Willamette University



Liberal Arts Research Collaborative

Student Presentations

Friday September 4, 2015

Ford 122

12:00pm-5:45 pm

**12:10-12:30 Jacqueline Remmel.** *The Underrepresentation of Women in STEM: A Feminist Science & Technology Studies Perspective.* (Advisor: Tabitha Knight, Economics)

**12:40-1:00 Madison Rotter.** *Diesel in Oregon: A Study of Environmental Health Activism and Collaboration in the Willamette Valley*. (Advisors: Joyce Millen, Anthropology; Barbara Stebbins-Boaz, Biology)

**1:00-1:20 Jaide Farr.** *Children’s Environmental Health Awareness in Salem Child Care Programs.* (Advisors: Barbara Stebbins-Boaz, Biology; Joyce Millen, Anthropology)

**1:20-1:40 Julianne Johnson.** *Cancer Clusters: Various Perceptions and Building Tensions.* (Advisors: Barbara Stebbins-Boaz, Biology; Joyce Millen, Anthropology)

**1:40-2:00 Rosaline Kim.** *The Social Life of Cans: Exploring Communication through Commodities.* (Advisors: Joyce Millen, Anthropology; Barbara Stebbins-Boaz; Biology)

**2:00-2:20 Ying Meng.**  *Air Quality and the Dry Cleaning Industry.* (Advisors: Joyce Millen, Anthropology; Barbara Stebbins-Boaz, Biology)

**2:20-2:30 Coffee Break**

**2:30-2:50 Juliette Hallberg.** *Why Women Choose to Pursue Computer Science in College.* (Advisor: Haiyan Cheng, Computer Science)

**2:50-3:10 Mylinh Pham.** *Women in Information Technology: IT's Work Environment and "Brogramming" Culture.* (Advisors: Haiyan Cheng, Computer Science; Tabitha Knight, Economics)

**3:10-3:30 Caroline Brinster.** *Women in STEM Fields: An economic analysis of the gender wage gap among the fields of Engineering, Science, Computer Science, and Mathematics.* (Advisor: Tabitha Knight, Economics)

 **3:30-4:10 Coffee Break**

**4:10-4:30 Nikolas Ruiz Anderson.** *The Elgin Marbles: A Debate on the Legal Ownership of the Marbles.* (Advisors: Jeanne Clark, Rhetoric; Ann Nicgorski, Art History)

**4:30-4:50 Emma Sargent.** *The Elgin Marbles: Conservation Gone Wrong.* (Advisors: Ann Nicgorski, Art History; Jeanne Clark, Rhetoric)

**4:50-5:10 Karen Adele Page.** *Culture in a Box: Creating Intentional Space for the 5th Century BCE in the 21st Century.* (Advisors: Ann Nicgorski, Art History; Jeanne Clark, Rhetoric)

**5:10-5:30 Luc Marceau.** *An Inherited Monument*. (Advisors: Jeanne Clark, Rhetoric; Ann Nicgorski, Art History).

**5:30-5:45 Conner Rettig.** *The Democratic Image: The Imagerial Evolution of Coca-Cola and the Parthenon.* (Advisors: Ann Nicgorski, Art History; Jeanne Clark, Rhetoric)

**Jacqueline Remmel.** *The Underrepresentation of Women in STEM: A Feminist Science & Technology Studies Perspective.* (Advisor: Tabitha Knight, Economics)

This research project addresses the issue of the underrepresentation of women in STEM (science, technology, engineering, and mathematics) ﬁelds in contemporary Western societies by drawing on the social studies of science and technology as well as feminist theoretical perspectives. The author critiques the ways in which STEM cultural values and deﬁnitions of femininity mutually deﬁne each other in opposing ways so that women in Western societies cannot simultaneously fill a socially accepted feminine role and be significant contributors to STEM industries. These social patterns are traced through historical developments both of STEM industries and of femininity, and they are explored in the particular context of contemporary STEM education and pedagogical practices.

**Madison Rotter.** *Diesel in Oregon: A Study of Environmental Health Activism and Collaboration in the Willamette Valley*. (Advisors: Joyce Millen, Anthropology; Barbara Stebbins-Boaz, Biology)

Despite the long-standing knowledge about the human health risks of diesel emissions, particularly in Oregon, this information has not yet disseminated into mainstream knowledge. Some of the big players in Oregon's environmental health movement, such as Oregon Environmental Council and Beyond Toxics, are beginning to prioritize the passage of diesel engine regulations, as well as the increase in public knowledge around diesel as measures to improve the health of Oregonians and their environment. These endeavors illuminate the methods and efforts by which the environmental health community takes action, and how and with whom they collaborate in order to accomplish an improved human-environment relationship in Oregon.

**Jaide Farr.**  *Children’s Environmental Health Awareness in Salem Child Care Programs*. (Advisors: Barbara Stebbins-Boaz, Biology; Joyce Millen, Anthropology)

Human development involves a complicated, intricately scheduled set of processes that often cannot be corrected for if executed incorrectly. Because this is such a sensitive yet vital life stage, a broad academic discipline, deemed children’s environmental health, has arisen to study how exposures in early life can influence the health and well-being of a person for the rest of their life. Focusing on physical exposure in early life, I investigated how child care providers in Salem understand children's health, and how they are working to limit children's exposures to toxins and other environmental hazards. Topics covered included chemical cleaners, sunscreens, and food selection, as well as other, seemingly unrelated problems that were found to be of higher concern to child care providers. By first understanding the actual concerns of child care providers, tackling environmental health issues may become more feasible in the future.

**Julianne Johnson.** *Cancer Clusters: Various Perceptions and Building Tensions.* (Advisors: Barbara Stebbins-Boaz, Biology; Joyce Millen, Anthropology)

A cancer cluster demonstrates a statistically unexpected number of cancer diagnoses over a geographical area and period of time. These concentrated pockets of cancer victims lead to the discussion of an environmental cause. Although some investigations have identified environmental causes, a large majority of cancer cluster sources remains unknown. In our community of West Salem, we have seen an unexpected number of children and teens diagnosed with osteosarcoma, a rare bone cancer. This has not been identified as an official cancer cluster by the health authorities. I evaluate the tensions and differences in perception associated with identifying and understanding cancer clusters in society.

**Rosaline Kim.** *The Social Life of Cans: Exploring Communication through Commodities.* (Advisors: Joyce Millen, Anthropology; Barbara Stebbins-Boaz; Biology)

Considering the safety of food and questioning how we have learned notions of food safety may not be something we think about on a daily basis. Through an exploratory approach, I looked into the social life of cans here in Salem, Oregon, in order to better understand various aspects of food safety. My research highlights the importance of interdisciplinary fields to provide ideal real life application, the complexity of understanding the safety of food from various perspectives, and the gaps in understanding that may not always be apparent.

**Ying Meng.** *Air Quality and the Dry Cleaning Industry*. (Advisors: Joyce Millen, Anthropology; Barbara Stebbins-Boaz, Biology)

My background as an international student from China led me to pay attention to one of the key elements for human survival: the air we breathe. Understanding that we often take the air we breathe for granted and neglect to consider the health-damaging impacts of air pollution, I wanted to research common health issues associated with bad air quality. Working as an intern with the Oregon Department of Environmental Quality, I focused on the Oregon dry cleaning industry as my case study. I researched the socioeconomic tradeoffs of using three of the most commonly used dry cleaning solvents in the industry, and their relative health and environmental impacts. This necessitated an examination of the few current federal level and state level regulations on the dry cleaning industry as well as an analysis of public perceptions of dry cleaning and the relative safety of solvents used in the dry cleaning process.

**Juliette Hallberg.** *Why Women Choose to Pursue Computer Science in College.* (Advisor: Haiyan Cheng, Computer Science)

In a society that is becoming more technologically advanced and integrating computers into all parts of our lives, one would think that we should have a balanced team of developers behind the tech. However, we currently have a field that is dominated by men. Women make up a small fraction of the computer scientists working and just as small a percentage is pursuing the career in college. In my project, I explore the determining factors in why women choose and do not choose to pursue computer science in college. I examine the influence of educational background in technology, exposure to technology outside of school, the support of one’s peers and family, and the perception of the computer science field. In order to understand the gender gap, we must understand the barriers that women face when choosing whether or not to take a computer science class in college.

**Mylinh Pham.** *Women in Information Technology: IT's Work Environment and "Brogramming" Culture.* (Advisors: Haiyan Cheng, Computer Science; Tabitha Knight, Economics)

Not only is the number of women taking careers in information technology low, but the number of women leaving the industry is also high. Together, these contribute to the extreme shortage of women in technology and the need for more people in general to fill computer related jobs. Many speculate that there are so few women because they are forced to face a culture of "brogramming" that the male dominated field has created. This research project provides a look into the "brogramming" culture with an analysis of a 2015 survey study comparing both males and females in their job satisfaction, self-assessment, relationship with co-workers, relationship with supervisors, and their plans for the future. The results support literature that points to a "brogramming" culture that discriminates against females. With these results, this paper intends to contribute to the current literature surrounding women in information technology and the gender biases that continue to exist, increasing the understanding of the problem at hand.

**Caroline Brinster.** *Women in STEM Fields: An economic analysis of the gender wage gap among the fields of Engineering, Science, Computer Science, and Mathematics.* (Advisor: Tabitha Knight, Economics)

The gender wage gap and the gender occupation gap have been analyzed thoroughly in the last decade, but what remains to be seen is further economic research into this phenomenon within the STEM fields. The STEM fields are heavily male-dominated and have an underrepresentation of women working in them, yet the gender wage gap is on average the narrowest in these industries compared to other industries that are more female-dominated. This study uses gender wage data from the Bureau of Labor Statistics from 1995 to 2014 by specifically studying median weekly earnings in all occupations related to life and physical sciences, engineering and surveying, and computer science and mathematics. The purpose of this study is to determine how median weekly earnings affect the gender wage gap and whether or not the gender wage gap is statistically significant.

**Nikolas Ruiz Anderson.** *The Elgin Marbles: A Debate on the Legal Ownership of the Marbles.* (Advisors: Jeanne Clark, Rhetoric; Ann Nicgorski, Art History)

With the passing of several UNESCO laws in the 1970's the waters around legal restitution have been muddied. In the case of the Elgin/Parthenon marbles many questions have been raised as to the legality of the removal of the Marbles and furthermore the legality of the British Museum’s claim to ownership. This study looks to address the key arguments presented in this case and how decisions made on them can affect the precedent set for future cases of legal restitution.

**Emma Sargent.** *The Elgin Marbles: Conservation Gone Wrong.* (Advisors: Ann Nicgorski, Art History; Jeanne Clark, Rhetoric)

It has long been argued that when Lord Elgin removed pieces of sculpture from the Parthenon he was doing so in the spirit of preservation. However, more than a 200-year conservation history shows differently. By analyzing the treatment of the Parthenon in Athens and the Marbles in the British Museum through contemporary ethics I’ll determine which nation has taken better care of the antiquities and what this means for current ownership issues.

**Karen Adele Page.** *Culture in a Box: Creating Intentional Space for the 5th Century BCE in the 21st Century.* (Advisors: Ann Nicgorski, Art History; Jeanne Clark, Rhetoric)

The British Museum showcases examples of art and culture from many time periods and cultures under one roof in an attempt to exhibit the cultural connectedness of the world and humanity. As an ancient Athenian temple, the Parthenon represents values intrinsic to the people of the 5th century BCE; the building and the Elgin Marbles stand as some of the best examples of Classical Greek art. Greece’s main argument for the restitution of the Elgin Marbles is their cultural significance to the country. I will argue that the Marbles have developed cultural significance in Britain during the near two hundred years that they have resided in the British Museum. This cultural impact creates a debate of space, exhibition, and ownership which I will investigate.

**Luc Marceau.** *An Inherited Monument.* (Advisors: Jeanne Clark, Rhetoric; Ann Nicgorski, Art History)

Few monuments can claim the longevity of social significance that makes the Parthenon such a unique site. To the western world, the Parthenon has served as a sacred site embodying the highest of human values for well over two millennia. What makes this building sacred, however, has constantly changed since its construction, and as the values of the modern world change, so too do the values invested in the Parthenon. As the debate over the ownership of the Parthenon Marbles continues, the dynamic and adaptable nature of this site’s sacred quality becomes necessary to analyze. This project seeks to explore the debate over the Parthenon Marbles in light of the Parthenon’s mutable sacredness.

**Conner Rettig.** *The Democratic Image: The Imagerial Evolution of Coca-Cola and the Parthenon.* (Advisors: Ann Nicgorski, Art History; Jeanne Clark, Rhetoric)

In a 1992 advertisement the Parthenon columns were manipulated to resemble Coca-Cola bottles in an attempt to situate an iconic American symbol in the historic echelons of Athenian democratic patriotism. How does the modern day Parthenon image propagandize democracy in this world of advertising and social media? It is now in the 21st century that the Parthenon is transplanted into a world of images in which its initial religiosity dissolves and is replaced by a tradition of consumption and replication.