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COVER IMAGE
By: Eileen Valencia and Reese Santonil
Photograph taken inside the Anthropology Club Materials used: Not real human Remains

Monte Verde: Human Subsistence and Mobility in Pre-Clovis Chile

Jean Pickard

She/Her/Hers

My name is Jean Pickard, and graduated from CSUDH in Spring 2022 with a B.A. degree in Anthropology/Archaeology and a certificate in Cultural Resource Management. This fall, I enrolled in an Applied Archaeology master's program at CSU San Bernardino. My interests include the lifeways and lithic trade activities of the precontact coastal Gabrielino-Tongva. In addition, my independent research analyzes Monterey Chert source provenance at the Palos Verdes Peninsula.

Introduction

Along the lush banks of Chinchihuapi Creek, a tributary of southern Chile's Maullín River, lies one of the most controversial archeological sites of the twentieth century, Monte Verde. In 1978, archaeologist Tom Dillehay and his colleagues found well-preserved human artifacts and features associated with Late Pleistocene faunal remains (fig. 1) (Dillehay 1989). Initial radiocarbon analyses of materials from the Monte Verde II cultural layer consistently dated the site to 12,500 BP. With this, Dillehay (1989) asserted that Monte Verde was occupied by humans between 12,000 and 14,000 years ago, predating what was then the earliest known Paleoindian site in the Americas at Clovis, New Mexico, by some 1,000 years.

The timing and method of initial human migration into South America, particularly to the site of Monte Verde, has been the topic of much debate since Dillehay's discoveries some forty years ago. However, questions about the site of Monte Verde itself -- how it was used and how its inhabitants subsisted -- remain.

I will address these questions by merging the archaeological data collected by Dillehay and his team between 1976 and 2013, Binford's (1980) information on forager and collector subsistence strategies, and Perreault's and Brantingham's (2011) discussion on mobility regimes. In the process, I will argue that Monte Verde was a residential camp occupied by logistically organized collectors.

Fig. 1. Location map of the study area and the site of Monte Verde.

Background

In his two-volume monograph, " Monte Verde: A Late Pleistocene Settlement in Chile, " Dillehay's project at Monte Verde initially spanned seven field seasons between 1976 and 1985. During this time, Dillehay and his team carried out a detailed survey of an area around Chinchihuapi Creek where locals had found mastodon bones. They excavated 173 m2 of the area, conducted experimental archaeological studies, and brought in an interdisciplinary team of specialists, including Mario Pino who studied the site's geology (Dillehay 1989a). Among this team were a biologist, palynologist, paleontologist, dendrologist, and lithic specialist.

Dillehay's claim that Monte Verde was the site of the earliest human occupation in the Americas sparked widespread debate among archaeologists. The controversy stemmed from the discovery of 11,500-year-old fluted projectile points associated with Pleistocene fauna at Clovis, New Mexico, between 1932 and 1936. This discovery led to the Clovis-first hypothesis, arguing that there was no evidence of human habitation in the Americas prior to the Clovis complex (11,500–11,000 uncalibrated C14 yrs. B.P.). Subsequently, a theory developed arguing that the presence of an ice-free corridor across Beringia accounted for the rapid spread of Clovis-making humans throughout North America. As a result, critics such as archaeologists Junius Bird (1979) and Thomas Lynch (1990; 1991) questioned the authenticity of Monte Verde's artifacts and their associated dates. In 1997, nearly twenty years after Dillehay's first excavations at Monte Verde, an esteemed group of archaeologists (including Junius Bird) inspected the site and verified that the Monte Verde II layer was 12,500 years old. Dillehay and his team returned to Monte Verde in 2013 "to further assess the geological setting of the sites by applying sedimentological, microstratigraphic, magnetic, optically stimulated luminescence dating (OSL), and macro and micro-botanical analyses" (Dillehay et al. 2015). Over two field seasons, the team drilled fifty-four archaeological cores and excavated thirty test pits and ten excavation blocks.

In addition, the team used radiocarbon and OSL analysis to date wood charcoal, burnt plant stems, animal bone fragments, and sediments (Dillehay et al. 2015). Findings from these analyses have confirmed Dillehay's previous assertions and have established even earlier dates between ~18,500 and 14,500 cal B . P .

Temporal Associations

To establish a framework for the hypothesis discussed in the following sections, we must first consider the contemporaneity of the archaeological materials excavated from Monte Verde II (MV-II). This habitational zone forms three distinct occupation areas: Zone A, Zone D, and Zone C. All the archaeological materials (architectural features, artifacts, and ecofacts) excavated at the site were buried under a layer of peat (stratum MV-5) on a thin occupational surface designated as strata MV-7 and MV-6 (Dillehay 1989b). According to Dillehay (1989b), "there is no doubt that all of the recovered architectural features and artifact concentrations in MV-6 and MV-7 represent a contemporaneous cultural event in both Zones A and D." Evidence for this is found in the Wishbone-shaped hut foundation in Zone A at the west end of the site (fig. 2). This feature, composed of compacted soil and gravel , sits on the MV-7 use surface . Within the boundaries of this feature , the masticated quids of two species of seaweed (Sargassum sp. and Durvillaea antarctica) were found, and around its perimeter were the remains of at least seven mastodons (Dillehay 1989b).

Thirty meters east of Zone A sits zone D and the remnants of twelve wooden hut structures (fig. 2). Here, fourteen mastodon bone fragments were recovered from use surfaces within these structures and their adjacent workshop areas (Dillehay 1989b).

AMS radiocarbon dates derived from fragments of the seaweeds Gigartina sp. on the use surface of the Wishbone-shaped hut (~12,290 +/- 60 C14 yr. B.P.) and Mazzaella sp. in a brazier in a hut structure (~12,310 +/- 40 C14 yr. B.P.) are contemporaneous and agree with the dates of all other archaeological materials found across the MVII site (Dillehay et al. 2008).

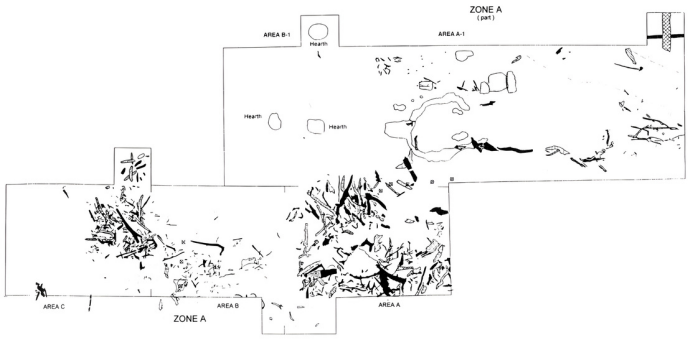

Fig. 2. Layout of the wishbone-shaped foundation, features and associated refuse in Zone A (top) and the layout of structural remains, features, and associated refuse in Zone D (bottom). From Dillehay 1989b.

Methods

According to the archaeologist Lewis Binford (1980), "We cannot hope to understand the causes of [archaeological] remains through a formal comparative study of the remains themselves. We must seek to understand the relationships between the dynamics of a living system in the past and the material by-products that contribute to the formation of the archaeological record remaining today." Therefore, using the features, artifacts, ecofacts, and botanical remains found by Dillehay and his team between 1976 and 2013 and information about subsistence strategies and mobility regimes from Binford, Perreault, and Brantingham, I will endeavor to answer the following questions: Was Monte Verde a temporary field camp, a stopping point for gathering food, hunting, and processing animals or a permanent residential camp from which its inhabitants ventured out and returned with regularity? Were the inhabitants of Monte Verde highly mobile foragers, exploiting resources as they happened upon them, or logistically organized collectors with specific strategies for procuring and storing food at their home base? To explore these questions, I will first discuss mobility regimes and how foragers and collectors differ on a mobility spectrum.

Analysis

According to Perreault and Brantingham (2011), "mobility regimes vary with the number of foraging moves groups make before returning to home base." For clarity, figure 3 below illustrates this concept in more detail:

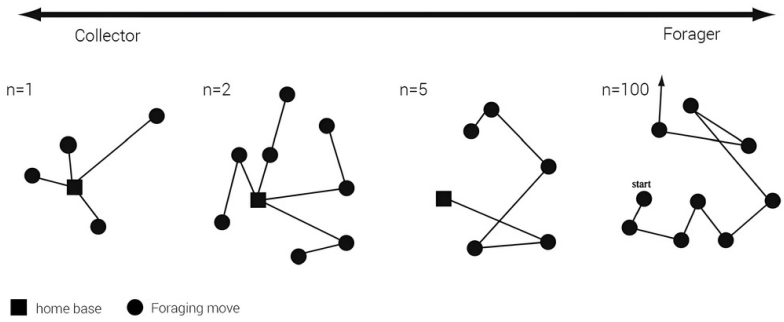

Fig. 3. Mobility Regimes. From Perreault and Brantingham 2011. When the number of foraging moves (n) equals 1, groups make one move before returning to home base (black square). This situation is characteristic of extreme cases of central-place or collector foraging and is limited by the distance that can be traveled in one day. Whereas when the number of foraging moves (n) is much greater than 1, groups are unlikely to return to their home base. This situation is characteristic of residential mobility (forager) foraging.

Binford (1980) defines foragers as people who gather food daily, exploiting resources as they wander, with no pre-planned strategy for collecting and storing food. They make many residential moves before returning to home base, if they do at all.

In contrast, logistically organized collectors frequently reoccupy their residential base after procuring food. In addition, the more sedentary the group, the greater the number and length of logistical forays (Binford 1980; Kelly 2013).

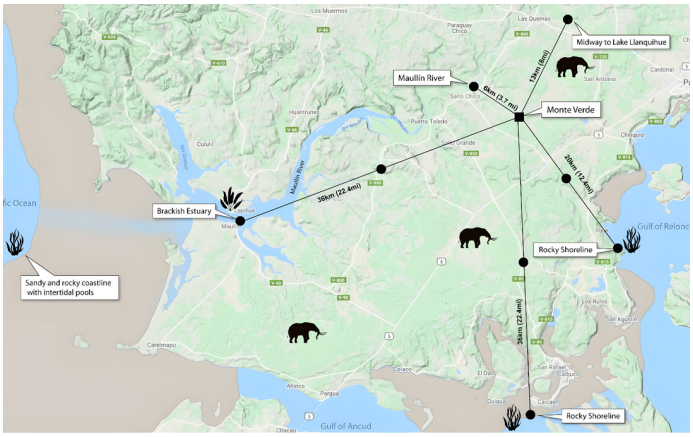

Fig. 4. Hypothetical mobility regime of the early inhabitants of Monte Verde. Note the Paleocoastal shoreline (brown areas) at ~15,000 to 14,000 cal yr. B.P.

Using Perreault's and Brantingham's model, it is possible to devise a mobility regime for the early inhabitants of Monte Verde (fig. 4). With this, I argue that the inhabitants of Monte Verde made a low number of foraging moves (between 1 and 3) before returning to their home base. Further, I contend that occupation at Monte Verde took place over a prolonged period by the same group of people, and that these people were logistically organized collectors. To support these claims, I will discuss the following archaeological evidence from Monte Verde: wood structures, faunal remains, and maritime botanical remains.

Archaeological Evidence

First, Dillehay and his team excavated the remains of twelve wooden structures and a wishbone-shaped compacted sand foundation at MVII. These structures, varying in size from 2.3 to 11.7 sq m (7.5 to 38.4 sq ft), were about 20 meters long and laid out like a row house (Dillehay1989b). The structures had been framed with large timbers anchored by wooden stakes, walled with round woods, lashed with juncus cordage, and covered with animal hides (Meltzer 2019). Considerable time and effort went into the collection of building materials and the construction of these dwellings. These factors, along with the square footage of the structures, indicate that a sizable group of people occupied the area for an extended period.

Second, Dillehay and his team found the bones of seven individual mastodons at Monte Verde. However, the likelihood that all of them died naturally at the same time and place is very low. So too, is the likelihood that Monte Verde was a kill site. If this were the case, complete skeletons would have been found. However, the 384 mastodon bones found around the perimeter of the Wishbone-shaped hut foundation were disarticulated and together did not make up one individual mastodon skeleton. Only selected sections of the animals, predominantly ribs and long bones, were present (Dillehay 1989b). In addition, many of the bones showed signs of butchering, including cut marks and fractures.

These factors suggest that the inhabitants of Monte Verde were logistically organized collectors who traveled out from their home base to hunt and returned with choice portions of their kill for the rest of the group to process. Third, Dillehay and his team found macro-botanical remains of coastal plant species associated with residential structures, hearths, and stone tools excavated at the site. According to Dillehay et al. (2008), the seasonal availability of seaweed and algae near Monte Verde was from early spring to early fall (fig. 5). It is important to note that during the site's occupation, the distance from Monte Verde to the coastal zones was much greater than it is today, varying from 12 to 22 miles (fig 4). Specialty items from the western sandy shores and the brackish estuaries of the Maullín River Delta required the most travel. This suggests that logistically organized collectors traveled from Monte Verde seasonally on multi-day treks to collect edible and medicinal seaweeds and algae. The inhabitants of Monte Verde may have acquired some seaweeds through trade with groups who lived closer to the most distant sources. Regardless, the presence of seaweeds and algae at Monte Verde shows that the people there had an organized method for collecting these items.

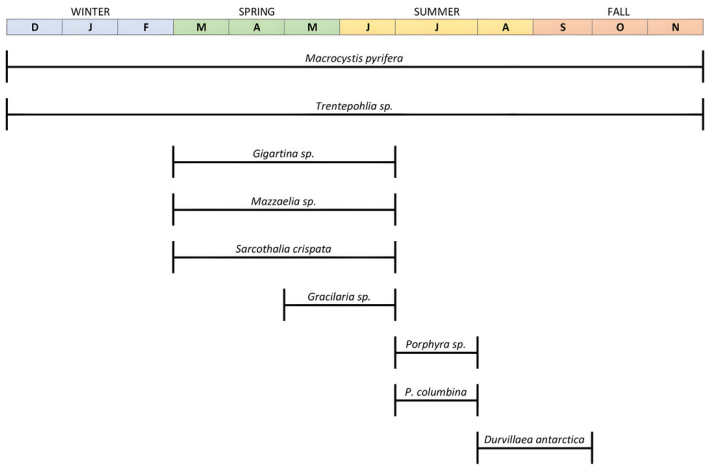

Fig. 5. Seasonal availability of algae and seaweed in the Monte Verde region. Seaweed and algae collection by the inhabitants of Monte Verde was conducted at various coastal locales from early spring to early fall.

Conclusion

Through the analysis of three key archaeological materials from Monte Verde (features, faunal remains, and seaweed), including the locations where they were found and their temporal associations, this paper argued that Monte Verde was a residential camp occupied by logistically organized collectors. In terms of location and contemporaneity, all three archaeological materials were found in association with each other within stratum MV-7 of the MVII site in Zones A and D. Furthermore, seaweed remnants and mastodon bones were located on use surfaces within and around huts structures and the Wishbone-shaped feature. The total assemblage of archaeological materials at Monte Verde reflects the year-round or seasonal occupation of the site and logistically organized economic activity (Dillehay 1989b).

Binford's (1980) definitions of foragers and collectors and the mobility regimes illustrated by Perreault and Brantingham (2011) informed this hypothesis.
Understanding the site typology and subsistence strategies of the inhabitants of Monte Verde can help inform future research into the location of seasonal camps and start a conversation about potential trade networks in the region. Future work could include analyzing the time it takes to travel by foot to the coastal seaweed harvest zones. This would help develop a more accurate mobility regime for the inhabitants of Monte Verde and inform researchers on possible midway encampments.

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INTERSECTIONAL IMPACTS ON TRANS-MASC INDIVIDUALS' FERTILITY

Lukas Daniels

He/Him/His

My name is Lukas Daniels and I served as the Editor-in-Chief of the ESJOA and the President of the Anthropology Club from 2021-2022. My research interests include Queer identity and culture, biological anthropology, sociology, mental health, how culture impacts biology, as well as power structures and their influence on consumption, identity formation, and cultures. My most recent research focused on transgender peri-reproductive health and lactation. I graduated from CSUDH in May 2022 majoring in Anthropology with a concentration in Biology and minoring in Women and Gender studies. I am currently enrolled in the Biological Anthropology MA / Ph.D. Program at Washington University in St. Louis!

The world's "first" pregnant man, Thomas Beatie, made headlines across the US in 2008 (Trebay, 2008). While these sensational headlines broke the ice for queer people across the country wanting to produce and carry their biological children, they did not curb the rampant transphobia, homophobia, and lack of information within the US public and the medical field. While the case of Thomas Beatie premiered over 12 years ago, the realities of biological parenthood for transmasculine individuals have not changed much as shown by a lack of information, research, training, or guidelines for providing medical and therapeutic care to trans-masc. individuals. However, recent research is slowly creating a baseline of information regarding transgender bodies and how they experience the world (de-Castro-Peraza, et al. 2019:12).

It is important to note the wide spectrum of genders and sexes regarding whom this paper will be studying and referring. Firstly, for this study, the sex terms of 'male', 'female', and 'intersex' will be used when discussing one's assigned sex at birth.

Thus, ‘cisgender’ will precede the sex term to describe the individual as someone whose gender identity aligns with their assigned sex at birth. Whereas ‘transgender’ will precede the sex term to describe someone whose gender identity does not align with their assigned sex at birth. For simplicity within this paper, ‘trans masc.’ will refer to trans-masc. individuals assigned female at birth (AFAB) that identify as transgender men and gender non-conforming or non-binary individuals who pursued Testosterone Hormone Replacement Therapy (THRT).
Trans-masc individuals often experience dysphoria, characterized by a distressing, cognitively dissonant reaction to one’s assigned sex and gender ascription not aligning with their gender identity (de-Castro-Peraza et al. 2019:12; Ellis et al., 2015; Light et al., 2014). Therefore, there are an array of methods designed to help to ease the distress of dysphoria. These methods include social and behavioral modification, talk-therapy, hormone therapy, and gender-affirming surgeries (colloquially referred to as “top” or “bottom” surgery, depending on the anatomical region of the operation). While these gender-affirming interventions are key in many transgender individuals’ wellbeing (de-Castro-Peraza et al. 2019:12), there are concerns about long-term hormone use and fertility outcomes (De Roo et al., 2016: 112; Hembree et al. 2009). It is important to note the wide spectrum of genders and sexes regarding whom this paper will be studying and referring. Firstly, for this study, the sex terms of ‘male’, ‘female’, and ‘intersex’ will be used when discussing one’s assigned sex at birth. Thus, ‘cisgender’ will precede the sex term to describe the individual as someone whose gender identity aligns with their assigned sex at birth. Whereas ‘transgender’ will precede the sex term to describe someone whose gender identity does not align with their assigned sex at birth. For simplicity within this paper, ‘trans masc’ will refer to trans-masc individuals assigned female at birth (AFAB) that identify as transgender men and gender non-conforming or non-binary individuals who pursued Testosterone Hormone Replacement Therapy (THRT). This study aims to determine if the biological side effects of THRT for transgender masculine individuals diminish fertility, or if there are confounding factors contributing to decreased fertility among trans-masc individuals.

Methods

In conducting a literature review, I gathered data through EBSCO Academic Search Premier and Google Scholar. Keywords including but not limited to transgender pregnancy, pregnant men, hormone replacement therapy, birth, birthing outcomes, and fertility preservation were used to find articles to review. Then, I narrowed down artiiclarticles by relevance to topic, date, and accessibility.This paper references sixteen peer-reviewed articles to provide insight into current knowledge of the possibility, risks, and

outcomes of pregnancy for trans-masc individuals with gestational capacity. While it is understandable that any individual AFAB with gestational organs may not wish to conceive, gestate, or parent due to the social, psychological, economic, and biological stressors it produces, there is an established desire among trans-masc individuals AFAB to have children (Wierckx et al., 2012; Moseson et al., 2020). Many studies have cited unknowledgeable and/or insensitive care providers, expensive procedures, and psychological well-being as key reasons for trans-masc people to not pursue having a biological child (Malmquist et al., 2021; El-Hadi et al., 2018: 263; Unger, 2016:877; Wierckx et al., 2012; Moseson et al., 2020). Therefore, I gathered and analyzed recent research about testosterone hormone replacement therapy, fertility preservation techniques, pregnancy, and peripartum medical care for transgender people. Then, I summarized the process and risks associated with achieving and fulfilling a pregnancy as a transgender person. By providing this information, I aim to help the transgender community learn more about their own bodies' capabilities as well as how to manage the social and medical barriers to pregnancy they may face. Additionally, I hope to inform the transgender community and their care providers on how to advocate for oneself and others in peripartum medical environments by providing a current review of the medical and social literature[SL1] .

Medical Transitioning and its Impacts on Fertility

There are multiple types of testosterone hormone replacement therapy (THRT) that trans-masc people may use, and it has been found that gender-affirming hormone therapy has positive impacts on transitioning individuals' physical and psychological health (Unger, 2016:877) There are multiple ways to administer THRT including intramuscular or subcutaneous injection formulated with testosterone enanthate or cypionate, subcutaneous implants that administer testropel, transdermal options that use testosterone gels or patches to administer THRT, and an oral option of testosterone undecanoate is available outside the US (Leung et al., 2019:200; Unger, 2016:878). The type of THRT prescribed will depend on the provider's knowledge, patient preference, patient's medical history, living situation, and accessibility. The effects of THRT can be seen within three months of use, and the individual undergoing THRT can expect amenorrhea (the cessation of menses), increases in facial hair, body hair, acne, libido, and muscle mass, as well as changes in skin texture and fat distribution (Unger 2016:878). Notable changes that occur with continued THRT include deepening of the voice, increased clitoral size, vaginal atrophy, and male pattern baldness (Unger 2016:880). These effects of testosterone are partially reversible with the cessation of THRT; however, the extent to which testosterone impacts fertility is highly debated (De Roo et al. 2016; Leung et al., 2019).

Biological considerations

The use of THRT by transgender masculine individuals has been known to damage reproductive functioning (De-Roo et al., 2016). Yet, there is evidence that transgender men can become pregnant with or without the cessation of THRT (Moseson, et al., 2020:9), especially with assisted reproductive technologies (Leung et al., 2019:858). Cases have been reported in which individuals have conceived while concurrently on THRT[SL2] (Practice Committees, 2013; Light et al., 2014; Leung et al., 2019). Thus, there must be underlying causations to the lack of fertility among transgender masculine individuals that wish to become pregnant.

Counseling concerning fertility preservation and one's desire to have future biological children is the main consideration taken when undergoing gender-affirming care in the form of THRT or surgery due to data suggesting negative outcomes for fertility preservation after one has been on THRT (De Roo et al., 2016). Counseling is important as transgender masculine patients are often too young to have clear reproductive wishes at the time of starting THRT (De Roo et al., 2016: 112). However, Leung et al. (2019:863) found that trans-masc. individuals who have already begun THRT can "preserve fertility", given they keep their ovaries. The fertility preservation options for trans-masc. individuals assigned female at birth (AFAB) "are embryo cryopreservation, oocyte cryopreservation, and ovarian tissue cryopreservation" (De Roo et al., 2016). However, unlike gender-affirming genital reconstructive surgeries that result in sterility due to partial or full hysterectomy, THRT's impact on fertility is partially reversible (De Roo et al., 2016, Leung et al., 2019).

A more recent study of the "ovarian histopathology" of trans-masc. people who underwent an "oophorectomy at the time of hysterectomy performed for gender affirmation" (Grimstad et al. 2020:1807), found no link between THRT and malignant cysts of the ovaries. Additionally, no association between the length of testosterone therapy before histopathology and ovarian cyst occurrence was found (Grimstad et al., 2020: 1807). Grimstad et al., suggest this data be added to the counseling transgender individuals are provided when considering THRT as they may wish to keep their ovaries for many reasons such as "no desire to undergo surgery, desire for backup sex steroids, and potential use for future fertility" (Grimstad et al. 2020: 1807).

Assistive reproductive technologies used for cisgender female patients can be used by trans-masc patients as well. Thus Leung, Sakkas, Pang, Thornton, Resetkova (2019:858) compared the outcomes of these technologies in female-to-male transgender (n=26) and cisgender female (n=130) patients through a "matched retrospective cohort

study". Leung et al. (2019) found that trans-masc individuals who have already begun testosterone hormone replacement therapy can "preserve fertility", given they keep their ovaries. Yet, little is still known about the safety of conception without the cessation of testosterone hormone replacement therapy[SL3] (Leung et al., 2019). Additionally, further research into the efficacy of fertility preservation whilst on THRT is important to reduce the psychological stress related to the cessation of testosterone (Ellis, 2015).

Pregnancy in Female-to-Male trans-masc individuals

Obedin-Maliver and Makadon's (2016) review of transgender males' pregnancy experiences include clinical guidance for caretakers of transgender men and gender non-conforming people contemplating pregnancy. The first public male pregnancy, that of Thomas Beatie in the U.S., was plastered across headlines. However, Beatie's experience is not unique (other than being the first legally recognized "male" to give birth in the U.S.) from most transgender men and gender non-conforming people's experience in the U.S. regarding pregnancy (Obedin-Maliver and Makadon, 2016). There has been little Rresearch comprehensively documenting transgender men's fertility and pregnancies[SL4] have been published recently (Ellis, 2015, Ellis et al., 2015; Obedin-Maliver and Makadon, 2016; Grimstad et al., 2020; Leung et al., 2019) and lack large enough sample sizes (Light et al., 2014). The, but the recent increase of media attention and research of transgender people demonstrate the existing need trans-masc people have for accessible and culturally sensitive care around "family planning, fertility, and pregnancy" (Obedin-Maliver and Makadon, 2016).

If a transgender masculine individual retains their fertility and manages to become pregnant, there are still obstacles to face during their pregnancy journey. Ellis, Wojnar, and Pettinato's (2015) study of trans-masc individuals "Conception, Pregnancy, and Birth Experiences" used qualitative measures with a grounded theory and interviewed eight transgender male or gender non-conforming gestational parents and found that overwhelmingly, a heighted sense of loneliness[SL5] "permeated participants' experiences, social interactions, and emotional responses during every stage of achieving biologic parenthood". Also, participants reported most distress during the pre-conception phase (Ellis et al., 2015). Thus, Ellis et al., suggests preconception counseling and culturally sensitive medical care may assist transgender and gender-variant people looking to gestate (2015).

Light, Obedin-Maliver, Sevelius, and Kerns (2014) study examined transgender men experiencing pregnancy after transitioning to guide practitioners and further research. They utilize web-based surveys to obtain information about participants'

"demographics, hormone use, fertility, pregnancy experience, and birth outcomes". The participants were not required to have been on THRT before the study to be eligible; however, 61% (n=25) of the participants (n=41) had been on testosterone before their pregnancy (Light et al. 2014). However, (Light et al., 2014) notes that only half of the participants received prenatal care, [SL6] specifically from a physician, and 78% delivered in a hospital. The low levels of prenatal care that transgender patients received may be due to transgender people in the US being twice as likely to be living in poverty and four times as likely to be unemployed than the general population (James et al. 2016). Moreover, the 2017 United States Transgender Survey found that over the previous year, nearly a fourth of their transgender participants did not see a doctor when needed because they feared mistreatment, and a third did not see a doctor when needed because of the cost (James et al. 2016: 93). Light et al. (2014) use mixed-methods approach to argue that transgender men can and are getting pregnant after medically transitioning, sometimes even while receiving THRT. However, health care providers are inadequately aware of the "unique needs of pregnant, transgender" individuals which is alarming and should be receiving more attention (Light et al., 2014, USTS 2017. Therefore, services and medical care that can improve the health care trans-masc individuals experience during pregnancy and birth should be informed by the community's input (Light et al., 2014[SL7]).

Birthing as a Trans-Masc Person

A major concern of patients wishing to conceive after THRT use is the impacts it may have on the birthing process and the fetus' development. The birthing process of transmasculine individuals was studied by Light et al. (2014) and they found that, out of their participants, more transgender men who previously used testosterone (n-9, 36%) birthed through cesarean section than the transgender men who had not previously taken testosterone (n=3, 19%). Also, one-third of the individuals in this study who had a cesarean section requested to have the procedure rather than birth vaginally (Light et al., 2014). While this data is based on statistically insignificant samples, it shows that there is a need for more research into what influences one's choice of birthing/delivery methods[SL8] . Moreover, Ellis et al. (2015) pointed out that care providers need to consider the specific concerns of transgender patients during delivery that include impacts from hormone therapy and the individual's worries of dysphoric distress or disassociation.
On the note of fetal development, there is evidence showing that "high endogenous androgen levels in pregnant women are associated with reduced birth weight" (Voegtline et al., 2013; Carlsen, Javobsen, Romundstad, 2006 as cited in Obedin-Maliver and Makadon 2016).

However, Obedin-Maliver and Makadon (2016) found no difference in “pregnancy, delivery, and birth outcomes" associated with prior testosterone use. Their participants did self-report complications like hypertension, preterm labor, placental abruption, and anemia. The most notable of which is anemia as there were no participants who reported experiencing anemia and had previously used testosterone. While their results are quite limited by small samples, self-reporting, and inability to observe the differences of prior and non-prior testosterone users, their findings are still important for caretakers and medical professionals to consider when caring for their transgender patients. Even though it is key to have an informed medical provider, as Obedin-Maliver and Makadon (2016) mention, there also needs to be training for all staff within care settings that implement asking each patient screening questions about their gender and pronouns[SL9].

CONCLUSION

Trans-masc individuals are biologically capable of conceiving, gestating, and giving birth successfully with the cessation of testosterone hormone replacement therapy, especially with modern assistive reproductive technologies. Therefore, the lack of accessible, informed medical care for trans-masc people who want biological children and the psychological and social stressors of being prescribed the incorrect gender have a greater impact on trans-masc individuals’ fertility than prior testosterone hormone replacement therapy.

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Perspectives on Giving Birth in The United States

Ana De La Torre

She/Her/Hers

Hello, my name is Ana De La Torre. I graduated from CSUDH in Spring 2022 with a B.A. Anthropology and a concentration in Applied Anthropology. My interests include baseball, travel, and spending time with my nieces and nephews. For this paper, I combined what I was learning in two separate classes. It was a unique experience bringing my own standpoint to the topics at hand and creating my own perspective.

Our existence as humans comes from the ability to reproduce our species through childbirth. Throughout our evolutionary history, humans have shaped childbirth practices in culturally unique ways. In the United States, contemporary childbirth usually happens in hospitals with nurses and doctors present. It is interesting how one practice can be analyzed in distinct perspectives depending on the observer. In this case the observer is an anthropologist. In this paper, I discuss three anthropologists who have distinct theories related to reproduction and childbirth: Ruth Benedict, Marvin Harris, and Bruno Latour. Each anthropologist has their own unique approach to understanding the practice and processes of childbirth, and they all reach different conclusions about what it means, why it is important and why it has evolved to generally occur in this certain way.

In the United States, the modern approach to giving birth is at a hospital. By most, this approach is thought to be a safe approach to childbirth. When childbirth is natural, it is referring to having a vaginal delivery, however, this is not the only method used. Oftentimes, delivering a baby through a caesarean section is

required for unusual circumstances such as a high-risk pregnancy or to avoid any further complications.

A caesarean section (otherwise known as a c-section) is a procedure performed by a doctor who surgically removes the baby from the womb. What both delivery forms have in common is that they both require the assistance of nurses and doctors. Regularly, they are performed with the consumption of strong drugs to help the process and ease the pain. As mentioned before, from the perspective of the hospital and many individuals, a vaginal birth is considered natural even if there is consumption of pain management drugs or other medications that help the birthing process. However, there are many who would argue that a true natural birth occurs without the use of those strong medical drugs. In the attempt to have more natural births by their definition, they opt to go through childbirth at home.

The first anthropological theory I will use to approach childbirth is that of Ruth Benedict. In her book *Patterns of Culture,* she writes about her theory on culture and personality. Benedict begins by saying, “prime importance in anthropology has without a doubt been the accumulation of a few full-length portraits of primitive peoples” (Benedict 1934). We of course no longer use terms like "primitive" to refer to any peoples or culture, but Benedict was writing in the early 1900s. She points out that anthropologists of the time only achieve magnificent contributions to the field when they study one culture at a time. Therefore, she decides to only focus on childbirth here in the United States and nowhere else. However, she does contextualize childbirth practices in the US compared with some other traditions. Benedict’s theory focuses on finding shared configurations, meaning different traditions but with similar patterns. In this case she points out that different countries have different traditions surrounding childbirth, but that all countries follow two patterns - vaginal and c-section births. According to Benedict, patterns found in a culture are linked to a culture's core values. Core values will determine what types of practices a culture adopts. Benedict writes that patterns surrounding childbirth in the US include hospitals, doctors, and medicine. This might propose that medical science is a core value and thus reflects the idea that childbirth in the United States is understood as a medical procedure that must be processed in a hospital.

However, not all members of a culture will always follow and believe in the culture's core values. Benedict believes every culture has these individuals; she calls them, deviants. She defines them as, “the person whose disposition is not capitalized by his culture” (Benedict 1934). In this example, as mentioned before, the norm is to have childbirth in a hospital. In the US, a "deviant" might be an individual who chooses to give birth at home - but in fact numerous Americans try to give birth this way. The reasoning may be because a hosptial birth does not comply with the core values of

the *individual*. When giving birth at home, the setup will be completely different from a hospital. You will not be assisted by doctors, nurses, or strong medical drugs. Instead, most home births will be accompanied by a midwife. Although Benedict has a name for these individuals, her theory does not look any deeper into these type of "deviant" births because they are not the pattern based on the culture's core values.

Marvin Harris, the author of the second line of anthropological theory I will analyze, would not agree with Ruth Benedict. He argues that these types of "non-traditional" births should be studied. In his article, "Anthropology and the Theoretical and Paradigmatic Significance of the Collapse of Soviet and East European Communism," Harris argues that anthropologists should study contemporary events through the lens of his theory of cultural materialism. He breaks down his theory into three structures: infrastructure, structure, and superstructure. For the sake of his argument, he says infrastructure is the most important. He states infrastructure is "directly linked to sustaining health and well-being through the social control of production and reproduction" (Harris 1992). This means infrastructure helps produce food and reproduce population. This explains why Harris is interested in childbirth as well - reproduction of the population is only able to happen through childbirth. Hence, unlike Benedict, Harris focuses on the contemporary movement of home births. He argues that the increase in home births during the second half of the twentieth century occurs because the home is increasingly viewed as an important component of an individual's infrastructure. He seeks to understand why the stability of infrastructure with regard to reproduction and childbirth is changing. Harris argues that the change towards more home births should be understood as an additional way to support the infrastructure.

However, although he begins to address the these issues, under his theory of cultural materialism, Harris does not provide a deeper understanding for why more home births are happening. He acknowledges them but will not address them further than that. This can be seen with the example he illustrates in his article in which he uses the collapse of the Soviet Union as an example of an incredibly significant contemporary event. Harris blames the collapse on a lack of support for infrastructure. In this case, Harris may not explore the reasons why women are turning away from hospitals, but he does acknowledge that it is happening. Possible explanations as to why this is happening might be mistreatment from the hospital staff, no insurance, the hospital care is too expensive, for political reasons... in fact the list might be endless. These explanations can also involve a changing superstructure causing a change in, thus creating a new modern form of childbirth.

Bruno Latour, on the other hand, would argue that there is no such thing as modern. Early in his career, Bruno Latour authored a

book, *We Have Never Been Modern* (1993). In the book he argues that humans have created an idea that they have developed and become "modern", distancing themselves from "traditional" humans. His conclusion follows the title - we have never been "modern." In the case of childbirth, Latour disagrees with Harris and contemporary views on childbirth. As mentioned earlier, giving birth at a hospital is considered the modern way by many. Harris says giving birth at home is modern, and others say giving birth at home is traditional. The conflicting views do not matter to Latour since he believes all of these interpretations and designations are wrong because none are modern or traditional; there is only childbirth. He develops this idea early in his career, but it helps him reach his main anthropological theory. In his book *Reassembling the Social An Introduction to Actor-Network-Theory* (2007) he explains his Actor-Network Theory (ANT), which says researchers should follow and observe networks of associations to draw conclusions about what makes the network work. In this case, the network is childbirth. Latour gives three test mechanisms that researchers could follow to proceed with the study and reach conclusions. The first test he says is, "the precise role granted to non-humans" (Latour 2007). Latour believes that the network, childbirth, involves more than just human associations. He believes that objects play an equal part in the network. Meaning, the process does not just involve doctors and nurses, but also the equipment that they use is part of the network. Latour would defend this test by saying that without equipment a c-section would not be possible, making the objects just as important. The second test question is, "Is the social in the end the same limited repertoire that has been used to explain (away) most elements?" (Latour 2007). Signifying that if the associations change, then the outcome changes. This is where Latour would question what is changing to cause the change to home births. The last test is, "Check whether a study aims at reassembling the social or still insists on dispersion and deconstruction" (Latour 2007). Latour wants the researcher to follow the actor and the object back. Here Latour has an endless number of approaches. He can follow the actor back all the way to conception, or even further back to the grandparents. He can follow the objects involved back to the opening of the hospital. He can follow back on the tools used by the doctors and nurses. This could be a major drawback of the ANT approach - the possibilities of actor and object associations are endless, the networks they create are endless... when do you stop?

In sum, there are many different perspectives that one could take in seeking to understand childbirth and its changing or non-changing conceptions, practices, and processes in society. Ruth Benedict approaches childbirth with her theory on culture and personality. She would be interested in studying childbirths in hospitals because that appears to be a core

value of US society at the time. The core values approach leads her to the practices she wants to investigate and not the other way around. Marvin Harris approaches childbirth from his theory of cultural materialism. Using the increasing popularity of home childbirths in the second half of the 20th century, he focuses on the importance of infrastructure. Lastly,, Bruno Latour uses his ANT approach to research childbirth, focusing on the social connections between non-human objects and humans that participate in childbirth.

Each anthropologist brings a set of interesting and unique points of view to contemporary childbirth practices in the United States. Although no one anthropological theory is superior to another, I personally support and respond to Ruth Benedict's approach the most. I find her direct approach to seeking to understand a culture's reasoning for developing certain practices and beliefs to be the most interesting. Moving forward, I will be very interested to use Benedict's core values approach as a starting point, but narrow it down further to dissect the various core values held by sub-cultures within a greater common culture. For example, how might the core values of women of color, or of non-heterosexual individuals affect understandings of childbirth and giving birth at home as opposed to in a hospital.

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Using Google Earth for Archaeological Research: A Virtual Survey of the Inka Road Network between Machu Picchu and Choquequirao

Efrain S. Arroyo

He/Him/His

My name is Efrain S. Arroyo, and I graduated from CSUDH in May 2021 and am now an M.A./Ph.D. student in the Anthropology Department at Binghamton University. My major is Anthropology with a focus on Archaeology. I am interested in the Inka Empire, territoriality and city planning, road networks, architecture and power, agricultural practices, communities of practice, and corporate labor systems. I am especially interested in the connectivity of the Inka road networks and tampus (waystations) to Inka settlements such as towns, imperial centers, and elite estates in the Cuzco region and what it suggests about infrastructural power and political or territorial control.

Introduction and Background

In the face of a global pandemic, disciplines like archaeology that rely on field research have had to adapt to remote investigation settings. Following the launch of Google Earth (GE) in 2005, researchers have postulated and tested its utility for archaeological research. Archaeologists have recognized the potential of GE as a tool for visualization, educational purposes, and research applications like remote sensing. For example, since 2016, the GlobalXplorer Project directed by Dr. Sarah Parcak of the University of Alabama at Birmingham, has demonstrated the utility of satellite imagery for identifying and monitoring archaeological looting, in addition to discovering and preserving sites previously unknown to archaeologists. However, more research is needed to assess its usefulness to the survey of previously studied areas in mountainous and heavily forested terrain like in the Central Andes of South America.

The Inka Empire, Tawantinsuyu (c. 1438-1533 CE),was the largest Indigenous polity ever to exist in the Americas, spanning much of western South America.

Tawantinsuyu expanded remarkably fast, with most of its landholdings obtained within a hundred years, its "material achievements were simultaneously political achievements" (Moore 2014). The Inka road network, known as the Qhapaq Ñan, connected the vast territories of the empire with approximately 40,000 km (25,000 mi) of roads, trails, and paths. As the result of a networked polity, the Qhapaq Ñan was the "imperial transport system of the Inca State" (Wilkinson 2019) and a means of connecting settlements, administrative and production and religious centers, and mining and agricultural zones under a state-serving economic, social, and cultural order.

Remote sensing has been a part of archaeology as long as it has been a discipline and is a way to observe landscapes and acquire information from a distance (Parcak 2009). Since the early 1990s, aerial photography has been a significant contribution to archaeology, from discovering to recording archaeological sites and features (ibid). Archaeologists did not begin using satellite imagery until the 1970s, although limited by image quality and resolution. Then, in the late 1990s, higher satellite image resolution and quality greatly improved the way archaeologists use satellite imagery for research (ibid). This remote sensing archaeological research project builds upon prior research to test the viability of publicly available satellite imagery platforms like GE to conduct preliminary archaeological spatial analysis.

Methods

A total of 60 km² of the Inka road network between the archaeological sites of Machu Picchu and Choquequirao were virtually surveyed using Google Earth. The "overlay image" tool was used to set a reference map (Lee 2010) over GE satellite imagery and create "placemarks" for major Inka sites. The "polygon measure" and "line measure" tools were employed to illustrate the survey area and its boundaries. The 60-km² survey area was divided into four 15-km² smaller survey squares. The reference map and the "placemark," "historical imagery," and "path measure" tools were used to identify and trace branches of the Inka roads. Remote sensing methods developed by Parcak (2009) and Inka road identification protocols developed by Hyslop (1984) were both incorporated.

Results

532 placemarks were created to mark the location of Inka roads, identifying 219 km worth of the road system. 63 path measures were created to trace Inka roads, creating a plan for 28 km of the road network. Inka roads were identified in different environments and types of vegetation cover. Inka roads vary in appearance from wide thoroughfares to small footpaths that look like lines and zigzags that cut through the vegetation and landscape. The difficulty of identifying Inka roads depended on image resolution, elevation, vegetation cover, terrain type, and its proximity to modern infrastructure. Although there was

high resolution in the survey area viable enough for archaeological research, limitations included inconsistent image resolution and quality. GE is feasible for archaeological research in this area, but that does not necessarily translate to its viability everywhere in the world.

Discussion

The survey results proved the viability of using publicly accessible satellite imagery like GE for archaeological prospection of archaeological features. Spatial analyses also demonstrated the feasibility of tracing the outlines and plans of Inka roads. Feature types intentionally omitted from the virtual survey were other archaeological features (e.g., waystations, residential architecture) and modern infrastructure. Spatial analyses like those presented in this study can play a role in protecting tangible heritage by helping to identify archaeological features before they are destroyed by modern infrastructural projects. GE satellite images are frequently updated, allowing researchers to track the encroachment of modern projects into archaeological zones over time.

GE is a feasible tool for archaeological research especially because it is a publicly accessible and cost-effective virtual platform that works great for conducting research from afar. Currently, during the COVID-19 pandemic, GE is an exceptional tool for conducting virtual research and allows users to conduct archaeological fieldwork from the safety of their home office despite the unfortunate circumstances. Even though GE makes remote archaeological research more practical, we must also recognize that it raises ethical questions about sharing spatial imagery and data, exposing modern activities, and the lack of the representation of individuals and their property. Furthermore, it is important to keep in mind that such examples of remote research serve as a preliminary survey that must be tested through further, on-the-ground reconnaissance when possible.

Conclusions

The preliminary results of this project indicate that archaeologists should be able to identify and quantify many sections of the Inka road network using GE, allowing them to better prepare for eventual pedestrian survey and LiDAR research. GE provides a cost-effective and publicly accessible virtual platform for archaeological remote sensing research. Lastly, this type of preliminary spatial analysis research can be conducted despite adverse conditions like a pandemic, allowing researchers to continue or prepare for more intensive research from the safety of their office.

Acknowledgments

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Fig. 1. Google Earth map of the study area.

Fig. 2. Google Earth map of the study area divided into four sectors using the Overlay Tool (Lee 2010).

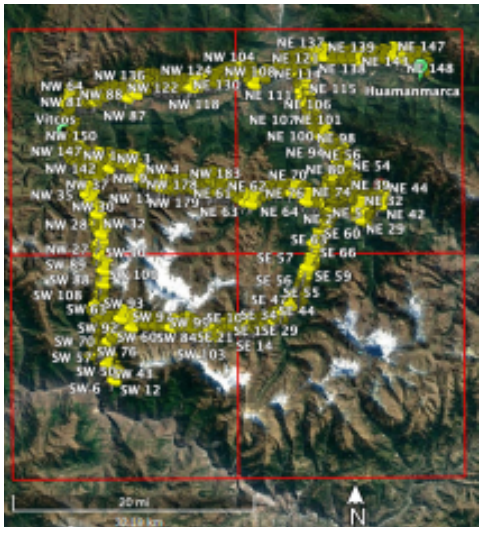

Fig. 3. Google Earth map with points identifying locations along ancient Inka road networks.

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Disability Programs in Northern Europe

Aden J. Rauschuber

He/Him/His

My name is Aden Rauschuber, and I graduated from CSUDH in spring 2022 with my B.A. in Applied Anthropology. While I have many areas of interest within the discipline of anthropology, my main focus has been disability studies. As a person with disabilities, I hope to add a more holistic perspective to disability studies literature. I hope you find my article helpful as I seek to change how society and the disabled community interact with each other.

Introduction

The earth is a very diverse place. After all, there are many living things on this planet, from animals to plants, fungi, protozoans, and bacteria; the earth carries a variety of living organisms. This can be broken down even further. After all, we as humans can be broken down into several other groups after our kingdom of Animalia. We are also part of the Phylum Chordata, Class Mammalia, Order Primates, Sub-Order Haplorhini, Infra-Order Simiiformes, Family Hominidae, Sub-Family Homininea, Tribe Hominini, Genus Homo, Species sapiens, and finally, Sub-Species sapiens. While I might have just thrown a bunch of information your way, you need to forget everything I just said because none of that even matters to the everyday human. This is because it is not the biological markers that help define us as humans but the social ones such as socio-economic status, race, and more. Anything that defines one as being part of a so-called "norm" or the so-called "minority" fits into this category. One of those "minorities" are people with disabilities, and these people, at least here in America, have had a hard time getting what we need to live a fulfilling life.

This could be because we are underrepresented, or maybe because we have a hard time being heard; whatever the case, we are not being heard as loud as we need to be. In order to address this issue, the disability programs in northern European countries were examined to see who was doing a better or a worse job than the United States when creating and implementing their disability programs. By the end of this paper, I hope you can use this newfound knowledge to better represent and help fight for those in the disabled community who cannot fight for themselves.

Article Review

To understand how to help those with disabilities here in America, a cross-cultural analysis is needed. Solli et al. (2018) provides the guidelines for and examples of disability in Norway. The authors do this by explaining that a comprehensive concept of cognitive objectivity (CCCO) is used to justify guidelines as true or false. They also state that the, "Four necessary conditions identified for defining a CCCO were: (A) acknowledging the patient's social context and life-world, (B) perceiving patients as cognitive objects providing a variety of meaningful data (clinical, psychometric, and behavioural data – i.e., activities and actions, meaningful expressions and self-reflection), (C) interpreting data in context, and (D) using general epistemological principles." (Solli et al. 2018). These conditions can be tracked in a few ways, such as by studying the person in their natural environment and recording their perspectives or thoughts in qualitative or quantitative data gained by a psychologist (this is usually reported in an official document called a certificate). In the end, though, whenever tracking these data, it is always essential to apply epistemological principles and not forget the context of the situation. This is because while it used to be the biomedical model that was important, this is no longer the case. This is because today, we either focus partially or entirely on the ability health model. This model focuses more holistically on the individual in society, giving us a complete picture of the individual's way of life (when using both health models, the model being used is the mixed health model). In the end, Solli and colleagues (2018) conclude that both the comprehensive concept of cognitive objectivity and the ability health model are more important and more accurate as they take social and environmental factors into account. All of this is important to note, as they show how the environment plays more of a role in how a disability is defined. Case in point - part of the reason I took this topic on is because I have been fighting for my Social Security Disability Insurance. I am still waiting for my appeal to happen in court, as a matter of fact, because to society, I do not fit the disabled stereotype. his is because while I have epilepsy, it is under control. This, along with my right-sided weakness due to neurological impairment and T visual impairment (completely blind on one side but

only neurologically impacted on the other), is not enough to consider me disabled, according to some people. Borup et al.'s 2019 article, “Healthcare use before and after changing disability pension policy: a regional Danish cohort study," looks more deeply into this by showing the effects that changing disability requirements has had on Denmark. Participants in Borup et al.’s (2019) study ranged in age from 18 to 64 and came from northern Denmark. These people were then broken into two groups: people with disability pensions between the years 2010 and 2012 or 2014 and 2015, which was further broken down and divided by the date of birth, sex, and residence. On top of this, ages were further divided between people ranging from 18–39 and 40–64 years. In the end “A total of 9115 individuals aged 18–64 years with residence in the North Denmark Region were granted DP in the 2010–15 period. Of these, we excluded 909 individuals with incident DP in 2013 and 874 individuals with residence outside The North Denmark Region at the time of being awarded DP. From the final study population counting 7328 individuals, two study groups were created; Group 1 included individuals awarded DP in 2010–12 n = 6286), and Group 2 individuals awarded DP in 2014–15 (n = 1042)" (Borup et al. 2019). Study participants ranged in their types of disability from “… only psychiatric contact, only somatic contact, both psychiatric contact and somatic contact and no contact except with a GP” (Borup et al. 2019). A few participants even died over the time that the research was conducted. By the end of this study, Borup and colleagues came to a few conclusions. First, they concluded that a 2013 policy change regarding access to disability pensions did exactly what it was supposed to do - disability pension acceptance went down across the board. However, there were some unintended side effects as “a change of diagnoses towards higher proportions of cardiovascular, pulmonary, neurological and cancer diseases and a lower proportion of musculoskeletal disorders in populations granted DP after the policy changes.” (Borup et al. 2019). On top of this “people who had been granted DP, contacts to somatic healthcare and hospitalization were more likely after the policy changes; inversely, we saw no significant difference between the groups regarding psychiatric healthcare use or hospitalization” (Borup et al. 2019). This is important as we can deduce that the changes made over the years to Denmark’s social security-like system have led to a weeding out of those with a less dire need of disability pension. This includes the weeding out of many younger people (despite supposed access to an interdisciplinary rehabilitation program for those with disabilities under 40). However, many women with mental health issues may have been let in. While this system may have faults, at least the disabled people impacted the most are getting taken care of better and have more resources available to them.

Although we may want to help everyone, we cannot always do so, but this does not mean that we should not try. After all, it is my belief that by helping everyone, we can then, in turn, help society. This is idea is supported by another article titled "Working while on a disability pension in Finland: Association of diagnosis and financial factors to employment" (Polvinen et al. 2018).
Compared to other countries, most people on disability pensions in Finland are still willing to work. This is huge as Finland has a smaller population than countries such as the United States. Due to this fact, the Finnish government needs everybody to work for as many years as possible to be a more productive country. While you might believe that working longer is a bad thing, this is not true as previous studies have found that when disabled people work, they are happier. It is not surprising, therefore that, "A relatively high number of working-age individuals are on disability pension in Finland, and 6.4 percent of those aged 16–64 years were drawing disability pension in Finland in 2015." (Polvinen et al. 2018). On top of this fact, the most common disability pensioners have cardiovascular or musculoskeletal diseases and are most likely to continue working. It is also common for those who recently retired to return to work.
This article discusses the connection between health and financial factors while on disability pension in Finland. It did this by looking at the "data from Statistics Finland, which consists of information from various registers. The data comprised a nationally representative 10 percent sample of Finns...The data included 14,418 disability pensioners. A total of 12,969 (90 percent) received a full disability pension, and 1440 (10 percent) received partial disability pension" (Polvinen et al. 2018). The earnings and levels of education were then also divided into several sub-categories. There were also classifications of "married or cohabiting, and those who were unmarried, widowed or divorced 'followed by those who had underage children and those who had not"(Polvinen et al. 2018). After elaborating on the demographic and socio-economic breakdowns of the participants in the study, the authors could draw many conclusions. One of the things that they could conclude after looking at all the data is that those with a higher education or disability pension made more money. This might be because higher status jobs may be easier to adapt to a disabled person's needs. We can now also say that those with musculoskeletal issues will go back to work and take biology and culture into account in some capacity more often than those once retired. They will also be more likely to do so than those with mental health issues who will go back to work less often once retired. This could be because having a mental disorder comes with many negative connotations. It is also important to note that those with partial disability pension are more likely to work than those on a full disability

pension. After evaluating these three articles, it is now quite clear that every country handles disability programs differently. While all countries seem to employ a more biocultural framework that takes biology and culture into account, not all countries look at people with disabilities the same. After all, as we have seen in these articles, some countries empower those with disabilities, such as Finland, while others, such as Denmark and the United States, do not. This leaves me to believe that one's disability is just as biologically based as culturally biased.

Conclusion

A quote attributed to Thomas Jefferson says that, "Our greatest happiness does not depend on the condition of life in which chance has placed us, but is always the result of a good conscience, good health, occupation, and freedom in all just pursuits." This is never truer than it is for people with disabilities. Life may be tough on us but with "a good conscience, good health, occupation, and freedom in all just pursuits," we can get through anything. As we have seen, to get through things, we need to depend not only on ourselves but also on others. This can be challenging as countries adapt to helping those with disabilities differently. Due to this fact, some countries are more successful than others. This is important to note as after conducting my research, it is clear that the United States is one of the least forward-thinking and accommodating countries when it comes to helping those with disabilities.

So, what can the United States do to help disabled people to better succeed? First of all, after going through the Social Security Disability Insurance process myself, I would suggest that the Social Security office pay more attention to how one's disability affects their everyday life. After all, not everything is black and white and clearly seen through words and numbers on a piece of paper. On top of this fact, I would also like to see them clearly define what each disability means as a visual impairment is not the same as legally blind, but both do deserve some sort of support. Finally, I would like to see them take more interest in helping those with disabilities find and keep work. From personal experience, it is hard finding and keeping jobs as people with disabilities are undervalued in the workforce in America while everything costs more for us.

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Community Engagement and Decolonization within Anthropology and Academia

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I graduated from CSUDH in spring 2022 with a B.A. in Anthropology and concentration in biological anthropology. My interests include Maya archaeology, Salvadoran culture, Forensic anthropology, and Community engagement. I had previously written a paper about Indigeneity in El Salvador, in which I drew on ethnographies as my sources. This led me to enroll in an Intro to Nawat course taught by Nahua Elders. I realized that some of the terms and information that I had used in my paper were outdated or incomplete. It made me realize that there are many sources that we use for scholarly research that could be updated. I decided to do more research on terminology used in scholarly books and connected it with community engagement. It showed how Anthropology isn't yet as decolonized as it should be as a discipline and how it affects our resources and the communities we work in.

Introduction

There have been several movements focused on decolonizing anthropology since the 1960s (Pels 2021). Although the goal of decolonizing anthropology is not new, there is still a lot of work that needs to be done to decolonize anthropology as a discipline. There are many aspects of how anthropology is taught in academia and how fieldwork is conducted that still need to be changed. It is important to prepare students, starting from the beginning in introductory classes by educating them on community engagement and respectfulness towards other cultures. Anthropology has claimed to be a subject that is inclusive and open to other cultures. However, there remain issues of equal access to research, higher education, and job opportunities for Black, Indigenous, People of Color (BIPOC) individuals, as social sciences remain predominantly white in academia and field research (Pels 2021). The impacts of earlier anthropologists who largely conducted their research under and in service to a framework of colonialism, are still seen today and the movement to decolonize and restructure

anthropology still has a lot of work to do. For instance, there is a lot of published work that includes problematic terms that came from colonization and need to be updated to suit the information we have learned over the years and that fit today's climate. There is still work that needs to be done in the field to ensure community engagement is put into practice. As well as preventing a fascination with another culture or community from overpowering one's respect for these communities, which is why it is so important to address these issues from earliest introductory courses. There also needs to be more equal access for BIPOC individuals to contribute to the future of the discipline. A diverse field can bring a variety of ideas and experiences into the discussion that can better benefit communities and research. The new generation of anthropologists has the opportunity to continue and push the work of decolonization and finally put it into practice.

When it comes to decolonizing anthropology, there are many factors to consider and there is no one answer to resolve the issue of an unequal and colonized discipline. Education, community engagement, equal access, and updating earlier work are just a few aspects to consider when pushing this movement. As Emma Waterton and Laurajane Smith (2010) state, community engagement is not the "cure-all" to resolve issues of inequality. School curriculum should include work on community engagement, and the importance of access to archaeological. information in non-academic communities (especially the communities with which the anthropologists work), and how earlier work of anthropologists needs to be revised. It is important for students to learn this information at the beginning of their anthropological education so they can be aware of this issue and bring this knowledge with them once they move further on in the field.

Being an anthropologist comes with responsibility including correcting and changing previous work that is problematic. The main focus of this paper is to show how current class materials still include information that needs to be updated. As well as pointing out problematic words and statements made in a popular introductory anthropology book about the precolonial Maya civilization, *The Maya* by Michael D. Coe and Stephen D. Houston. It is crucial to edit previous work to add inclusive and decolonized information because the students who use this material would otherwise continue to spread outdated knowledge and misinformation. Also, having inclusive and decolonized texts can create a safer and more welcoming space for students who identify as BIPOC. This paper will also discuss different forms of inclusive practices such as community engagement to utilize in the field. In addition, I will show the importance of descendent and community involvement in anthropology and how it impacts these communities as well as archaeological research.

Community-based archaeology

Community-based archaeology involves collaboration with the descendent and local communities within which anthropologists work (Atalay 2012). In *Community-based archaeology* (2012), Sonya Atalay points out the importance of "problematizing the future" in archaeology. This means to think hard about community involvement and engagement in archaeological places and landscapes that results in long-term sustainability. There are three important aspects to consider when problematizing archaeology's future, 1) the issue of relevance, 2) the question of audience, and 3) concerns about benefits. First, research needs to be relevant to the modern world and with this, the world can be open to archaeologists (Atalay 2012).

Second, the audiences in archaeology are usually academic individuals. More archaeologists are now engaging with communities in the archaeological process, and this expands the audience to these community members. Community-based participatory research (CBPR) is a way to expand the connections and create potential engagements with Indigenous groups, public audiences, and local communities. CBPR benefits both partners by creating an opportunity for communities to learn the information that is being gathered and for archaeologists to receive diverse knowledge from different traditions and experiences. F for CBPR to work, everyone involved needs to have equitable partnerships and projects must be community-driven (Atalay 2012). Involving community members in projects empowers the community and ensures that they know and learn what is happening with projects that involve them and their ancestry.

And third, many communities have been excluded when it comes to archaeological excavations within their own territories and ancestral lands. They also do not have access to the archaeological information that has been uncovered and researched on their ancestral land (Atalay 2012). These community members and descendants should be part of the decision-making when it comes to archaeological fieldwork. It is also important to have equal access to projects for BIPOC anthropologists as many times projects are led by anthropologists who do not have a connection or history with the community that is related to the research. It is important to have a diverse field because BIPOC individuals have their own knowledge and experiences that they can bring to projects, especially projects where they have a connection. Community archaeology is being practiced more today than it has in the past. Creating new methods of archaeology and community engagement is one of the practices that we need to implement in fieldwork to create inclusive and accessible research. It benefits communities by creating a safe space for them to participate in research and have a say in projects. It also helps research by including different viewpoints and information

that would have been missed if community members and BIPOC individuals were not involved.

Terminology

New academic practices should include reviewing, editing, and updating older textbooks that are still used in classes. Here I will reference a textbook that was taught in a class that I took during undergraduate education that I noticed had some information that needed to be critiqued and updated. *The Maya* by Michael D. Coe and Stephen was the main text used in my Ancient Americas class and it includes a lot of information that is hurtful to Indigenous people. It includes terms that have a colonial history that should no longer be used. Other information in this book is important and depicts the most accurate information that was available at the time that it was published.

Some terms that are found in this text are "exotic", "discovery", and "backward". When using the word "discovery" to refer to artifacts and earlier cultures, it implies that this entity did not exist beforehand. It should go without saying that we all know that artifacts and early sites existed for the people of that time. It is better to use different words such as "unearthed" or "uncovered" instead because it implies that this entity has existed before but has been brought to our attention during our time. These entities that are unearthed are not something "new" or "exotic" for us to discover. Using harmful words like these romanticize and exoticize early civilizations. This leads Indigenous descendants of these civilizations to experience racism and colonial tourism. These artifacts and sites are only new to us, the outsiders of this community. There are descendants still living today who have known about these objects and sites or should have known about them if it weren't for colonization.

There are also some terms in the book that even the authors admit are not used correctly. One example is "Tik'al" the name of a very important Classic Maya site. In the majority of the book, the site name is spelled "Tikal" despite the authors' recognition at the beginning that it is not the proper spelling of the name. The authors state that since this is a well-known spelling of this word by students, tourists, and literature, it would be confusing to use the logically correct spelling "Tik'al" (Coe and Houston 2015). The issue with this is that it is continuing incorrect information about the spelling and ignoring what was used by early civilizations. It is also important to note that the name Tik'al was given to the site recently based on the reservoirs that were still filling with water and the name roughly means "at the watering hole". If no one starts to use the correct spellings and information , then it will never change, and people will continue to learn the incorrect spelling of this word. Another word that is "Cenote". The Yukatek Mayan term is "tz'onot". Although the book uses the word "cenote ", the authors state that "cenote" is a word that was used by

Spaniards that came from the Yukatek Mayan term “tz’onot” (Coe and Houston 2015). It is well done that the authors noted this because it is important for readers to be aware of the history of this word.

Another potentially problematic word is “Pipil”, a term used to identify Indigenous peoples of El Salvador and other areas on the Pacific Coast and Guatemala. The term “Pipil” is a word that comes from Tlaxcallans, an Indigenous group from Central Mexico who spoke Nahuatl and helped the Spaniards conquer Maya areas. In a Nawat language course from Asociación Nacional Indígena Salvadoreña taught by Nahua elders (names undisclosed for privacy reasons), they teach students the history of the word and state that they identify as Nahua or Nawat, not “Pipil”. The word “Pipil” means “child” in Nawat. Calling an entire group of people “Pipil” is inappropriate. The word for child is used in the language to refer to someone who is a child . However, it is not what the entire community uses to identify themselves because it would be calling non-children “child” as well. It is important to use terms that people use to self-identify and it is important to research and question the history of a word if you are unsure of where it came from, especially if it comes from areas that experienced colonization. If one refers to themselves as “Pipil”, it is also important to not question their identity even if others from the same cultural community do not identify with this word. However, it is still important to know this information and if referring to a group of people with different terms for their identity it should be stated so in the text.

Another term that is similar is “Eskimo” which is also in this text. The term “Inuit” is the term that Indigenous people of the Northern polar circle identify with today (Sinchi Foundation 2020). Although there are still some people who self-identify as “Eskimo ”, there has been a big movement to educate people on the history of the word which is a word that was given to them by European settlers. In the Algonquin language, which is a language spoken by Indigenous people of Quebec and Ontario, Canada, “Eskimo” translates to “eaters of raw meat." Identifying a group by a single trait does not give recognition to other parts of their rich culture such as throat singing, mask dancing, and creation stories (Sinchi Foundation 2020). The word “Eskimo” is a general term used to describe a large group of people from different regions in the Northern Circumpolar areas where some do not identify with this word. Although this can be tricky since some people still identify with this, it is important to know this information and use the word that the people or person with whom you are referring or in contact identifies. This is an important part of decolonizing anthropology and not only should this be taught in anthropology courses, but people outside of academia should know this information as well. Due to colonization, there are a lot of terms that are used today that refer to Indigenous people that

they do not use to identify themselves .

The word Indigenous is also not capitalized in the text. According to the University of British Columbia's Indigenous foundation (2009), Indigenous with a capitalized "I" is referred to in the United Nations as peoples of long settlement and who have a connection to specific land that has been impacted by industrial economies, displacement, and settlement of their traditional territories by others. This definition acknowledges the modern European colonial era where people were suppressed for political, economic, and social exploitation and sovereignty (Weeber 2020). Using the lowercase "i" in "Indigenous" can refer to anyone who was born and grew up in the place they currently live (Weeber 2020). Capitalizing the "I" is used to identify a group of political and historical communities (Weeber 2020). The capital "I" makes a clear distinction that who you are speaking of is an "Indigenous person" with historical ties to a land.

Another thing to note from the text is that the authors make assumptions about certain artifacts while admitting that they are unsure of their true meaning. Female fired clay figurines were made in the Preclassic villages of Mexico and the Maya area (Coe and Houston 2015). The authors state that no one is sure of the meaning of these figurines but go on to state that it is thought that they may have something to do with fertility similar to female figurines from the Neolithic and Bronze Age Europe (Coe and Houston 2015). The issue with this is that no one knows the true meaning behind these figurines. If no one is sure, it should be common practice to not guess what it means without any evidence. The idea that female figurines are connected to fertility is questionable because this idea stems from Old World civilizations that were thought to reflect matriarchal societies which focused on fertility and the Mother Goddess (Marcus 2019). In her article Studying Figurines (2019) Joyce Marcus states that there have been many overviews that have pointed out that scholars were over-emphasizing women even though men and animals were seen in the collections in which they were researching.

Another interesting note about the book is that although the Maya civilization did not "collapse", this term is used throughout the book with minimal explanation or qualification. The author states in Chapter 10 that the Maya are resilient and still alive today (Coe and Houston 2015). The result is that there are many reasons for the Maya to have left sites, but those reasons did not erase the Maya. They endured and transitioned to adapt to their changing environment. There is also the word "abandonment" that is used to describe the dispersion of this community. When using these words, it has a sense of failure behind it instead of resiliency (McAnany 2014).

Also, towards the end of the book, the authors talk a bit about post-conquest life for

the Maya. There is a quick statement about how this was a time when enslaved African people were brought against their will into Guatemala, Campeche, and later in time the area that is now called Belize (Coe and Houston 2015). When the Spaniards came between 1500 and 1750, about 716,000 Africans were brought during that time which was more than the number of Spaniards that came, which was 678,000 (Nájera and Luis, 2017). However, there is no further information about the enslaved African populations brought to the Maya area in the book. There have been several types of relations between Maya and enslaved African people in the Post-conquest Era. An example of Maya and African people relations is the Maya resistance to Spanish colonization in 1531. Sugar plantation owner, Francisco de Montejo, had requested slaves from Spanish colonial authorities to his plantation but because of the Maya resistance this request was postponed . This conflict illustrates the history of war and slavery that brought the Maya and African people together (Nájera and Luis, 2017). There are many Afro-Indigenous people today and it is important to acknowledge them. Afro-Indigenous people are overlooked and deserve to be represented. Many people do not realize how slavery affected early Indigenous cultures and communities in the Americas. Therefore, if one is speaking about the Maya or any other group that had contact with enslaved African people, it should be widespread practice to acknowledge the history and impact that African slavery had on this civilization.

Conclusion

There is a lot more information and parts of the text that need to be evaluated. What I have pointed out here is just a few examples from the book that needed to be critiqued. A new edition of the book is set to be published in 2023 and I will look forward to seeing if any of the terminology and approaches are updated. Community engagement, changes of school curriculum, and equal access is also only part of what can be done to decolonize anthropology. The information that I have provided is to help readers think deeply about what information they are being taught and if you are the educator, what information are you telling your students. It is imperative to think about better ways to practice archaeology that involve diverse and community-based practices. There won't be a change in anthropology and academia without people acknowledging that there needs to be a change. Anthropology needs to be more inclusive and have people in the field that represent the diversity of humanity. A more diverse and inclusive field will result in better research and representation for communities and students.

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