Sample Physical and Life Sciences Abstract

Rebecca L Higginbotham: **A Study of Decomposition in Water.**
Biology

This research project was conducted to gain a better understanding of the decomposition process of a body submerged in water; to determine if water type or quality has an effect on the breakdown of tissues, thus extending the post-mortem timeline beyond what has been documented in above-ground, open-air case studies; the general rule of thumb of "one week in open air equals two weeks in water" is the basic parameter. This study involved submerging small dead adult rats in various water types. Observations of the rat's physical changes and measured changes of the water's dissolved oxygen, temperature, salinity and pH were recorded daily over a period of two weeks. An open-air control tank was set up to establish a base timeline for comparison of all aquatic data sets. The statistical analysis shows no correlation between data sets. However, there is a distinct trend in the time it takes for the dissolved oxygen to decline, as well as, the rat's physical changes that creates a consistent timeline and visual depiction of the daily deterioration process. Results of this study indicate that the 2:1 ratio as the general rule of thumb are inaccurate since the decomposition of a body in water far exceeds the time for full decay of a body in an open air environment. The resultant information from this study serve to further the available information in the field of forensic research to strengthen the use of this data in court cases involving time of death.

Mahdokht Hamidian: Fruit Preservation Cream.
Chemistry

Every year, U.S. supermarkets experience economic loss due to losing roughly ten percent of their produce to spoilage during transportation and storage. Once fruit is harvested, any natural resistance to spoiling micro-organisms is lost. Currently, domestic and international produce distributors utilize costly methods such as refrigeration and vacuum cooling to reduce the rate of spoilage. As an inexpensive alternative, the author of this study has developed a natural product that can easily be applied to help fruit maintain its natural freshness from the time of harvest until consumption. This Fruit Preservation Cream is a nontoxic creamy substance that can be applied to fruit in a thin layer coating to slow the spoilage process. This study involved evaluating the spoilage rate of apples for a time period of up to 6 months. Taste, smell, and overall fruit appearance were examined for apples covered with the preservation cream and compared to a control group of apples without the cream. Experiments took place in a controlled laboratory environment, in a home kitchen environment, and an outdoor California backyard setting. The results of this study showed that the Fruit Preservation Cream significantly reduced the rate of spoilage of apples in the three environments tested. This suggests the Fruit Preservation Cream to be a viable inexpensive and non-toxic product to preserve the natural freshness of fruit, thereby increasing its shelf life. This product has the potential to greatly decrease the rate of produce spoilage, thereby reducing costs to produce distributors, supermarkets and consumers.

Sample Social Science Abstract

Olivia Jäggi, A Comparative Study on Suicide Prevention.
Anthropology
Suicide is considered to be the tenth leading cause of death in the United States, and national suicide rates have increased an alarming 33% since 1999. To understand this trend, suicide rates from the United States were compared to those of South Korea, a country that is notorious for its high suicide rates. By examining relevant literature and comparing statistical data, it was found that in contrast to the United States, Korean suicide rates have decreased significantly over the last few years. This study will examine the potential reasons behind this trend and discuss the implications on suicide prevention in the United States. In 2011, the Korean government issued a ban on paraquat pesticides during one of their national suicide prevention initiatives. This is significant because pesticide poisoning was one of the most common methods of suicide at the time. Shortly after this ban, Korean suicide rates began to decrease rapidly, which implies that the restricted access to lethal suicide methods might serve as an effective suicide prevention strategy. In comparison, firearms contribute to more than 50% of suicides in the United States, thereby making them the most common method of suicide. Considering the effects of Korea's ban on pesticides, it can be hypothesized that the restriction of access to firearms could significantly decrease national suicide rates the United States. Although the restriction of firearms cannot solve the underlying problem, it would still serve as an important first step towards the improvement of suicide prevention overall.

Sample Technology Abstracts

Travis Morrissey, Ian Schenck, Keegan Frederick: OCC Student Success Center App.
Technology
Our team will be demonstrating a mobile application we built for the Student Success Center on the Android smartphone operating system in the CS A273 Mobile Application Development course. The application aims to help students find the right tutors for their classes quickly, by being able to search for tutors based on class and availability. Currently information about tutors and the center overall are stored locally on paper. We used the Android Studio development suite software to develop the application. The source code is written in a high level object oriented programming language called Java, and the user interface is programmed in XML. The persistent database is developed using SQLite, which is a widely used and open source database engine. The design is modeled to allow for the user interface to be separate from the code that runs the application, resulting in a more versatile and maintainable program. To determine the demand for our application, we asked students in different majors if they would be interested in it, how often they would use it, and what they liked about it. A majority of the students showed interest in the application and reported that if they had it, they would use it multiple times in a semester. The features that the students liked were searching for tutors remotely and the ability to save your course list for faster searching. The application would save students time by allowing for remote searching of tutors, and providing useful information about the Student Success Center.

Sample Humanities Abstracts

Ryan Banh: **Affordable Housing and Housing Affordability in Orange County.**

Geography

Mainstream media persists as one of the most egregious perpetrators of anti-Millennial generation narratives. Across traditional and modern platforms, journalists and other media personalities espouse a condescending tone toward persons born between the years of 1976-2001. Newspapers, online magazines, and television engage in infantile and profanely insulting language towards the millennial generation regarding their financial and workplace habits (Melchior). Showing contempt for Millennial labor, exhibits media blindness to actual public perception, creating a destructive employment landscape for Americans. Current media depicts the majority social opinion of the millennial generation as 'lazy' and 'stupid.' A 2014 Reason/Rupe telephone poll reveals 55% of Americans surveyed describe millennials as 'responsible' and 'hard-working.' Mass-media communicates a conflicting message to the public, about millennials, who are coming of age as the dominant workforce with 81.0% of ages 25- 34 and 81.2% of 35-44 employed in the job market (United States Bureau of Labor Statistics). A 2014 online survey conducted by human resource consultants David Maxfield and Joseph Grenny reveals that one-third of workers of all generations spend five or more hours per week occupied by generational conflict. Division between the narrative and public perception positions the media as conflict creators in the narrative. Positive intergenerational perceptions are vital to workplace productivity. Counter to economic success, firms lose on the potential of new workers when a negative perception of millennial generational attitudes becomes routinely accepted. Demonizing the millennial generation does not best serve traditional markets.

Echoes from the Underground
European and American Literature

Friedrich Nietzsche notably referred to the Russian novelist Fyodor Dostoevsky as "the only psychologist from whom I have anything to learn." Dostoevsky's ability to encapsulate the darkest and most twisted depths of the human psyche within his characters has had a profound impact on those writers operating on the periphery of society. Through research on his writing style, biography, and a close reading of his novel *Notes from the Underground* I am exploring the impact of his most famous outcast, the Underground Man, on counterculture writers in America during the great subculture upsurge of the 1950s and 60s. Ken Kesey, Allen Ginsberg and Jack Kerouac employ both the universal themes expressed by the Underground Man as well as more specific stylistic and textual similarities. Through my research I have drawn parallels between these three writers with respect to their literary works as well as the impact of both their personal lives and the worlds that they inhabit. The paper affirms that Dostoevsky has had a profound influence on the geography of the Underground and that this literary *topos* has had an impact on the writers who continue to inhabit that space.

Passersby
Creative Writing

Richard Hugo wrote in his book of essays, *The Triggering Town*, that "knowing can be a limiting thing." His experiences, however brief, in many of the small towns that pepper Montana's landscape served as the inspiration to much of his poetry, and his observations came to reveal more of the poet than of the triggering subject. For Hugo, the less he knew of a place, the more he could imagine. My project, "Passersby," is a short collection of poems and black and white photographs that explore this notion of knowing and imagination. Place is the triggering subject in "Passersby" and will take the audience or viewer to a variety of national and international

locations, from Rome and Paris to Beaver, Utah and the Oregon Coast, and from there, into an exploration of experience and imagination relished by the poet. Hugo believed that as a writer "you owe reality nothing and the truth about your feelings everything." While reality will play a role in "Passersby," this work aims to blur the lines between knowing and imagination in order, perhaps, to find a truer place for the poet.

Sample Visual and Performing Arts Abstract/Artist Statement

The Integration of Historic Periods in Costume Design
Theatre
As productions turn away from resurrecting museum pieces, integrating costumes from two different historical periods has become more popular. This research project focuses on what makes costume integration successful. A successful integration must be visually compelling, but still give characters depth and tell the story of the play. By examining several Shakespearean theatre productions, I have pinpointed the key aspects of each costume integration that successfully assist the production. While my own experiences have merged Elizabethan with the 1950s, other designers have merged Elizabethan with contemporary and even a rock concert theme. By analyzing a variety of productions, connecting threads helped establish "rules" for designers. Through this research, I have established common guidelines for integrating two periods of costume history while still maintaining a strong design that helps tell a story. One method establishes the silhouette of one period while combining the details, such as fabric and accessories, of another period, creating an equal representation of the two. A second option creates a world blended equally of the two periods, in which the design becomes timeless and unique to the world of the play. A third option assigns opposing groups to two different periods, establishing visual conflict. Many more may exist, but the overall key to costume integration is to define how each period is represented. When no rules exist, there is no cohesion of ideas and the audience loses sight of character, story, and concept. Costumes help tell a story, and without guidance, that story is lost.

Sample Journalism Abstract

International Headlines 3.0: Exploring Youth-Centered Innovation in Global News Delivery
Traditional news media must innovate to maintain their ability to inform contemporary audiences. This research project analyzes innovative news outlets that have the potential to draw young audiences to follow global current events. On February 8, 2011, a Pew Research Center Poll found that 52 percent of Americans reported having heard little or nothing about the anti-government protests in Egypt. Egyptians had been protesting for nearly two weeks when this poll was conducted. The lack of knowledge about the protests was not a result of scarce media attention. In the United States, most mainstream TV news sources (CNN, FOX, MSNBC, ABC) ran headline stories on the protests by January 26, one day after the protests began. Sparked by an assignment in International Reporting J450 class, we selected 20 innovative news outlets to investigate whether they are likely to overcome the apparent disinterest of Americans, particularly the youth, in foreign news. Besides testing those news outlets for one week, we explored the coverage and financing of these outlets, and we are communicating with their

editors and writers to best understand how and why they publish as they do. We will evaluate them, following a rubric, and categorize them based on their usefulness and effectiveness.