Diversity and Inclusion in Animal Behavior

Assessment via assessment
Class & College Information

- Psychology 160 - Evolution and Behavior
- 50-100 Students
- Elective: Usually comprised of all college levels and many non majors
- Asian American, Pacific Islander, and Hispanic Serving Institution

“In this course, students will learn about the study of behavior from an evolutionary perspective. We will look at the mechanisms underlying behavior and how behavior develops in an animal’s lifetime, as well as the fitness benefits of behavior and how behavior evolves across species. We will look at a variety of behavior topics, from reproductive and mating behavior to cognition and communication. Animal behavior is a fascinating field that draws from a variety of disciplines, including psychology, neuroscience and anthropology, and students will learn about how these and other fields have impacted our understanding of behavior. In addition to lectures, we may also have in-class discussions about a variety of topics.”
Three Main Assignments

01 Infographic
Watch a conference presentation and create an infographic of the study!

02 Group Padlet
Group Padlet presentation describing a seminal animal in research

03 Short Thought Assignment
Student written thoughts on a controversial topic in animal behavior
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Student written thoughts on a controversial topic in animal behavior
Who is Dr. Charles Turner? (1867-1923)
The Short Thought Assignment

- Read Paper 1 or 2 (or both)
- 400 written words (any format!)
  - Preliminary thoughts.
  - Highlight 3 researchers
  - Where should we discuss the researchers in this class.
  - Are the issues presented still problematic today?
  - One possible solution to improve the issue(s).
Examples
Newsletter!

ANIMAL BEHAVIOR SCIENCE INCLUSIVE DIGEST
Monthly Email Newsletter curated by our top Editor: NAME

PAST DISPARITIES WITHIN THE FIELD
- People of color weren’t allowed access to laboratories and research libraries.
- Universities weren’t hiring them.
- RSC’s that allowed scientists to use their research laboratories weren’t properly funded.

It’s no surprise that within the field of animal behavior transforming theories created by people of color were not credited to them because of racism and discrimination inside the field. I am not surprised to hear about the disparities they’ve faced before, it is surprising that institutions continuously allowed this to happen and had rules that reinforced this. It was not shocking to hear that they weren’t properly credited because at the time racism, segregation and discrimination was still in the minds of people who followed the institution’s rules. In certain institutions there are still prevalent today where researchers aren’t being credited to the work they contribute. This newsletter sheds light to the researchers who made an impact to the field of animal behavior past and present.

ZULEYMA TANG-MARTINEZ
- Animals can recognize him through odor and small OIA.
- Tang-Martinez’s contribution to animal behavior helped explain major incompatibility couples (MCIC) where animals are able to smell which MCIC levels are similar to others and which ones are foreign. Her name wasn’t mentioned in class and findings could go great in the sexual selection (mate choice behavior).

ANDY SIH
- Animals adapting to new environments.
- If Sih’s research contributed to animal behavior by showing evidence that animals work well in new environments it is necessary that there is more research. He didn’t know about him in class however, his finding should be mentioned in the next issue.

Even though writing this newsletter wouldn’t reverse the injustices researchers had to face in the past, we can continue to promote inclusion and diversity. We can do this within the field, classroom and animal behavior research by rightfully citing people’s research when their work is used.

CHARLES H. TURNER
- Spider spinning webs (2)
- Charles H. Turner found out that spider webs change based on their environment. His research on the spider webs showed co-evolutionary change in spiders who live in different environments. His research helps spiders increase their level of fitness. His work should be mentioned in the evolution issue.

PROMOTING INCLUSION
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Twitter Thread

@psych160student - Jun 1

Although I am not surprised about the discrimination & bias in animal behavioral studies, I am shocked at the lengths people will go to, to be explicitly biased. Learning about women & PPC’s experiences in this field has been a tough subject to read.

@psych160student - Jun 1

A large amount of knowledge that we have today in animal behavioral science is from research done by women and PPC. To name a few, Jane Goodall, Diane Fossey, and Jane Altmann created new methodologies that changed animal behavioral studies for the better.

@psych160student - Jun 1

In my evaluation & behavior class, I am currently taking. Altmann’s work could be highlighted when we discussed mating behavior & parental care because her work highlighted not only looking at dramatic animal behaviors but subtle behaviors as well.

@psych160student - Jun 1

Similarly, Fossey and Goodall’s work with developing a deeper connection with the animals they were studying can be highlighted in every topic we have discussed. If we connect with what we see are exciting then we can get a better idea of why they behave in a certain way.

Anonymous @michayllyyy - Jun 1

Okay, but women and men are equal now. Black people and other minorities have the same rights as every one else. Move on from the past already!

@psych160student - Jun 1

Actually, anonymous, these issues are still relevant to women in any STEM field to this day. The three feminist theories in the Research Perspective for Understanding Women’s Education journal articles by EE, U. & C. explore how schools perpetuate dominant patriarchal (p1/2)

@psych160student - Jun 1

... ideologies that hinder access to quality education for girls & women in this journal article, we see the research that has done to explain how women still receive unequal education with women often called “niche” or “special” or “proper” methodologies. Goodall & Fossey are examples of this (p2/2)

@psych160student - Jun 1

Also, minority researchers and students do not have the same access to educational benefits, such as mentors, as the more privileged do. We have seen numerous counts of research done by minorities being ignored because of their race, such as Charles Henry Turner’s work (p3/2)

@psych160student - Jun 1

Turner had no access to laboratories, research libraries, and had no stable job because he was black (Lee, 2179). Turner’s research revealed new information about insects that was never accepted before. He did all of his studies without the resources his white colleagues had.

Anonymous @michayllyyy - Jun 1

I see your point, but I’m sure everyone’s work was cited, so they got credit. It is not that big of a deal.

@psych160student - Jun 1

Much of the time, research from women and PPC was not recognized or was not cited. Citations matter in order to give credit where credit is due and to not steal anyone’s hard work. Women and PPC are more likely to be taken advantage of by not being credited for their research.

Anonymous @michayllyyy - Jun 1

Oh I see your point... if this is all true how can we more diverse and inclusive so this does not happen in the future?

@psych160student - Jun 1

We can promote diversity and inclusion by listening to marginalized groups of people. We can listen to their concerns and work towards solutions for a more inclusive learning environment. Most importantly, we can credit their work and allow equal opportunities in work and research.

Anonymous @michayllyyy - Jun 1

Thank you for educating me. Your research, sources, and explanations has helped me change my perspective. Would you mind citing your sources?


I’m sure the fellow STEM students who read this blog are fond of skimming over (or even skipping) the authors of research articles assigned by our professors. An article I read a few days ago from Dr. Danielle N. Lee1 convinced me perhaps we should start paying attention to who contributes to our discussions in each class.

Her article shone a light on various BIPOC scientists, their work, and research in the field of animal behavior, historically and presently. As a woman of color, I have always been aware of disparities everywhere I go, so I wasn’t surprised by her article. Despite the effort of STEM culture to be, problematically, “color-blind” (specifically in Western countries, and even more specifically in North America), biases still very much exist.

A 2019 study2 showed that racial achievement gaps between STEM courses taught by more fixed mindset faculty3 was twice as large as those in courses taught by more growth mindset faculty. This is one of the reasons why BIPOC in animal research and STEM overall is lacking. We rarely hear of BIPOC researchers and their contributions until one of them puts in the effort, like Dr. Lee, to highlight their research.

I decided to find the research papers of some of those mentioned in her article, Nyeema C. Harris, an African American, she wrote a paper on parasites, mutualists, and

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1 Emma Liang, a fictional aspiring animal behavioralist, a college student, and blogger
3 These fixed mindset faculty believe that academic ability is fixed and have larger racial achievement gaps and inspire less student motivation in their classes.
4 These were the bias that White and Asian students are more talented in STEM than their Black, Latinx, and Native American counterparts.

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After diving into the deep end for organizations and coalitions created by non-white people, I discovered Oceanawell, Sri Lanka’s first marine conservation research organization, founded by Sri Lankan biologists Dr. Asha de Vos. Although her work is pertinent to Sri Lanka, it still matters that a woman of color founded an organization for her own country in a world where Western make voices dominate. Citations matter. Every time we skim over them or leave it to “et. al.”, we enter this problematic ideas of “color-blindness” and erasure. We choose to ignore the lack of diversity. Of course, fame doesn’t matter, but give credit where it is due, especially for BIPOC.

With all this in mind, I believe that professors should assign articles that aren’t just from Western researchers, but other countries as well, to decolonize science from the Western context. Additionally, STEM faculty should seek to understand their students from all backgrounds to create more room for BIPOC in any STEM field.
Women today still struggle to be heard, to be recognized, to be published (Reiber, 2015)
Every thought is shoving a “feminist” agenda down the throats of the people that oppress us
So we scream, loud and proud against the noise that holds gender roles as guides (Stout, Grunberg & Ito, 2016)
    Can we try a different perspective?
    Because I’m getting tired of the narrative
That women bring nothing more to the table
    But babies and breakfast
Why don’t you read about how sexual selection, mating behaviors and kinship affect you
Thank you, Cathleen R. Cox, Like Sarah Hrdy and Gail Michener too (Tang-Martinez, 2019)
    Can we get this talked about in units 4, 6 and 9?
Classrooms should be filled with role-reversals, diversity, and teachings of erasure
    It’s our revolutionary act
To take a stand, for the women who were silenced
    By the foot of a man
To pave the way
We must join hands
Because if you even saw a glimpse of what women in science have to offer
    You’d be shaking their hand
The most revolutionary act is elevating her.
Short Story

On a typical Saturday afternoon, two frogs set together under a tree and chatted.

“Yo, man, can you hand me this piece of this dead butterfly? Looks delicious.”

“Common Henry! I’m tryna tell you about the humans’ trash I’ve found, this article about us! can you believe how clueless humans are when they try to understand us?”

“I’m not surprised humans had biased theories about us. Until about 50 years ago female humans were excluded from scientific societies. This led to that male interactions were considered the most important in animal social groups (Tang-Martinez, 2020).”

“Not cool! Remember when we went to the nearest house and eavesdrop on an evolution class on Thursday morning? human-students read about this female named Sarah Holy when they learned about parental care. Apparently, human females tended to focus on behaviors that were performed by female animal which until then were overlooked (Tang-Martinez, 2020), which highlights that their involvement helped to gain a broader perspective about us.”

“Totally. Yet, Hory was not mentioned when they discussed sexual selection although she made contributions to the discovery that female animals solicited and mate with multiple males (Tang-Martinez, 2020). Similarly, Patricia Gowaty wasn’t mentioned then, although she challenged the Human model of sexual selection which is well accepted and being taught (Gowaty et al., 2012). Also, Jean Goodall investigated chimpanzees and corrected some misconceptions about them (Britannica, 2020). Yet, some of her work, for example about high-ranking female chimpanzees (Pusey et al., 1997), wasn’t mentioned, although it could have been mentioned when they discussed reproduction success.”

“Do you think those issues still exist among humans?”

“I’m afraid so. Today, one-third of ABS fellows are women (Tang-Martinez, 2020). Although it’s progress, the fellow’s positions are not equally distributed between women and man”.

“Right! Similarly, other human groups are still discriminated. For example- Some human wrote an article about a scientist named Charles Turner that wasn’t recognized for his work because he was African-American (Dona & Chittka, 2020). Ironically, the article used information from a different article written by Lee (2020), an African-American female, without citing her to give her the credit she deserves. Man, citing is important to recognize one’s contribution.”

“Ya know, I think humans can fix this. But, they need to address the foundations of higher education. For example- high admission fees can be a barrier for minorities. Also, biased additions-committee members might prefer students from specific groups (Forrester, 2020). Also, even in class, they should discuss women researchers to encourage women students to pursue higher education.”

“Harold, comment! Give me this worm next to you before he flees. I’m starving!”
“Allowing us to have creative liberties in-class assignments was also refreshing and beneficial to my learning.”

“This challenged me intellectually in such that I had a difficult time answering questions in a good way since I had to think beyond the ordinary.”

— AMAZING 160 STUDENTS
Next Steps

Transition from assessment to Assessment!

- Evaluating how creative assessments that incorporate diversity, inclusion, and student identity within the classroom impact learning outcomes, and Assessment across classrooms, program, departments, and more?
- Student (opt-in) surveys that allow for quantifiable outcomes
- Additional creativity?
- Other suggestions!?
Assignment Instructions

Link 1!
Link 2!
Thank you!

Joel Bloom!
Marcia Liu
Shiao Chuan Kung
Hunter College
The Assessment Fellows
ABI Faculty Development Program
ACERT
Paul McPherron
My students!
Julie Van Petegham