

SPOTLIGHT ON RESEARCH

COLLABORATIVE FOUNDATIONS: USF and Pitzer College Explore Colorism, Affective Relationships, and Financial Transfers

Dr. Elizabeth Hordge-Freeman (USF Sociology) and Dr. Jessica Kizer (Pitzer College) are using five waves of data from the National Longitudinal Study of Adolescent to Adult Health survey to examine how skin color shapes affective closeness between child and parent; perceptions of parental support; quality of sibling relationships; and financial transfers between children and parents. Theoretically grounding their research in Hordge-Freeman's concept of "affective capital," the project explores how colorism can impact the quality of relationships in ways that have long-lasting material and affective consequences.

In September 2018, Dr. Hordge-Freeman and Edlin Veras (USF Sociology Ph.D. student) traveled to Pitzer College to collaborate with Dr. Kizer on their UNI project, "Color Matters: The Impact of Colorism on Affective Relationships and Financial Transfers in Families." Their visit entailed research meetings to discuss

the data analysis and conceptual mapping for their collaborative research, which they hope to present at a national conference in 2019.

In addition to the meetings, Dr. Hordge-Freeman and Edlin Veras presented a joint formal research talk on findings from their recently completed research on colorism. As well, Dr. Hordge-Freeman and Edlin Veras each separately presented interactive lectures to engaged undergraduates in two classes related to racism and colorism in the U.S. and Brazil.

Some of the most memorable experiences from the visit include their tour of all five Claremont colleges, interactions with Pitzer faculty and students, and discussions with Pitzer College administrators about collaborative study abroad opportunities. As part of the grant, Dr. Hordge-Freeman and Edlin Veras hosted Dr. Kizer at USF in January 2019.



SPOTLIGHT ON RESEARCH

Using State-of-the-Art Technologies to Investigate How Auditory Deprivation Affects Peripheral Attention

USF researchers in the Department of Psychology are working to figure out how deaf people read in a language that they have never heard. Although the literacy rate for deaf adults lags behind the rate for hearing people, skilled deaf readers actually read more efficiently than their hearing counterparts because they utilize a wider range of visual attention. This project, funded by the UNI award, investigates whether this attentional enhancement comes from deafness per se, or experience with a visual language (American Sign Language).



In collaboration with Dr. Amy Lieberman and researchers at Boston University's School of Deaf Studies, Dr. Elizabeth Schotter's team designed a series of experiments using state-of-the-art eye tracking equipment to present signs either close to the viewer's focus or far away from it. They compared how well deaf and hearing signers, and people who did not know sign language, were able to recognize components of real ASL signs and made-up signs.

Deaf signers' performance was aided by language knowledge (i.e., real ASL signs or English words), particularly in the far periphery. These preliminary data demonstrate that both deafness and language knowledge contribute to identification ability, suggesting that English literacy in the U.S. deaf population may benefit from learning sign language early on. Drs. Schotter and Lieberman presented these findings at the Annual Meeting of the Psychonomic Society (2018) and the Workshop on Reading, Language, and Deafness (2018).



SPOTLIGHT ON RESEARCH

Uncovering Amphorae, Discovering Commercial and Economic Systems

The UNI award has allowed Dr. Davide Tanasi (USF History) to collaborate with Dr. Michelle Bonifay and Dr. Filippo Pisciotta (Centre Camille Jullian, CNRS and Aix-Marseille University, Aix-en-Provence, France) to characterize the content of Roman and Late Roman amphorae coming from several different shipwrecks identified off the coasts of Marsala, in Western Sicily.

Marsala (Lilybaeum in Latin) was a major Roman port and trading post between Tunisia and Italy. The high number of amphorae recovered underwater from shipwrecks of various periods testifies to a consistent flux of goods moving from north Africa to Sicily and possibly vice versa. To identify the content of those containers and consequently to characterize an entire cargo would be extremely helpful to shed light on the commercial and economic dynamics of the Sicily-North Africa system in the Late Roman period. Using Gas-Chromatography and Liquid-Chromatography Mass Spectrometry (GC-MS and LC-MS) analytical techniques, it will be possible to identify the chemical signatures of organic residue imbued in the ceramic body of the amphorae and define contexts such as grape wine and olive oil.



Thirty three vessels held at the Archaeological Museum "Baglio Anselmi" of Marsala ranging in chronology between the 2nd and the 7th century CE, were sampled over summer 2018. The samples were subsequently submitted first for Gas-Chromatography Mass Spectrometry (GC-MS) analyses. The preliminary results showed the presence on seven amphorae of palmitic, stearic and linoleic acids which are the markers of olive oil. Further analyses are still ongoing.

SPOTLIGHT ON RESEARCH

Portable Power Generation in Rural Africa



In partnership with researchers from the Botswana International University of Science and Technology (BIUST) and funded by the National Science Foundation (NSF), Dr. Sarath Witanachchi (USF Physics) is investigating an innovative new paradigm of energy harvesting. The collaboration with BIUST researchers will lead to the development of working modules that will be tested in the field with the aim of producing efficient portable energy sources to improve the lives of people living in rural Africa, and indeed for most of the developing world.

The novel concept pursued in this project investigates the viability of using high voltage produced by thermoelectric modules from the recovery of waste-heat of cooking stoves to operate solar devices in reverse-biased configuration. The expected outcome is that during the time of the day when the sun is shining, and the cooking stoves are in operation, batteries can be charged more efficiently to store more energy.



In June 2019, a group of seven graduate and undergraduate students from USF will travel to BIUST and will team up with a cohort of students at BIUST. For four weeks, they will live, work, and travel together to achieve project goals. The group will also consist of a Social Science student who will study the cultural norms of the tribes to understand the social structure and effect of technology on the tribal society.

