[Class]
[Semester]

Lab activity
Unit: Disability as biodiversity

Disability in people is (at least in part, some argue entirely) socially constructed. This means that there are socially agreed upon definitions of who is disabled and who is non-disabled. Lots of peoples' bodies and minds are different from each other -- but if I asked you to imagine a disabled mind or body, you'd have specific mental images or concepts about what that means. Those ideas are shaped by culture – they are different depending on who you know, where you live, and the time period. And it means that not all variance in bodies and minds is considered bad or good – it depends on the social agreement, which is usually implicit.

More background on the social model of disability –
"The social model of disability: thirty years on"
Mike Oliver 2013 – Disability and Society
https://www.tandfonline.com/doi/abs/10.1080/09687599.2013.818773
*Mike Oliver coined the definition

By extension, this necessitates that people are projecting onto nonhumans what makes a disabled body in nonhumans – how do we know that an octopus or a pine tree would consider a normal body or mind? What about algae or hive creatures like ants and honey bees?

Just as we've discussed the challenge of making meaning out of observing animal behaviors, how can we – as scholars and just as humans – make meaning out of differences in animal and other nonhuman bodies? Can we? Should we?!

For this week's hands-on activity, we are exploring digital biodiversity repositories to look for disability. But also to remember that there's a lot wrapped up into representations of bodies and mind traits (e.g. personality) – as you saw in last week's unit on how nonhumans are represented in toys and games. Whose body defines a species and how it's represented? Whose should?

To give you one example from Rachel Mundy's scholarship, she describes the work of Wallace Craig, who studied Eastern wood pewees (a kind of bird). In his own 1943 monograph, Craig describes a particular individual bird, "Saunder's Genius" (so named for the person who helped Craig study it – Aretas Saunders), who sang with a stutter. Stuttering in humans is an involuntarily repetition of sounds and considered a disability. How can these ornithologists and animal behavior scientists know whether a bird's song has a stutter? Their conclusion came from comparison to other individuals in the species and their songs. They certainly noticed differences. But was it disability? Is it?

Dr. Mundy's book *Animal Musicalities: Birds, Beasts and Evolutionary Listening*
https://www.hfsbooks.com/books/animal-musicalities-mundy/

Stammering is considered by ornithologists to be a disability in birds. It refers to repeated notes and like human stuttering appears to be involuntarily and only present in a small proportion of individuals in any given population.

More on stammering and examples of how scientists and science writers consider it parallel to a speech disability in humans:
http://www.bbc.com/earth/story/20160810-we-are-not-the-only-species-to-develop-speech-impediments
https://www.thecut.com/2016/08/stuttering-birds-are-helping-scientists-understand-how-humans-learned-to-talk.html

Ornithologists are people. So they consider stammering a disability in birds. Can they know that birds consider stammering a disability? How would they know? How would you know?

So today, our in class assignment is to explore digital biodiversity collections to examine variation in nonhuman bodies – and try to think through if and how we'd be able to assign disability or non-disability labels to that identity. But just like Jeff Goldblum in Jurassic Park:

We will also be reflecting on whether it's actually possible to assign these labels meaningfully in nonhumans – and whether we should even be trying to.

We'll be looking at morphology and anatomy, because that's the most accessible in digital biodiversity archives, which are often a visual medium.

But not always – check out the Cornell Lab of Ornithology Macaulay Library, which is an archive of sounds and audiograms – one can also examine variation in sound and calls https://www.macaulaylibrary.org/)

Week 12 hands on activity

First, pick a biodiversity database. There are many, for today you can use either iDigBio or GBIF. I've attached quick explainers from Dr. Anna Monfils (CC licensed) on how to use either.

Second, your goal is to pick some measure of diversity in nonhuman bodies to observe, measure (likely write down existing data on measurements), and then assess. For our class, you should observe at least 10 specimens of a given taxa (likely species) to complete this exercise. So you'll need to decide on a taxa and aspect of morphology / anatomy to observe. Use the document on the next page to plan your strategy.

Third, dig into the database and collect your data. Use the handout for searching strategy directions – be in touch if you have any questions or trouble. There's also help documentation on both websites. I strongly suggest writing down your observations as you go.

Then, consider the emergent trends of your observations. What patterns are there?

Then, make a results figure (table, chart, graph) of your choosing to show what you've explored and concluded.

Lastly, answer the reflection questions on the last page of this packet.

Turn in:

Your planning table

Your raw data

Your results figure

Your reflection answers

Exercise – plan out your time and query ahead

Question:	
Hypothesis:	
Assumptions:	
How you'll design your query in the database:	
What organism/taxa are you looking up?	
What variables are you collecting and measuring?	
How will you assess patterns?	
How will you know that you've collected enough observations?	
What resulting graph or chart will you make with your data?	

Reflection Questions

1. What patterns emerged from your observations? Did anything surprise you?

2. Did you find any disabled bodies in your data collection and observations? What makes you think yes or no?

3. One of the questions that emerges when thinking about questions of bodies and difference is how much difference is meaningful – and what meaning to make of that. Do you think the range of variability you found is meaningful? How do you know?

4. You measured an aspect of morphology or physical appearance in a nonhuman organism. But many definitions of disability are connected to function – how do you know, or would you know, that this appearance based trait is connected to meaningful function for the organisms?

5. Digital collections – or even physical specimens in museum collections – are not the same as observing nonhumans alive and in their natural habitats. What opportunities and limitations does this exercise's use of digital collections mean for understanding disability and bodily difference in biodiversity (which is inherently alive)?