Undergraduate Research Symposium May 19, 2017 Mary Gates Hall

Online Proceedings

Poster Session 1

Balcony, Easel 93

11:00 AM to 1:00 PM

Empathy: Where to Go, Where to Start?

Michelle Wiuff, Senior, Psychology, Bemidji State University
McNair Scholar
Mentor: Kate Larson, Psychology, Bemidji State University

Empathy can be a hard topic for discussion, especially when it comes to first examining it. Previous research on empathy has highlighted two basic types of empathy; cognitive and emotional empathy. Cognitive empathy refers to taking the perspective of another person and emotional empathy refers to emotional responses to another person that are like those responses the other is experiencing (parallel empathy) or a reaction to the emotional experiences of the other person (reactive empathy). The purpose of this project evolved from previous findings on college student empathy and local campus wide investigations. At the completion of this survey, we discovered???current empathy levels on campus and the potential for increasing the perspective taking aspect of empathy. With this knowledge, we hope to explore potential interventions intended to increase perspective taking. ???The futuristic goal would be to build a more inclusive and diverse community environment that has the ability to embrace all students.

Session 1D

Ecology and Evolution

Session Moderator: Bonnie Becker, Interdisciplinary Arts & Sciences (Tacoma Campus)

MGH 234

12:30 PM to 2:15 PM

* Note: Titles in order of presentation.

Jaw-Dropping Sculpins: Comparative Functional Morphology and Evolution of the Cottoid Feeding Apparatus

Nina Finley, Senior, Biology-Environmental Studies, Whitman College
Goldwater Scholar
Mentor: Kate Jackson, Biology, Whitman College

Dozens of sculpin species inhabit the Salish Sea, and their heads range from short and squat to long and sleek to lumpy and oblong. Our study focused on jaw gearing, or the mechanical relationship between the movement of muscles and jaws, in five of these species. We measured 37 anatomic and 5 kinetic variables describing form and function in the jaws, and we phylogenetically corrected our data to track how jaws evolve. Anatomic gearing was measured in dissected specimens, and kinetic gearing in live feeding fish. Both lines of data revealed that evolutionary shifts to higher gear ratios correlated with shifts to shorter muscles. This coevolution of gearing and muscle length allows diverse jaw structures to maintain similar muscle strain magnitudes and preserve high feeding performance. This intraspecific, coevolutionary relationship may help explain how dozens of sculpin species are able to maintain distinct head morphologies and coexist in the Salish Sea.

Poster Session 2

Commons West, Easel 2

1:00 PM to 2:30 PM

The Spread of Misinformation Online during Crisis Events

Stephanie Ann Stanek, Senior, Human Centered Design & Engineering
Mary Gates Scholar
Mentor: Kate Starbird, Human Centered Design & Engineering

Misinformation is a large component of social media. Sometimes, misinformation increases during times of uncertainty and panic, such as during crisis events. By collecting Twitter data from events such as the Boston Marathon Bombings, Paris Terror Attacks, and a WestJet Airlines Hijacking, it became apparent that thousands of individuals turn to social media as a real-time news source. First, data from public Twitter profiles was collected during major crisis events. After collecting the data, it was qualitatively coded based off a scheme pertaining to rumor acknowledgement. Next, individual Twitter users were contacted to participate in a semi-structured interview centered around their social media use habits. Through interviewing individuals who participated in the online conversation, data shows that there are emotional feelings related to online rumoring. This research aims to identify different ways misinformation is handled on Twit-

ter and explore a new idea, ”emotional proximity.” Implications of this research include a deeper understanding of how information travels online during crisis events, and the emotional influence social media has on individuals during drastic times.

POSTER SESSION 2

Commons West, Easel 1

1:00 PM to 2:30 PM

Exploring the Flow of #BlackLivesMatter Conversations in Response to Shooting Events Using a Shared Audience Network

Leo G (Leo) Stewart, Senior, Human Ctr Des & Engr: Human-Computer Int, Computer Science
Mary Gates Scholar, UW Honors Program
Mentor: Kate Starbird, Human Centered Design & Engineering

This research examines the politicized conversation around officer-involved shootings. Drawing on a dataset of shooting-related tweets containing #blacklivesmatter, #bluelivesmatter or #alllivesmatter, we construct a network graph of Twitter users who participated in this conversation, utilizing a measure of shared audience to connect and cluster accounts into communities. We then employed mixed-methods, including visual and qualitative analysis, to explore the communities, influencers, and information flows of this discourse. Our findings identify and describe several distinct clusters of accounts—both left- and right-leaning clusters, including a cluster of alt-right media—and show how users within the latter cluster were significant in shaping the flow of discourse. We situate our findings within the broader context of competing political narratives leading up to the 2016 presidential election. This work provides insight into the underlying structure of politicized discourse on Twitter, and demonstrates the utility of a shared audience network relation for guiding interpretivist analysis of Twitter conversations.