**Poster Session 1**
Commons West, Easel 38
12:00 PM to 1:30 PM

Perceived Discrimination Among Multicultural Students: An Examination of Latino and Asian-American Students at a Four-Year Institution in the Northwest
Gerardo Galeana, Senior, Political Science, History, Washington State University
McNair Scholar
Mentor: Julie Kmec, Sociology, Washington State University

This study looked at whether multicultural students, specifically Latinos and Asian Americans, perceived discrimination in their classrooms, workplace, or on campus in general. Participants consisted of Latino and Asian American students who filled out an online survey with questions on these areas. Four hypotheses were created and tested which were 1) Latinos would perceive discrimination more than Asian Americans, 2) males would perceive discrimination more than females, 3) multicultural Greek members would perceive discrimination more than non-Greeks, and 4) upper classmen would perceive discrimination more than lower classmen. The results from the survey responses supported only one of the four hypotheses where multicultural Greeks perceived discrimination more than non-Greeks. This area of perceived discrimination among multicultural students is something that should have more research conducted on.

**Session 1M**

Qualitative Research in Assessing Health and Wellbeing
Session Moderator: Clarence Spigner, Health Services
Mary Gates Hall 288
1:00 PM to 2:30 PM

* Note: Titles in order of presentation.

**Session 1P**

Interests, Organizations, and Political Reform
Session Moderator: John Wilkerson, Political Science
Mary Gates Hall 171
1:00 PM to 2:30 PM

* Note: Titles in order of presentation.
Fighting Privatization in Bolivia: Cultures of Resistance
Brenden Wynn Mc Lane, Senior, Global Studies (Bothell)
Mentor: Julie Shayne, Interdisciplinary Arts & Sciences

Since 1986, Bolivia has experienced a wave of International Monetary Fund imposed privatization. The breaking point occurred during the Cochabamba Water War. Over a period of months, citizens of Cochabamba took to the streets to protest the sale of their state water utility, SEMAPA, to international consortium Aguas del Tunari, and the resulting 150-300% rate hikes. This research asks this question: to what degree has indigenous culture helped to shape such anti-privatization movements in Bolivia? This research argues that the anti-water privatization movement fostered a reclamation of indigenous identities by Bolivian indigenous peoples who felt detached from their traditional roots. Indigenous groups such as the Aymara and Quechua historically have been socially, politically, and economically excluded from the Bolivian nation, which has been dominated by a white/Mestizo elite. While Bolivian social movements in the past have been formed along union lines, contemporary movements have seen indigenous groups rally around their unique indigenous identities. This research shows how cultural elements such as collective memory and dance have been used as rallying points for protestors who feel denied full citizenship, giving scholars a better understanding of how social movements achieve success. In Cochabamba, the tradition of the Fiesta, practiced annually by the city’s indigenous inhabitants, served as a focal point for collective action which united participants under their own definition of “Bolivian” culture. Bolivian indigenous social movements additionally serve as a model for further reversals of IMF imposed economic policies. Such movements indicate a desire for increased representation of the indigenous majority, as well as alternatives to the capitalist system of economic development. This study is based on analysis of primary and secondary sources. Primary sources include: published interviews with activists, media coverage of their actions, and economic reports regarding privatization plans. Secondary sources include multidisciplinary analyses of the movement in question.

Dancing Towards Success: Measuring the Benefits of Dance at a Secure Residential Facility for Teens
Ann Maclean, Senior, Dance: Dance Studies
Mentor: Gibson Cima, School of Drama
Mentor: Juliet McMains, Dance

"...And earlier today she had us dancing!” enthused a young teen, who had previously been sullen and uncooperative. Now she reassured the new-comer that the Secure Crisis Residential Center (SCRC) they now inhabited, was not really that bad. While working as a counselor at this SCRC, I came to suspect that teaching dance led to improving the attitudes of its residents. An SCRC is not an incarceration facility. Police or case workers bring teens to the centers when there are no charges against them, but they are nonetheless unable to return home for whatever reason, i.e. no adult is home or accessible, they are homeless/run-away, they have been kicked out of their parental group, or foster home etc. The facility provides safe, temporary transitional room and board for up to 15 days. It also offers residents services addressing housing, educational, family, health, legal, and other needs. This facility’s ability to deliver services depends directly upon cooperation between residents and staff. Multiple studies have demonstrated dance programs’ benefits in inner city school rooms. This study addresses the question: does providing dance classes in this SCRC, reduce the number of reported incidents and/or improve cooperation? The study consists of teaching two classes per week for ten weeks. I will compile data from both the facility’s current measures regarding the number and severity of incidents, and also from brief questionnaires of staff members about levels of cooperation experienced on their shift. Data will be compared between dancing and non-dancing days. I hope and anticipate that my research will generate much needed support for the survival and expansion of dance programs in facilities like this one, thereby strengthening benefits delivered to the at-risk youth they serve.

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SESSION 1U

RESEARCH IN THE VISUAL AND PERFORMING ARTS: CRITICAL INQUIRIES INTO PRAXIS, CREATIVE PROCESS AND (RE)PRESENTATION
Session Moderator: Betsy Cooper, Dance
Meany Studio Theatre
1:00 PM to 3:00 PM

* Note: Titles in order of presentation.

SESSION 2C

GENDER AND SEXUALITY IN THE 21ST CENTURY GLOBAL WORLD
Session Moderator: Judith A Howard, Sociology
Mary Gates Hall 234
3:30 PM to 5:00 PM

* Note: Titles in order of presentation.

The Right to Recover their Roots: Women, Memory and Identity in Postdictatorship Argentina and Chile
Mahala Katherine (Mahala) Lettvin, Senior, American Studies (Bothell)
Mentor: Julie Shayne, Interdisciplinary Arts & Sciences
“The Right to Recover Their Roots: Women, Memory and Identity in Postdictatorship Argentina and Chile” investigates the gendered division of memory and the ways women survivors of repressive governments construct a collective memory and identity. The Pinochet dictatorship in Chile (1973-1990), and the Dirty War in Argentina (1976-1983) were responsible for hundreds of thousands of victims subjected to detainment, torture, death, disappearance, and exile. Additionally, these regimes severely limited, if not altogether destroyed artistic freedom in both nations. The post-dictatorship era (beginning in Argentina in 1983 and Chile in 1990) allowed for, and in some cases encouraged the documentation of memories conveyed through cultural production. However, lingering fears of censorship and contradictions with institutionalized narratives of the past oftentimes prevented the effective creation and communication of these traumatic memories. This paper examines theories on collective memory, history, identity, and gender with particular attention to the ways in which they intersect, influence, and depend on one another. Recovering identity is particularly difficult while a populace seeks to rebuild civil society, and becomes even more laborious when identities are located within memories that contradict the dominant narratives of history. I argue that women, who were excluded from civil society long before the state implemented terror, assume crucial roles in defining personal, political, familial, and national identities while narrating their memories of trauma and loss. Further, because women’s memories rely on collective rather than self-identification, they are able to articulate a collective memory. Research for this paper is based on the analysis of primary sources, including: novels, letters, documentaries, films, memorials, parks, street art, and blogs. These testimonials are analyzed through a gendered lens, arguing that memory is a gendered process operating to serve innumerable cultural, political, and social purposes.

SESSION 2D

PLASTICS TO PLANTS TO TEETH: READING EARTH’S HISTORY
Session Moderator: Caroline Stromberg, Biology
Mary Gates Hall 238
3:30 PM to 5:00 PM

* Note: Titles in order of presentation.

Spatial and Temporal Distributions of Microplastics in Puget Sound
Jessica Lorraine (Jes) Maves, Senior, Interdisciplinary Arts & Sciences (Environmental Studies), UW Tacoma,
Environmental Science, UW Tacoma
Mentor: Julie Masura, Environmental Science, Interdisciplinary Arts & Sciences

Plastic pollution in marine ecosystems has proven to cause damage to wildlife as well as have negative impacts on the economy and human health. Current research has been unable to accurately identify concentrations of microplastics, a subset of marine pollution, within the ocean environment. By collecting and calculating these concentrations, we can identify a correlation between microplastic marine debris and environmental conditions. Microplastics are any synthetic poly-
mers that are less than 5mm in diameter. This study describes a 2010 comprehensive survey of microplastics within Puget Sound. Our field methods include a 15 minute surface trawl of the upper 2 to 4 centimeters of the water column. Plastics within the field samples are concentrated in the lab using wet peroxide concentration and gravimetric analysis. Every sample collected during 2010 contained plastic. Of the samples collected, concentrations in Puget Sound are as high as 422 mg plastic / g solids and as low as 2.3x 10^-3 mg plastics / g solids. The concentrations vary spatially and temporally throughout the Puget Sound, and are not dependent on basin-type or location. Further studies will link these concentrations to other outside parameters including tides, weather, and watershed. Continued work will determine if the presence of plastics in the environment is increasing, decreasing, or remains the same.

POSTER SESSION 3
Commons West, Easel 27
4:00 PM to 5:30 PM

FTIR Analysis of Microplastics in the Ocean
Dana Lyn (Dana) Scott, Senior, Interdisciplinary Arts & Sciences (Environmental Studies), UW Tacoma
Mentor: Julie Masura, Environmental Science, Interdisciplinary Arts & Sciences

Connections based on composition, location, and origination will improve our ability to assess the future impacts of microplastics in the oceans. Microplastics are synthetic polymers classified by their size, must be ≤5mm, and vary in composition. This study will categorize each microplastic particle by shape, size, as well as composition through Fourier-transform infrared spectroscopy (FTIR). The FTIR creates a molecular fingerprint by transmitting infrared radiation at the microplastic particle, producing an output infrared spectrum. These spectrums can be cross-referenced to other known plastics' fingerprints for identification. An entire sample may then be analyzed using this method to compare proportions of different types of plastic found at each sample site. Of the 218 samples analyzed 64% were polyethylene, 15% polypropylene, 10% polyvinyl chloride, 3% mixed polyvinyl chloride and polyethylene, 2% high-density polyethylene, and 6% unknown polymers. Additionally the particles scanned have been found to contain an unidentified chemical signature attached to its fingerprint. This FTIR research has yielded important and promising data, for future risk assessment, by allowing analysis of microplastics at spectroscopic level.

Methods for Identification of Bottlenecks in Non-Viral Gene Delivery for Gene Therapy
Brian Chou, Senior, Bioengineering, Neurobiology
Mary Gates Scholar
Mentor: Suzie Pun, Bioengineering
Mentor: Julie Shi, Bioengineering

Gene therapy is the treatment of disease by inserting genes or altering them in a subject’s cells and tissues. The Pun lab develops cationic polymer-based delivery vehicles. Our agenda was to determine the intracellular fate of drug delivery vehicles carrying the therapeutic genes in order to better understand cellular barriers that limit efficient delivery. For this project, we applied two methods to study the intracellular trafficking of polypplexes (polymer-DNA complexes). The first approach is a quantitative method using subcellular fractionation to separate organelles and determine the distribution of polypplexes in various cellular compartments after internalization. We hypothesized that by using methods of centrifugation, organelle-specific enzyme assays, and radiolabeling, polyplex distribution could be quantitatively analyzed. We demonstrated successful separation and quantification of organelles using a combination of differential and density-gradient centrifugation. The polypplex distribution in each fraction was determined through radiolabeling. In this way, a quantitative “snapshot” was taken of the distribution of polypplexes inside the cell, and yielded information for the identification of potential bottlenecks in trafficking to the nucleus. Our second approach is to study the intracellular trafficking of drug delivery vehicles by time-lapse fluorescence imaging combined with single-particle tracking. This complementary approach reveals both the time-course and behavior of particles as they are trafficked within the cell. By fluorescently-labeling the polymer and applying the polypplexes to cells, we successfully observed their motion within a single cell. We further optimized the quantity of polypplexes delivered and the image capture techniques to robustly track polypplexes within a single cell. Our work therefore provides improved methods for determining the mechanism and efficacy of gene delivery systems and potentially any particle-based drug delivery system. For future work, we plan to investigate the process of unpackaging of the polypplexes inside cells.