

Title: Anthropology, Science, and Human Rights Activism

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Summary: In this presentation, I share a bit about me and how my identity has influenced my career as an anthropological scientist and my activism. I define anthropology and describe how anthropologists are engaged in activism and I demonstrate how we can use science to inform our decisions. I conclude by showing how anthropology and science has led to policies and practices that limit the rights of certain people and why inclusion matters.

Defined terms in order of appearance:

Activism is taking meaningful action to encourage change or promote a cause

Anthropology is the study of humans. There are four primary fields: biological/evolutionary, cultural, linguistic, and archaeology.

LGBTQ+ stands for Lesbian, Gay, Bisexual, Transgender, and Questioning or Queer. The "plus" signifies other gender or sexual minority identities including but not limited to, gender non-conforming, pansexual, intersex, and asexual.

Non-binary gender represents a gender that is neither fully "male" or "female"

Policy is a law, regulation, or plan followed by an organization or government.

Cooperation is when someone makes a sacrifice or pays a cost to help someone else.

Evolution is a gradual change in characteristics over time.

Biology is the study of living things.

Science is a processing of observing the natural world to understand how it works and the knowledge gained through that observation. In order for something to be science it must be: 1. Empirical meaning it can be observed, 2. Repeatable meaning it can be observed multiple times, and 3. Falsifiable meaning that it can be proven wrong.

Morals are principles that we use to judge what is "right" and "wrong"

Cultural relativism is the idea that a person's beliefs, values, and practices should be understood based on that person's own culture.

Ethnocentrism is judging another culture and believing that the values and standards of your own culture are better – especially with regards to language, behavior, customs, and religion.

Bias is a belief that skews a person's judgement leading to an incorrect assumption.

BIPOC stands for Black, Indigenous, (and) People of Color. Black and Indigenous are at the beginning to emphasize the historic oppression and abuse these people suffered.

Indigenous refers to being a member of the people who were/are the original inhabitants of a particular area.

Race is a concept that groups of people are physically and genetically distinct from other groups. However, race is not an accurate biological concept although people's belief in race causes social issues and discrimination. *

Privilege is an advantage that a person or a group has in relation to another person or group.

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Colonialism is when a country uses power to control, occupy, and exploit another territory or nation. Colonization is the process of taking control and occupying of another nation.

Imperialism is the use of power and exploitation to expand one's territory or culture into another nation's territory or culture. Imperialism erases the history and power of the overpowered nation and rewrites that nation's culture with the culture of the imperialist nation.

* From the [American Association of Physical Anthropologists \(AAPA\) Statement on Race and Racism](#), "Race does not provide an accurate representation of human biological variation. It was never accurate in the past, and it remains inaccurate when referencing contemporary human populations. Humans are not divided biologically into distinct continental types or racial genetic clusters. Instead, the Western concept of race must be understood as a classification system that emerged from, and in support of, European colonialism, oppression, and discrimination. It thus does not have its roots in biological reality, but in policies of discrimination. Because of that, over the last five centuries, race has become a social reality that structures societies and how we experience the world. In this regard, race is real, as is racism, and both have real biological consequences."

Script:

Slide 1

Hi, I am Liam Gleason. My pronouns are they/them. Today I want to present to you how I combine anthropology and science to advocate for human rights and inclusiveness. **There is also a content warning for this presentation. This presentation has illustrations of human remains. These illustrations are not depictions of real skeletons who were once living people.**

Slide 2

Before we begin, I want to establish a road map to activism, which I am defining as taking meaningful action to encourage change or promote a cause. Often, we are passionate about things that impact us, so I want to share a bit about me and how my identity has influenced my career as an anthropological scientist and my activism. Next, I want to define anthropology and describe how anthropologists are engaged in activism. Then I want to build on that by introducing y'all to how we can use science to inform our decisions, and the role of our morals regarding science. Lastly, I want to end by showing how anthropology and science has led to policies and practices that limit the rights of certain people and what we can do about it. Alright, let's begin.

Slide 3

Who am I?

When I was in high school, I came out as queer and like many queer folks I was not accepted by my parents and I became homeless for a while during my senior year. I wasn't very interested in school and my parents didn't care about formal education. I was really bad at math and science and I almost didn't graduate high school. I didn't take the SATs or even consider that I would

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ever go to college because no one in my family had ever gone to college. However, a friend ended up convincing me to join them at community college which is where I took my first anthropology class. As soon as I took that class, I thought “Wow, this is the coolest thing ever and I want to be an anthropologist!” so I started focusing on getting good grades and trying to figure out how to apply to University. But I was really scared because I didn’t know how to apply or how to pay for it and because I didn’t know about scholarships or federal student aid through the FAFSA, I joined the military. I served for about six years on active duty in the Air Force where I was able to travel to over fifty countries and was able to pay for college. I applied to Arizona State University (ASU) where I earned a bachelor’s degree in anthropology and a minor in biology and loved it so much, I chose to stay for graduate school to earn a PhD. I have a master’s degree in anthropology and am currently a PhD student in evolutionary anthropology. I study the evolution of human behavior, which I will talk a bit more about later. I am a member of the Arizona Science Policy Network where I advocate to politicians about the importance of education funding, access to quality education, environmental conservation, and science-based policies. I also teach at a community college as that was a very meaningful experience for me and I want to provide that for others. I also recently found out that I have Graves’ disease so that makes me reflect more on accessibility in the classroom. Lastly, I am also the founder of Anthrollustrated.com which is a website that features free illustrations of diverse anthropologists. Some of the images in this presentation are from the website.

Overall, it took a lot of work to get to where I am from where I started, but I am very grateful for where I am now, and I am very grateful to all the people that helped me get here. It was really all these life experiences I had meeting all different types of people that made me want to study humans.

Slide 4

If you want to study humans, then become an anthropologist! As anthropology is the study of humans. There are four main fields of anthropology. One field is biological or evolutionary anthropology that studies human biology and human evolution. Biological anthropologists study genetics, fossils of humans and our ancestors, human behavior, and sometimes they study monkeys and apes since they are our closest living relatives. Another field is cultural anthropology. Cultural anthropologists may interview people or read texts or analyze artwork to study culture, which includes a person’s beliefs and customs. Culture may also influence how someone dresses, the food they eat, the music they listen to, and language they speak. Another field is linguistic anthropology. Linguistic anthropologists study how language evolves and is used all around the world. Finally, there is archaeology that studies the culture of historical people through historic sites and artifacts. Some archaeologists also study the skeletons of people of the past to understand more about their lives.

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There are many other subfields of anthropology including, forensic anthropology so like the TV show Bones. These are people who work with human remains at crime scenes. There are

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medical anthropologists who study health. Urban anthropologists study how cities are designed and if these designs benefit the people who live in these cities. Environmental anthropologists understand human's relationship with the environment. Visual anthropologists study art, I know someone who is a visual anthropologist who studies graffiti in Los Angeles and works with artists and the city to create city-approved areas where people can use spray paint to make public art. Some anthropologists work in art, science, or natural history museums to help curate exhibits and teach the public about humans. Also, some anthropologists work for corporations to improve culture in the workplace and increase efficiency. Basically, if it is about humans, there is probably a subfield of anthropology for it.

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I specifically study the science of cooperation by understanding the evolution of human behavior. Cooperation in my job is defined as a person making a sacrifice or paying a cost to help someone else. Some examples include, giving a donation to charity or donating blood. Paying taxes is also a form of cooperation as you pay a cost for resources that everyone can use such as roadways, community services, and even the military. Serving in the military is also an example of cooperation, military members sign up to pay a potential cost, which is may be their life, for the benefit of the nation.

As my PhD advisor, Prof. Sarah Mathew, notes if we can understand how cooperation works then we can create solutions to cooperative dilemmas including, poverty, environmental resource preservation, and climate change efforts such as the Paris Climate Accord. In the Paris Accord, each nation is agreeing to limit their greenhouse gas emissions (i.e., this limits the nation's financial gain so the nations are paying a cost) and by all the nations reducing their pollution then the Earth as a whole can benefit.

Based on my past, I am really interested in understanding why people help people they do not know? And how does a person's reputation influence them or not to cooperate with others? For example, if you have a bad reputation will people stop helping you? By understanding why people choose to help each other even at a cost to themselves, we can create policies and programs that also help people.

Slide 7

Alright, so I have said the word science a couple times now, but I really want to define what science is because there are a lot of misunderstandings and these misunderstandings lead to ideas that spread false claims and hurt or hinder other people. So, what is science? Science is a process of observing the natural world to understand how it works and the knowledge gained through that observation. In order for something to be science it must be three things. One, it must be empirical meaning it can be observed. If we can't observe or collect data or information about it then it can't be understood through science. Two it must be repeatable meaning it needs to be able to be observed multiple times and have the same results each time. There needs to be a consistent pattern. If you cannot repeat the observation with the

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same results, then it cannot be understood through science. Three, it needs to be falsifiable meaning that it can be proven wrong. This one sometimes confuses people, so I want to clarify this concept. Imagine that you believe all pigeons are gray and you want to scientifically prove this. So, each day you go outside and observe the pigeons at the park and each day you only look for and see gray pigeons. This is not science because in this scenario you are trying to only confirm a belief by collecting information that agrees with your belief. A lot of pseudo-science and conspiracy theories use this sort of thinking. You could make this actually scientific by trying to falsify the claim. So, if you went out each day and searched everywhere for a pigeon that is not gray, you would eventually find a pigeon that isn't gray, maybe it is white or brown right, anyway this shows that the statement all pigeons are gray is incorrect. However, the process you did was scientific. You need to look for opposing evidence and not evidence that only confirms your beliefs to see if your claim can hold up even in strict of tests.

On a final note, there are many ways of knowing about the world and Western Science is just one way to understand certain questions. But how do we know other things if we don't use science?

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Well we use the humanities, which includes philosophy, religion, and ethics to understand questions that science cannot answer. Science answers questions about how the natural world works but it cannot provide moral guidance. Science tells us how the world is, but not what to do about it. Questions about the meaning of life, how to be a good person, whether a God or Gods exist are answered through philosophy and religion and these questions cannot be answered through scientific means. Science and religion or spirituality do not need to conflict with each other and in fact these ways of knowing can be intertwined with each other. Example, in some cultures the soul or spirit is also treated in medicine.

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On that note, I want to briefly mention two important terms from cultural anthropology. These terms are not usually discussed in science, but it is important to mention when studying humans. First is the idea of cultural relativism which means that a person's beliefs, values, and practices should be understood based on that person's own culture. For example, if someone came to America, they may think that tipping a waiter is immoral because in other countries it may be rude to tip someone as it may mean that you are calling them poor or low-class. However, it is important for that person visiting the United States to understand cultural relativism and in US culture it is polite to provide a tip to a waiter. The other concept is ethnocentrism. Ethnocentrism is judging another culture and believing that the values or standards of your own culture are better than the other culture. An ethnocentric belief would be thinking that speaking English is morally better than speaking Spanish. While a non-ethnocentric belief would be recognizing that there are differences in the English and Spanish language, but one is not morally better than the other. You may think one is easier to learn, but that doesn't mean that it is better than the other. As anthropologists we need to identify if we have these biases and address them. No culture is better than any other culture. There have

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been many horrible crimes against humanity due to ethnocentrism, so it is important to recognize it.

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So again, you can be a person of faith and be a scientist. You can also not have faith and be a scientist. But my point is that, religion and science can coexist. To illustrate that point, this slide displays pictures of people from various religious backgrounds who study evolution. The people featured on this slide have different religious identities such as, Muslim, Hindu, Sikh, Buddhist, various Christian denominations, Jewish, Catholic, Agnostic, and Atheist. However, they all study evolution.

Slide 11

Alright now that we know what science is and what questions science can and can't answer. How can we use science to make meaningful change? Well, science doesn't make moral decisions it just states facts. But we can use these facts to understand how to best advocate for things we care about. For example, human-caused climate change is a scientific fact. We can observe it, test it, and the results are repeatable. Climate change has been tested so many times and has been reviewed by hundreds of experts that it has been confirmed as a fact. And science has shown that reducing the use of fossil fuels is effective at slowing down climate change. BUT science cannot tell us whether we should reduce the use of fossil fuels as that is a moral decision. If you value conservation and protecting the environment, you may vote for policies that limit fossil fuel use. However, if you value immediate economic benefits, you may not care about limiting the use of fossil fuels and your vote will reflect that ideology. Science can inform policy, but the policies are ultimately rooted in moral values.

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Evolution is a fundamental concept in anthropological science since it impacts all living creatures. The simple definition of evolution is just a gradual change in characteristics over time. That's it. However, a common misconception is that evolution has a plan or designs creatures to be perfect. This is not true and the idea that evolution leads to a perfect living creature has created incorrect ideas that have hurt people by promoting racism, sexism, ableism, homophobia, and more. So, remember evolution does not have goal and does not design anything to be perfect. All it is, is a gradual change over time.

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One solution to preventing false science and immoral policy is to be more inclusive. So, let's use evolution as an example. Who is the first person that you think of when I say the word evolution? Most people when they hear about evolution immediately think of Charles Darwin. However, Charles Darwin published his book on evolution by natural selection in 1859. If we remember the definition of evolution as a gradual change in characteristics over time, we can see that other individuals from different parts of the world talked about evolution hundreds of years before Darwin was even alive and some individuals were collecting evidence of evolution decades before Darwin. So why don't we talk about this in the classroom? If POC first talked about evolution and women made important discoveries, then why did ideas suggesting BIPOC

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of all genders and white women were unintelligent persist? Would the beliefs that people with dark skin are aggressive have been promoted if the research was being done by people with dark skin? Would researchers try to prove if people who are able-bodied have superior genes if the researchers used a wheelchair or used a hearing aid? Would women have been more successful at running for political office if the false belief that women are less capable than men due to their hormones never existed? Would this belief have been promoted if women made up the majority of the scientific community?

Representation matters and the concept of privilege in which some people have more advantages than others can be scientifically studied. We can observe and repeatedly test if some people have more advantages than others due to perceived or real differences. Darwin was a wealthy educated Englishman with access to a lot of resources. He had many well-connected friends and his country colonized a large part of the world, so he was able to travel. Around the same time there was another man from the United Kingdom who also came up with the idea of evolution by natural selection however, some argue due to this man's financial issues and controversial political ideas he was largely forgotten. Additionally, in the 1800s women were not allowed to join European scientific societies so any contributions they made had to be sold to men who were a part of those societies who would then get credit for the discovery. If Darwin was a woman or did not have the money to travel or couldn't read or write or if he didn't have access to people who could publish his work, then you can imagine he probably wouldn't have become a famous scientist. Also, the narrative that Darwin is the primary person associated with evolution is based on a European narrative that has been spread to many countries through colonization and imperialism. As shown before, other non-European people discussed evolution, but we rarely talk about them. Darwin's role and the European narrative has been cemented because he is continually cited when anyone does any work on evolution.

Slide 14

Ethnocentric ideas surrounding colonization led to faulty scientific studies of non-European people. These studies claimed non-European people were unintelligent or inferior and thus their contributions were ignored or destroyed. For example, through European colonization and imperialism countless scientific texts were destroyed throughout Central and South America. Sometimes items were stolen and placed into museums that advertised exotic items. But again, if we think about cultural relativism, these items were not exotic to the people that made them. Sometimes scientists or archaeologists stole the bodies or skeletons of people's ancestors so they could better understand them. However, you can imagine how hurtful and immoral this is if some random person broke into your favorite relative's grave and stole their body to do experiments on it without your family's knowledge or consent. It is crucial to acknowledge Indigenous Knowledge and Ownership when working with materials or people and recognize and respect that people have a right to their land, beliefs, and ancestors. I also want to point out the story of Henrietta Lacks whose cells have been used hundreds of times for scientific research without consent and she as a person was never acknowledged and her family only a few days ago received payment for her contribution after pressure from outside organizations.

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These ideas still persist in our society today. Many members of the US government went to school in a time where some of these ideas were common and much US policy especially policy on women's health was justified through these ideas. These biases can also be seen in technology, if you recall some phones were unable to recognize the faces of people with darker skin. This is because people with darker skin were not included when they designed or tested their product. Now it may not have been the designer's intent that the facial recognition software didn't recognize people with dark skin, but it is the impact of the decision not to include people with darker skin in the design or testing process that ultimately matters.

Earlier I noted how the concept of race has caused harm to people. There are a lot of misconceptions about race. To clear things up I want to read a shortened paragraph from the American Association of Physical Anthropologists (AAPA) statement on Race and Racism. Remember the people who wrote this statement are scientists who study humans. "Race does not provide an accurate representation of human biological variation. It was never accurate in the past, and it remains inaccurate today when referencing humans. Humans are not divided biologically into distinct types or racial genetic categories. Instead, the Western concept of race must be understood as a classification system that emerged from, and in support of, European colonialism, oppression, and discrimination. It thus does not have its roots in biological reality, but in policies of discrimination. Because of that, over the last five centuries, race has become a social reality that affects societies and how we experience the world. In this regard, race is real, as is racism, and both have real biological consequences."

Lastly, as anthropologists it is important to consider if we are excluding people or if we are not being culturally relative when we engage in science. The main reason I founded Anthro Illustrated was because there were no images of diverse anthropologists, my team and I wanted to feel seen and we wanted to others to feel represented too. I provided the images for free because I recognize that sometimes money can be a barrier. We continue to recruit people for our team because we all have a unique perspective through our lived experience that add values and we want more of those unique perspectives and not less.

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In conclusion, we need more diverse perspectives in science and anthropology. We need people to be educated about the history of science. We need people to understand what questions science can answer and which questions our morals must answer. And lastly, we need to continue the work and constantly reflect on our own biases and the impact of our actions. I am asking all of you to join in these conversations and become informed and engaged in these topics so we can all advocate for justice and human rights.

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Thank you for listening to this presentation. As a final note, I want to leave you with this slide of people who are anthropologists who are actively engaging in social justice to make anthropology and the world more inclusive. You can follow them at their twitter handles to learn more about their work.