SEED IDEAS Application

Project Summary

Understanding the natural world has been central to human existence for thousands of years (Pliny the elder, 79). While letters, articles and books have been a common way to communicate science for centuries, recently new ways of tracking science communication have been developed, for example the attention metric known as altmetrics. There is a large gender bias that exists in traditional metrics of academic success, which contributes to the leaky pipeline of female scientists (Holman, 2018; Grogan, 2019; Peplow, 2019). For example, journalists under-quote women as news sources, both in traditional news outlets and in tweets (Artwick 2014) and articles with women in leadership positions receive fewer citations (Lariviere et al. 2013). This is despite the fact that women researchers have higher percentage of first authorships than men, but men have a lot more last authorships than women (van Der Weijden and Calero-Medina 2014). Additionally, there is no difference between men and women's number of publications, if you control for differences in structural position/resources (Ceci and Williams 2011). However, women account for less than 30% fractionalized authorship, which decreases the recognition they receive (Lariviere et al 2013). Social media metrics are more gender balanced than citations (Paul-Hus et al. 2015), despite the fact that men tend to have a greater web presence than women (van Der Weijden and Calero-Medina 2014).

Julie Fortin is doing innovative work exploring the patterns in altmetric data as it relates to different types of academic journals and temporal patterns of attention. Her work is central to understanding how the academy can do better to achieve the ideals for which it stands.

Goals and Objectives

1. In-Person Seminars for the University of Hawai'i Campus Community

We believe that bringing Ms. Fortin to campus at the University of Hawai'i has the potential to enrich our community with a dialogue about women researchers. Our proposal is to bring Julie Fortin to the University of Hawai'i at Manoa to give two public seminars and a live radio interview. The seminars will be to the Ecology Evolution and Conservation Biology graduate program and to the department of Tropical Plant and Soil Science.

2. KTUH Radio Interview and Discussion for the Broader Hawai'i Community

Julie will also give a live radio interview with Program Director, Bjarne Bartlett on Breakfast with Bjarne at KTUH to bring our on-campus discussion to the larger community on 'Oahu. The seminars and research will take place over a one-week visit in February 2020. The collaboration is focused on how to leverage large datasets and computer science to understand trends over time and to understand variability in many different fields to benchmark how academic publishing is doing and how new metrics can provide new insights into changing gender dynamics.

Presentation	**Discussion**	**Audience**
Seminar: Ecology Evolution and Conservation Biology Graduate Program	The balance in Altmetric data between male and female scientists.	30-50 graduate students
Seminar: Department of Tropical Plant and Soil Science	The balance in Altmetric data between male and female scientists.	30-50 faculty and graduate students
Radio: Breakfast with Bjarne	The balance in Altmetric data between male and female scientists.	~1 million terrestrial listeners
Radio: KTUH Online	The balance in Altmetric data between male and female scientists.	~1000 streams/month

Method and Evaluation of the Project

Our group will track the number of attendees at both seminars, including demographic data, to gauge seminar interest by demographic group. We will also survey attendees to evaluate attitudes about the gender gap in science. Finally, we will track listeners to the interview posted on KTUH Online to assess the level of community interest.

Area of Diversity Addressed

SEED IDEAS is committed to encouraging underrepresented minorities to pursue careers in STEM. Further, despite the increase in the number of women received PhD degrees over the last 40 years there has not been a corresponding increase in the number of female faculty at Universities (Pell, 1996; Peplow, 2019). Exploring the way in which scientific research is communicated and publicized is important to understanding if this is a contributing factor to this leaky pipeline. Gender differences in math-intensive fields are no longer due to discrimination in reviewing/grant funding/hiring. Policies put in place decades ago to combat this discrimination appear to have worked, with current barriers being different that require new approaches (Ceci and Williams 2011). Despite these factors it is unknown how new metrics, such as altimetric, that focus on attention are related to gender. Ms. Fortin's work has the potential to answer these questions.

About Dr. Mikey Kantar

Michael Kantar is currently an assistant professor at the University of Hawai'i at Manoa, he received his PhD in Plant Breeding and Genetics from the University of Minnesota and did a post-doc at the University of British Columbia. He was a 2018 AAAS Leshner Leadership

Institute Public Engagement Fellow. His research focuses on Neo-domestication, crop wild relatives, and the genetic basis of local adaptation.

About Ms. Julie Fortin

Julie Fortin is a data scientist and lab manager in the Land Use and Global Environment lab led by Professor Navin Ramankutty at the University of British Columbia in Vancouver, Canada. She received her Master's in Environmental Studies from the University of Victoria, where she was a member of UVic Women in Science. She enjoys participating in scientific outreach endeavors including presentations at elementary schools to promote STEM among young girls.

About Mr. Bjarne Bartlett

Bjarne Bartlett is a graduate student in Molecular Biosciences and Bioengineering at the University of Hawai'i, the Program Director at KTUH, and host of Breakfast with Bjarne Friday Mornings from 6-9am. He is interested in the gender gap present in the natural sciences, particularly whether current university and government policies are working, and hopes to host and interview with Ms. Fortin on Breakfast with Bjarne.

Budget

Item Category	**Description**	**Cost**
Honorarium	N/A	$500
Transportation	Roundtrip Air Travel on Air Canada	$700
Transportation	Local Cab fare	$200
Student Support	KTUH student time	$300
Supplies	Food for seminars	$75
Other	hotel during stay	$500
Total		**$2275**

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