation at the Iron Mountain Mine site, pH levels have been recorded as low as -3.4 in the resulting acid mine drainage. Despite this, microbial communities have been isolated from the acid mine drainage at three specific sites on the Iron Mountain Mine facility. Soil samples taken from these three sites have been used in microcosm studies to identify microbial activity that neutralizes sulfuric acid. Microcosms were set up to contain on average fifty percent soil and fifty percent ground water and were monitored by weekly sampling to establish baseline sulfuric acid concentrations. After baselines were established, microcosms were fed either sodium lactate or sodium acetate to stimulate microbial growth. These microcosms were also sampled weekly to identify any reduction in sulfuric acid concentration. In this presentation, results of these microcosm studies will be shown and any successes in the microbial neutralization of sulfuric acid will be reported. If successful, these microcosm studies will be scaled up toward the direct microbial neutralization of sulfuric acid in situ at specific locations on the Iron Mountain Mine site.

Title: “Metagenomics of Microbial Communities in Acid Mine Drainage”

Single Presenter: Rachel Last

Faculty Mentor: Brian Hooker

Abstract: Iron Mountain Mine is a US EPA superfund site located nine miles from Redding, California. When active, the facility was used to mine gold, silver, copper, iron, and iron pyrite. Weathering of the mine facility causes a reaction between rain water and iron pyrite which leads to the production of sulfuric acid. Because of sulfuric acid accumulation at the Iron Mountain Mine site, pH levels have been recorded as low as -3.4 in the resulting acid mine drainage. Despite this, microbial communities have been isolated from the acid mine drainage at three specific sites on the Iron Mountain Mine facility. In the proposed presentation, we will present the results of a metagenomics study on the constituents of bacterial communities and archaeal communities located at three separate sites on Iron Mountain Mine. These communities were identified using 454-Pyrosequencing of 16S ribosomal RNA. DNA was extracted from soil samples taken from sites ranging in pH from 0.5 to 2.5. After DNA extraction, 16S sequences were isolated by PCR and purified prior to sequencing. Results showing the presence of both sulfidogenic bacteria and acetogenic bacteria will be presented. Sulfidogenic bacteria are important to Iron Mountain Mine as they possess metabolic capability to neutralize acid mine drainage. Conversely, acetogenic bacteria can further promote the production of sulfuric acid.

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1:30 – 2:30 SRS Session #6

Discussion Panel: “Short Stories” Grubbs #123

Session Moderator: Dr. Brian Larsen, *Assoc. Prof. of English*

Title: “Shakespeare in Traffic”

Presenter: Sarah Blumert

Mentor: Brian Larsen

Abstract: The Dodge Ram’s long, irritated honk had done nothing to move the bumper-to-bumper traffic oozing from highway 13 onto the 580 interstate. Up ahead, an 18-wheeler with a dark blue cab pulled forward several inches, or perhaps it was just becoming hazy in Alex’s vision, wavering like a watery reflection in the afternoon heat.

Wiping beads of sweat from his creased forehead with the back of his calloused hand, Alex eyed the temperature gauge—only a quarter of the way above C. Still a mile to the exit—they might make it, at least they would if this God-blessing traffic would let up.

Alex’s mind traveled back three miles to his shop—that red Camaro still needed a tune-up, and he needed to change out the fuel filter on the silver Outback. He’d have Philip do that. Phil still hadn’t finished his last project, but maybe changing a fuel filter was more straightforward than switching out spark plugs.

Alex glanced over at his son, Philip, in the passenger seat, poring over a crinkled sheet of paper slashed with yellow highlighter. The teenager’s thin lips moved in silence, committing all seven lines to memory.

“Almost got that down?” Alex asked in a gruff voice.

Philip’s theater audition was the last place Alex wanted to go, but his son’s pleading eyes and his wife’s withering glare had left Alex no choice..

Title: “Dirty Deeds Done on Spoon Lane”

Presenter: Janet Spoon

Mentor: Brian Larsen

Abstract: I will be reading an autobiographical story written in Fiction Writing Course at Simpson University.

Title: “What Sara Said”

Presenter: James Davis

Mentor: Brian Larsen

Abstract: A fictional piece of literature, spoken aloud.

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4:15 – 5:15 SRS Session #9

Discussion Panel: “Appreciating the Diversity of ‘Place’”LaBaume-Rudat #201

Session Moderator: Dr. David Rice, *Assist. Prof. of Biology*

Title: “Fostering the Lives of Non-Minor Dependents”

Presenter: Chloe Lynch

Faculty Mentor: Cherry McCabe

Abstract: My presentation is a policy proposal that looks at the State of California's system for youth aging out of foster care. It summarizes how youth have been taken care of by the state in the past and how the California government can improve in assisting their transition into adulthood. As well as how they can assist these young adults in becoming successful members of society. I specifically look at the California Assembly Bill 12 and the benefits this bill has given to youth aging out. I also propose amending the qualifications of the bill for youth aging out of the system to meet in order to receive benefits from the state. This amendment will improve the use of funding and provide the most efficient benefits to these youth.

Title: “Were You There: Investigation of a Great African-American Spiritual”

Presenter: Chloe Wright

Faculty Mentor: Dan Pinkston

Abstract: American Music has many contributions including African-American music which includes spirituals and work songs dated before the Civil War as well as music genres of blues, jazz, rap, and hip hop. These genres have had an enormous impact on main stream American music such as rock, classical, etc. The African-American spiritual "Were You There" is one of the most famous spirituals that has been a cross-over hit in many genres including pop artists, gospel artists, and hymnals. I will go over the history of the song and it's important origins as well as look at some of the covers of this famous spiritual. Primarily, I will focus on why the text of this spiritual inspired me to write this contemporary version of this African-American spiritual. My piece begins in minor creating a somber sound when the lyrics ask God "were you there when..." and then the music becomes less sorrowful and turns to major when the hymn lyrics talk about "shouting for joy." The song finishes in major with the revised lyrics "you were there..." resolving that God was there during those time.

(Note: This presentation also includes a performance of the composition.)

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for Student Research Symposium 2018**

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4:15 – 5:15 SRS Session #10

Discussion Panel: “Commercial and Economic Factors of ‘Place’” Grubbs #123

Session Moderator: Prof. Wally Quirk, Assist. Prof. of Business

Presenters: Joseph Taveras, Nicole Morse, Michael Munn, and Daisy Rodriguez

Title: “Changes in Economic Exchange or Click and Order vs. Brick and Mortar - The Evolution of the Market Place”

Faculty Mentor: Wally Quirk

Abstract: A historical review of the shift of marketplace transactions; the theory of exchange is examined and discussed in light of the physical change of customer use of online shopping vs. retail shopping. The financial and social implications of these trends will be evaluated.

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4:15 – 5:15 SRS Session #11

High School Division Presentations: “Place: The Final Frontier”LaBaume-Rudat #204

Session Moderator: Dr. Brian Hooker, *Assoc. Prof. of Biology*

Title: “Project KnightWolf: Shasta High School and Shasta College students building a micro-satellite to conduct scientific research of the Low Earth Orbit (LEO) environment”

Presenters: Nathaniel Stack, Hannah Blum, Jacob Akana, Max Schalo, Seth Rehmann, Colby Huskey, Finn Cave, Isaac Sorrells, Taylor White, Ryan Place

School: Shasta High School

Mentor/Teacher: Brian Grigsby

Abstract: Project KnightWolf is a cooperative project where a team of high school and college students (Shasta High and Shasta College) are working together to build and ultimately launch (July-Dec 2018) a TubeSat satellite into Low Earth Orbit (LEO). Upon reaching polar LEO, the spacecraft will gather both temperature and magnetometer data at around 90-150 miles above the Earth's surface. Through the use of an amateur radio (HAM) system and antenna, the team will track and download the data gathered by the satellite's sensors. The path of the spacecraft will orbit the Earth every 90 minutes, upon which students will be able to acquire a signal and download their data. This data, with the help of scientists from John Hopkins Applied Physics Lab will be used to analyze and deepen our current understanding of the environment found in LEO. The LEO environment has been studied extensively by multiple organizations that include John Hopkins DODGE 3, a spacecraft made to use sensors to gather information about the magnetic field from LEO. Humankind is constantly searching for answers in regards to their place among the stars. But, how much do we know about the LEO? How do the temperatures vary with each 90 min orbital pass? How much does the magnetic field fluctuate? With our additional data, we plan to add to the body of existing knowledge about LEO. Currently, students are soldering, testing and designing circuits for the satellite, for preparation to launch no earlier than July 2018.

Title: “Project SKOUT (Shasta's Kinect Observing Underground Terrain): Development of a rover, incorporating current readily available technology to map underground locations”

Presenters: Nathaniel Stack, Chloe Koschnick, Noah De Los Santos, Taylor White, Connor Arel, Ryan Meline, Colton Melhase, Jacob Akana, Jacob Huskey, Hannah Blum

School: Shasta High School

Mentor/Teacher: Brian Grigsby

Abstract: Exploration of inaccessible underground terrain is a goal that NASA has for future missions. This research demo is based on the NASA Ames mission (Project BRAILLE Biologic and Resource Analog Investigations in Low Light Environments). Similar to the NASA Ames project, Project SKOUT will utilize a VEX robotics system (commercially available for education) as well as an Xbox Kinect system to image underground terrain in inaccessible areas. Students will design and construct a robot capable of rendering 3-D spaces that are otherwise unreachable, even in the total absence of light. The data will be collected using the Kinect's infrared technology to map out the physical features in the area. An agile vehicle will be required to traverse rough terrain that simulates the surface of Mars or other similar planetary topography. Our research, coupled with the research done by scientists, will give students an unusual and rare glimpse into the experiments that are being conducted for future NASA rover missions. Currently, students are testing various mobile rover designs to be able to navigate rough terrain (rovers being considered are being designed from previously designed NASA rover missions) and are testing the ability of the Kinect system to map terrains in infrared.

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For the first time, there will be three faculty sessions at the symposium this year. These concurrent sessions provide an opportunity for Simpson students to learn about their professors' scholarly work and witness firsthand how professors present their research at professional conferences. These sessions will contribute to one of the purposes of the symposium by showcasing the scholarly research conducted by Simpson University's academic community. Each session will wrestle with the symposium theme of *place*.

2:45 – 4:00 PM SRS Session #7 Simpson University Faculty Presentations

Discussion Panel:LaBaume-Rudat #204

Session Moderator: Dr. Nicole Kenley, *Assist. Professor of English*

Title: "The Birth of the Basketball Court: Bodies in Time and Space"

Faculty Presenter: Dr. Craig Cook, Dean, School of Education

Abstract: This paper addresses bodies in time and space, namely, in describing the processes of constructing playgrounds and basketball courts during the American occupation of the Philippines in the first half of the twentieth century. Using a culturalist approach to bodies in time and space from Henning Eichberg, and Foucauldian perspectives on the body within institutions, I seek to show how the American body politic sought to construct the corporeal Filipino body, with its prime tool being the basketball court. Today, basketball courts are ubiquitous around the Philippine Archipelago. In doing a history of the present, my aim as a researcher is to make explicit the processes and material conditions in which Filipino bodies were made visible and to be regulated by the American colonial regime. Among the questions I seek to address are: How was the body shaped by these emergent technologies? How did local culture shape these processes and outcomes? What meanings, both local and trans-local were constructed around these new forms of leisure, play, and the body?

Title: "The Power of Place: Exile and Execution in the Life of Reginald Pole"

Faculty Presenter: Dr. Timothy Orr, *Assist. Professor of History*

Abstract: The life of Reginald Pole sits at a number of interesting political intersections. Pole, though an Englishman, spent much of his life on the continent during the early years of the English Reformation because of his Catholic faith. His decision to go into exile on the continent and then to return to England despite the powerful position he held in Italy may be viewed as a microcosm of broader religious currents during this period. Pole's life serves a window through which to examine the decisions of early modern individuals who faced the threat of religious persecution. Pole's flight to the continent preserved his life but his activities there led to the execution of many of his relations—including his mother. When Pole returned to England his reinstatement of heresy laws reversed a tide that he himself had experienced and set forth thousands of English Protestant refugees while also creating a several hundred Protestant martyrs. However, Pole himself also pardoned a number of English Protestants and thereby spared their lives. This paper will examine the correspondence of Reginald Pole as he underwent these experiences and explore how he viewed the use of law in relation to exile and execution over the course of the English Reformation. The backdrop to all of Pole's activities is the question of place and how particular locations come to be invested with both religious and national significance.

Title: "Place as Encounter: The Sacred, the Sublime, and the Everyday"

Faculty Presenter: Prof. Amy Smallwood, *Assoc. Professor of Outdoor Leadership*

Abstract: There are many words we use for the natural places of the world: wild, untamed, remote, pristine, 'untrammled,' grandiose. In the 1800's, a common word was *sublime*. Yet our language fails to grasp or imply any kind of connection to natural places. The elements of the natural world are understood as "things," living or non-living, organic or inorganic, biotic and abiotic. We lack adequate language to signify our *relationship* with these things. Martin Buber's work in existential philosophy can be helpful here, as he proposes the word *encounter* to signify more than just an *experience*. In encounter, we interact with place (and, for Buber, people and God) relationally and reciprocally. This paper will explore Buber's work, along with the works of others like Rudolph Otto and Albert Schweitzer, to seek further understanding of human relationships with place.

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2:45 – 4:00 PM SRS Session #8A Simpson University Faculty Presentations

Discussion Panel:LaBaume-Rudat #201

Session Moderator: Dr. Jennifer Costillo, *Assist. Prof. of Psychology*

Title: “Assessment of vitamin A toxicity among adults as well as the effectiveness of plumpy doz nutrient supplement in correcting anemia among young children of the Rohingya refugees in Bangladesh”

Faculty Presenter: Prof. Megan Grover, Assist. Professor of Anatomy and Physiology

Abstract: The Myanmar refugees residing in the UNHCR refugee camps, Kutupalong and Nayapara, in the Cox Bazaar region of Bangladesh are highly vulnerable to food insecurity and consequently malnutrition. Vitamin A deficiency is a global health issue ensuing childhood blindness and increased rate of mortality. Thus, mega-dose vitamin A capsules are distributed in collation with the measles and DPT vaccines, to children, and to lactating women, in addition to retinol fortified food rations and retinol-containing micronutrient supplements. Consequently, at-risk groups, primarily pregnant women, malnourished children, and also well-nourished six to 23 months old children, receive massive retinol quantities, over exceeding the WFP and capsule programme recommendations. Estimated daily retinol intakes warrant possible risk of toxicity.

Anaemia is also a major public health issue, induced by multiple micronutrient deficiencies and extenuating factors, as seen by an anaemia prevalence of approximately 50% in the six to 59 month old refugee population in April/May 2010 (when defined as a blood haemoglobin concentration < 11g/dL). Pushtika is the current micronutrient used to correct anaemia, yet adverse symptoms results in non-compliance. Plumpy ‘doz, a peanut-based spread, has been evaluated in a recent cohort study to compare its effectiveness on change in haemoglobin levels in children six – 35 months of age with Pushtika. Both Pushtika and Plumpy ‘doz increased haemoglobin levels from baseline to after – intervention ($p < 0.001$). Their effects are impacted by differing camp and programme conditions. Yet, neither supplement seems to be more effective than the other in changing haemoglobin levels in the camps (NYP: $p = 0.232$; KTP: $p = 0.790$). Plumpy ‘doz could be a useful alternative to Pushtika as it contains added kilocalories, which is beneficial considering GAM prevalence in the camps.

However, in calculating vitamin A status and deciphering micronutrient efficacy, confounders of food insecurity and adverse camp conditions must first be addressed. Vitamin and mineral deficiencies and or toxicities must also be evaluated in order to determine real nutrient needs and target interventions. Although micronutrient supplements and vitamin A capsules are seemingly effective, short – term treatments in the presence of deficiency, long-term strategies need to be implemented.

Title: “Mental Wellness a Place of Mind”

Faculty Presenter: Dr. Rebecca Swartzman, Assist. Professor of Nursing

Abstract: Wellness is a current media buzzword popularly used to promote healthy lifestyles. Generally speaking, the focus of wellness in this context is geared toward a healthy diet and exercise and is simplistically taken to mean the opposite of illness. Yet, the concept of wellness is much broader than health which implies only the absence of disease in the physical body. A concept analysis as described by Walker and Avant (2011) was applied to the term mental wellness to determine its meaning beyond a standard dictionary definition. In the nursing metaparadigm, *person* is viewed as a triune being consisting of body, soul, and spirit, and the nurse practicing holistic care attends to the physical, mental, emotional, and spiritual needs of the patient (Watson, 1999). Thus, wellness also must encompass the entire person by considering the state of the spirit and soul of an individual as well as their physical body. A state of wellness is more than merely the absence of disease, and implies a holism that is greater than the sum of its parts. In 1987, Duncan postulated that an earnest analysis of wellness proposes that mental wellness maybe at the center of overall wellness. While wellness has been readily accepted in relation to the physical body, it has not been largely used in relation to the soul and spirit. In fact, the constructs of soul and spirit, emotion, will, and thought are often condensed by societal and professional norms into the single term "mental." Indeed, instead of mental wellness, one hears of mental illness or mental health. Rankin writes, “If taking care of the body isn’t the most important part of being healthy, what is? It’s caring for the mind, caring for the heart, caring for the soul.” A concept analysis of the term mental wellness resulted in an operational definition stating mental wellness was the sum of spirit, soul, and body working in harmony as it is influenced by relationships, community, thoughts, intellect, and environment. The concept analysis commenced for the purpose of developing a faith based nurse managed wellness center with an emphasis on mental wellness.

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2:45 – 4:00 PM SRS Session #8B Simpson University Faculty Presentations

Discussion Panel: Grubbs #123

Session Moderator: Dr. Michelle Stinson, *Assoc. Prof. of Old Testament*

Title: “Electric Blues Death Rattle: Wisdom Literature and Ecclesiastical Visions in U2's ‘Pop’”

Faculty Presenter: Dr. Dan Pinkston, Professor of Theory and Composition

Abstract: “Vanity, all is Vanity.” So begins the book of Ecclesiastes. This ancient Hebrew wisdom echoes through the ages, influencing a myriad of philosophers, artists, and theologians...even the biggest rock’n’roll band in the world. U2’s albums in the mid-1990s showed a dramatic departure from the optimistic anthems of their late 80s output. And, in hindsight, this trilogy of albums is markedly different from the life-affirming efforts they have released in the 21st century. *Pop*, the last of these albums, is examined in this paper as a form of wisdom literature, functioning in a manner that is analogous to the Biblical books of Ecclesiastes, Proverbs, Song of Solomon, and many of the Psalms. Songs from this album will be explored in the ways they express dissatisfaction, doubts, philosophy, anger, and questions. Like wisdom literature found in scripture, *Pop* is not an easy read, but this paper argues that it is a necessary step in the development of U2’s global voice, and holds a unique, fundamentally important place in U2’s discography.

The album begins with the frustration of *Discotheque* (“You can reach, but you can’t grab it”) and ends with *Wake Up Dead Man*--questioning where God is in tragedy (“Did you think to try and warn her?”). Between these two bookends are song after song that confront and expose anger, doubt, and resignation. Hope is also expressed, but it is a painful, hard-earned hope.

Salient musical aspects will be analyzed as well, including motives, textures, and timbral choices that enhance the tone of the album. From the inclusion of elements from electronica to a range of production choices, the album’s sonic imprint communicates the uneasy, searching tone of wisdom literature. *Pop* is a powerful piece of art in the wisdom literature tradition—albeit an overblown, post-modern version of its scriptural precedents.

Title: “Investigating the place of same-sex orientation and same-sex oriented people in the Church of the Nazarene”

Faculty Presenter: Dr. Reg Watson, Clinical Training Director

Abstract: The Church of the Nazarene asserts that homosexuality is a perversion of human sexuality, and that homosexual acts are sinful and subject to the wrath of God. Paradoxically, the denomination maintains that *all* people should be treated with dignity, grace, and holy love—regardless of sexual orientation—while firmly maintaining its position that a “homosexual lifestyle” is sinful and contrary to scripture. Nazarene clergy experience a tension between the denomination’s position on same-sex orientation and ministering to same-sex oriented people. This qualitative study explored the lived experiences of thirteen Nazarene clergy responses to homosexuality and their interactions with same-sex oriented people.