

REVIEW ARTICLE

Addressing the Alien in the Room: Why Public Perception is Imperative to the Field of Archaeology

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ABSTRACT

Pseudoscience in archaeology, or pseudoarchaeology, are ideas formed by distrust, with minimal observable evidence that explain the human past. In a world of widespread, accessible misinformation, researchers often dismiss the ideas presented within pseudoscientific theory as laughable or irrelevant. On the contrary, many of these thoughts are supported by and for colonialist or racist agendas. With popular media throughout North America now supporting pseudoarchaeology, misinformation is beginning to take a hold on public perception of the field of archaeology. To explore this influence further, this paper summarizes the origins and thoughts presented within popular pseudoarchaeology, current public understanding of archaeology, and why this matters to archaeologists. This paper primarily considers how archaeology is portrayed in Canada and the United States, although I use additional international examples to underscore the importance of global public engagement and media influences within the field of archaeology. Stressing the lack of accurate representation of archaeology, especially regarding the representation of Indigenous peoples, provides an invitation to strive for public engagement and honest discourse about the field.

Keywords: pseudoarchaeology, public perception, pseudoscience, public engagement, white-supremacy, misinformation

INTRODUCTION

Prior to entering formal education or employment, professional and academic archaeologists usually have a preconceived notion or definition of what archaeology is and what archaeologists do. Often, popularized media in the forms of literature, television, and film offer the first exposure of archaeology to budding archaeologists and non-archaeologists alike. Inaccurate representations of the field are generally the first depictions of archaeologists that many people perceive as truth. While these representations of archaeology can be intended as harmless and romantic portrayals of the field, ultimately, many of them are rooted in colonialist ideologies that perpetuate racist

ideas. Due to the inaccuracies and falsities these representations present, archaeologists and other researchers often dismiss believers in pseudoscientific theory. However, with the current rise in scientific distrust and white supremacist groups in North America, exposing the potential harm in pseudoarchaeology and inaccurate archaeological representation in popular media is dire. This article discusses this topic further analysing the origins of popular pseudoarchaeology today, the media representations of archaeology, how the public perceives the field of archaeology, and what this means going forward. In doing so, this article highlights current and past perspectives on archaeology through qualitative survey data

to communicate the discrepancies in public engagement and interest in public opinion from researchers in archeology.

THE EMERGENCE OF PSEUDOARCHAEOLOGICAL THEORY

Pseudoscience and pseudotheory derives from the Greek prefix pseudo, meaning “to lie or to cheat” (Card and Anderson 2016). Essentially this means science or any school of thought that is unfounded by credible evidence or rejects the scientific method altogether. Archaeology, a field built on material evidence from humankind, rejects pseudoscientific or pseudotheory based on its lack of logical explanation that provides information on the human past. Many popular schools of thought in pseudoarchaeology are derived from misinterpretations of historical texts, and many known today are based off ideas presented by the Theosophical Society (Anderson 2019)

The Theosophical Society was founded in New York City in 1875 and included a group of spiritualistic seekers. Theosophy is the intent of achieving knowledge of God through spiritual ecstasy or connecting with otherworldly or supernatural beings (Anderson 2019). Notable names in this group include Helena Blavatsky, Henry Olcott, William Judge, and George Felt. The group believed in powerful ancient beings, supernatural powers of humankind, and these powers within the natural world (Anderson 2019; Card and Anderson 2016). Blavatsky is responsible for many of the popularized forms of pseudoarchaeology seen today. Most notably, she wrote about the five Root Races, or stages in the development of humanity. In the Fourth Root Race, Blavatsky’s writing claimed that humanity went through a stage of emotional development, which occurred on the lost continent of Atlantis (Anderson 2019). While Blavatsky made these claims, Atlantis had only recently been brought back to public attention with a publication by Ignatius Donnelly, sparking the discussion on the

existence of Atlantis. Donnelly presented the Atlantis theory as hyperdiffusionist, a common theme in many pseudoarchaeological claims in which the cultures of ancient Egypt and the Maya were so great that they must have a common origin (Feder 2006). Hyperdiffusionism suggests that two or more cultures are of a single origin, often rejecting cultural diversity of the past (Anderson 2019).

Another theosophical claim that sparked popular texts are derived from Howard Phillips (H.P.) Lovecraft’s (years active 1917–1937) and Erich von Daniken’s (born 1935) Ancient Astronaut theory, otherwise known as Ancient Aliens. Von Daniken suggested that the primary influence for his Ancient Astronaut theory were the Vedic texts of India, which described temples that could fly through the sky and into the darkness (Anderson, 2019). At the same time, Blavatsky also alluded to a similar theory with reference to the alleged ancient Tibetan text named The Book of Dzyan. With reference to The Book of Dyzan, Blavatsky suggested that otherworldly beings led and aided the people of Atlantis to take the first steps in building society as we know it today (Anderson, 2019). Lovecraft, popular pulp fiction author, used these theosophical ideas within his writings. Many people who are familiar with Lovecraft’s writings read them as truth rather than simply fiction (Card and Anderson, 2016) Von Daniken also used the theosophical claims to support the Ancient Astronaut theory (Card and Anderson, 2016).

As absurd as these theories may seem, they are often cited as spiritual or religious belief and explanation for natural phenomena outside of Western Science (Feder, 2006). More often though, the satisfaction obtained from pseudoarchaeological discourse seems to lie in a rebellion against the authority of scientific rationalization. Mainstream archaeology has become a major purveyor of damaging the mysticism of pseudoarchaeology in the sense that mainstream representations pushes the historical record back further, denuding the

past of mysterious forces, and dispelling the enchantment of ancient sites (Laycock, 2019). Some of these theoretical approaches, whether rooted in religion or not, can however, have serious consequences when tied with colonialism and racist ideologies.

POPULAR MEDIA REPRESENTATIONS OF ARCHAEOLOGY

Film and Television

The general public may hear about the field within popularized media such as Indiana Jones, representations of Atlantis, or TV shows such as *Ancient Aliens*. These examples provide a glamorized or false idea of what archaeological studies and practices are. Despite this, many consumers gain an alternative perception to what archaeologists do and what archaeology is as a field. Often, archaeologists immediately dismiss these ideas without considering the origin of them, or the influence they may have on the general public.

While having little to no basis, the Ancient Astronaut theory, popularized by von Daniken's *Chariots of the Gods*, has one of the largest influences on popular media including pseudoarchaeology. This theory is also found in Hollywood science fiction films. Like Atlantis, Ancient Astronaut theory endorses diffusionism, in which similarities in material culture through space and time exist only due to one influence or one type of being (Card and Anderson, 2016). As previously mentioned, many of these media portrayals of archaeology in Hollywood have theosophical influences such as the TV show, *Ancient Aliens* (2009–present). Many other popular films have likewise featured archaeologists engaged with paranormal monsters or powerful ritual objects, most prominently the Indiana Jones film franchise (1981–present). The plot of each film revolves around a particular artifact imbued with spiritual power. The first and third films, for instance, focus on the Ark of

the Covenant and the Holy Grail respectively, which are sacred objects from Jewish and Christian tradition (Anderson, 2019). The fourth film similarly relies on a crystal skull as its primary plot device. Through the film, this skull is shown to have miraculous psychic abilities, and, at the end, is shown to be the actual skull of an extraterrestrial being.

The film *Prometheus* (2012) presents another hyperdiffusionist perspective of ancient cultures, assumed to be endorsed by real life archaeologists. The plot of this film is set in 2089 CE, in a cave on the Isle of Skye in Scotland. The introductory characters, archaeologists, discover a collection of 35,000-year-old cave paintings. In one of these paintings an anthropomorphic figure is pointing with its finger to a group of six circles. The archaeologists present their findings at a meeting, and, in a typical pseudoarchaeological manner, they connect the representation from the cave on the Isle of Skye in Scotland with later representations from different cultures all over the world. They supposedly found the same representation of six circles on an Egyptian papyrus from 2470 BCE, a Mayan stela from 620 CE and on a Sumerian monument from the beginning of the third millennium BCE (Matić and Žakula, 2021). There is both a supernatural and hyperdiffusionist representation within the film, portraying inaccurate representations of archaeology and of history.

Inaccurate portrayals of the field are more easily consumed than accurate portrayals of archaeologists. In understanding these portrayals of pseudoarchaeological thought, it is easy to assume that Hollywood makes films for entertainment and profit, not primarily to convey some sense of historical events. Consequently, movies typically embody contemporary stereotypes and mythologies. Hollywood creates films that audiences see as both familiar and consistent with trends in popular media. In cinemas this process situates archaeological activities in supernatural

worlds, and hence a consumer can grasp meaning by analyzing the mystical qualities or themes visible on screen due to powerful imagery of supernatural relationships with the past (Hiscock, 2012). Filmmakers can be considered producers as well as consumers of pseudoarchaeological thought.

The goal of cinematography in science-fiction or action and adventure film is often to make events appear realistic. Cinema audiences receive visually powerful fictionalized narratives that subtly and forcefully deliver stories that offer the same image of the human past as stories offered in the guise of pseudoarchaeological research (Hiscock, 2012). These movies have the capacity to deliver ideas about the human past without having to persuade the audience to accept evidence. This provides further reason and meaning for an audience to be incredibly receptive of pseudoarchaeological thought (Hiscock, 2012).

Journalism and Social Media

There are many other ways media portrayal may influence public opinion of the field of archaeology. However, there have been few analyses conducted on media portrayal of archaeological work from news outlets and social media. When thinking of archaeology, many of those outside the field may think of academia as a primary career for those pursuing the field. However, cultural resource management (CRM), is the largest employer of archaeologists around the world. CRM may employ archaeologists through private, public, or government sectors to manage sites at risk from development or natural forces and preserve archaeological and heritage resources. Canadian governmental policy often requires CRM to be conducted before undergoing any major development project (Kuhn, 2002; Pokotylo, 2018). Because this is a major avenue for many archaeologists to be employed, CRM requires funding to ensure that archaeological resources

are protected and therefore public interest is engaged.

Robert Kuhn (2002) examines CRM portrayed in media in the state of New York, USA. While this article does not solely focus on public perception, the paper focuses on how press coverage can influence public perception of archaeology. If public perception is negative, archaeological work may receive little to no funding from government organizations and private funding avenues. Kuhn's review consisted of over 200 media coverage samples from newspapers on CRM. The newspaper clippings fell into three categories: archaeology focused (discoveries, information about the past, or opportunities to see new sites), development projects regarding the status of archaeological work, or issues and procedures in CRM (Kuhn, 2002). During the given time period, 1,965 projects were conducted in the state and only 53 were reported on. 20% of quotes are from CRM professionals. 29% of quotes outside of CRM are from other professionals in the field of archaeology, knowledgeable about archaeology, or are in favour of CRM. 10.6% of all newspapers contained one or more errors, including dates of sites, spelling, or terminology errors. One in every ten articles contain misinformation about archaeology or a CRM project. 25% of all articles have a negative stance on CRM projects, where 32% of articles are deemed positive representations of the field. All editorials and commentary focused on controversies in CRM. Media representations on CRM and archaeology vary from location to location. While much of the representation is positive, there is still significant amounts of room to improve in journalism. With limited resources such as tight deadlines or lack of resources, journalists may have considerable obstacles when reporting on projects (Kuhn, 2002). Even so, their position to report on CRM greatly shapes how the public views archaeology. Considerations for the field could be to

generate a greater network of individuals outside CRM projects for media outlets to contact who may reflect a meaningful view of a project such as academics, those who work in heritage branches, Indigenous stakeholders, and so on.

The development of social media has been instrumental in spreading information from journalists and scientific journals. Often, information can be skewed and misinterpreted, even when regarding sensitive issues. In recent years, the National Centre for Truth and Reconciliation (NCTR) has been working closely with Indigenous communities in aiding and collecting statements from survivors and their families of Canadian Residential Schools. Canadian Residential Schools were part of a larger initiative beginning in the 1880s to exterminate Indigenous cultures and identity by removing children, as young as two or three, from their parents and forcing them into government and church run schools (National Centre for Truth and Reconciliation, 2015). The unfortunate reality of these schools is that school officials made up of Christian church members subjected children to disease, starvation, neglect, physical abuse, emotional abuse, and sexual abuse. Many children died, often without a marked grave (National Centre for Truth and Reconciliation, 2015). In 2021, the Tkemlúps te Secwépemc Nation of Kamloops, British Columbia issued a statement regarding the preliminary analysis of Ground Penetrating Radar (GPR) indicating the presence of unmarked graves of 215 children (Tkemlúps te Secwépemc Office of the Chief, 2021). This press release generated widespread media attention, which transpired across multiple forms of news access, including social media. The attention was also put towards the ongoing work of Indigenous communities and their collaboration with GPR specialists, including archaeologists (Ka'nhehsí:io Deer, 2021). Unfortunately, social media has also perpetrated the spread of false and misleading information that the

graves of 1,100 children were discovered at Blue Quills First Nation, when the First Nation did not issue any statement that this happened (Ka'nhehsí:io Deer, 2021). Misinformation regarding or portraying the sensitive work of current archaeologists in Canada with the NCTR, while inaccurate, can be incredibly harmful to Indigenous communities, survivors, and their families who are working towards healing from this historic trauma.

EXPLORING PUBLIC PERSPECTIVES AND PERCEPTIONS OF ARCHAEOLOGY

After establishing the emergence of pseudoarchaeology and its relation to media representation of archaeology, it is worthwhile to explore studies of how public perception of the field has been reflected. There are currently studies exploring the perceptions of archaeology from individuals pursuing post-secondary education (Gotshalk-Stine 2011), individuals actively engaging in archaeological interest by visiting archaeological sites or museum settings (Kajda et al 2018), and from members of the public (Pokotylo 2002). However, recent survey data is limited and suggests a general lack of interest in pursuing the understanding of public perception of the field. Data that does exist can create a broad, overlaying interpretation of how the public understand the view of archaeology. This section will explore some of these data sets to create a sense of where public perception lies today.

General Public Perception

In Canada, most archaeological sites have a deep connection with descendant Indigenous communities. Therefore, archaeological perceptions of Indigenous peoples are ultimately the most important consideration when archaeology is being practiced. However, there have been very few archeological studies on this matter, except for a general review by Joe Watkins (2005).

While many Indigenous people globally could still hold a similar perception of archaeology over fifteen years later since the publication from Watkins (2005), it is important to note that over the past 50 years, archaeology has shifted dramatically from primarily science-based to being a discipline employing both quantitative and qualitative research (Atalay, 2012). In North America especially, much of the archaeological record is directly tied to Indigenous peoples and their ancestral histories, meaning that archaeology both directly affects Indigenous communities and the future of archaeology. Failing to acknowledge and actively remove colonial practices and attitudes in the field will perpetuate poor relationships with Indigenous communities and archaeologists. As noted by Watkins (2005), relationships between researchers and Indigenous communities in United States are cold due to colonialist attitudes although collaborative efforts vary from state to state (Watkins, 2005). Although Watkins' perspective is positive regarding Canadian archaeological practices, I argue that there is indeed much room for improvement with Indigenous communities across the country and world, and the more recent shift towards reconciliation efforts are a considerable step to acknowledging and improving colonialist practices.

Elsewhere, Sami from Scandinavia, Aboriginal people from Australia, and Maori from New Zealand are becoming increasingly involved with archaeological practices. However, Mesoamerican, and South American archaeologists are mostly in the beginning of the process of forming collaborative efforts in archaeological practices. It is also appropriate to note that the level of community-based initiatives is highly dependent on funding and accessibility (Watkins, 2005). While these perspectives are important to understand for the future of archaeology, continued surveying on Indigenous perspectives and opinions of the field would also be worthwhile to providing

insight on improving researcher and community relationships if deemed appropriate. When researching current perspectives on archaeology, it is vital to include the perspectives of descendant communities, who often contain intimate knowledge of archeological sites and historical evidence an outsider would not otherwise know. Archaeology is ultimately a field rooted in colonialist ideas, and failure to recognize this is failure to recognize what strides could be made in active and inclusive engagement with study communities (Atalay, 2012).

Local governments of communities have a large role in protecting archaeological sites from increasing commercial and industrial development. Amanda King's and colleague's study (2011), for example, focuses on the relationships and perceptions of archaeology of municipal councilors and Indigenous councilors in the Fraser Valley. Very few municipalities in the Fraser Valley incorporate the protection of these sites into their policies. A 2011 survey conducted in the Fraser Valley region solely focused on these governments resulted in a 27.9% response rate. From these surveys, data analysis concluded that less than 20% of councilors knew the archaeological inventory of the province and very few municipal counsellors could identify when humans arrived in North America. Indigenous councilors identified the latter question with a qualitative answer, since time immemorial, indicating traditional beliefs. 25% of Indigenous counsellors believed that their own governments developed laws to protect archaeological sites. While both governments were not well informed on archaeology, Indigenous counsellors showed more interest and regarded archaeology as highly relevant to Canadian society (King et al. 2011). Municipal government councilors generally regarded archaeological sites most important to the scientific community. While Indigenous councilors put more emphasis on visiting more pre-contact sites than municipal councilors,

who put more emphasis on visiting historic sites. 67.1% of Indigenous councilors disagreed or strongly disagreed that the provincial government has effectively managed archaeological heritage in the region. A primary theme in this survey is that although some differences in opinions may be minor between Indigenous and municipal councilors, Indigenous councilors offered a different perspective when addressing heritage that may be directly linked as ancestral or solely due to traditional beliefs (King et al, 2011). Many of the First Nations and municipal governments agree that there should be a single, local heritage policy to govern the management of archaeological sites in the region. To do so, communication between local government systems needs to improve to protect and manage the archaeological heritage the participants are concerned with (King et al, 2011).

There have been very few studies conducted with participants Canada-wide regarding perceptions of archaeology in the last decade. The most recent, David Pokotylo's 2002 study focused on participants from all provinces in Canada. The survey involved eighteen multiple choice questions and seven open ended questions. One in five participants identified dinosaurs in association with archaeology. Participants had formal training in post-secondary or secondary education and displayed a wide age range and multiple gender representations. Most participants had a very general or limited sense of what archaeology was as a field, despite 91% stating they visited museums and 41% visiting an archaeological site. Most respondents identified humans living in Canada between less than 500 years to 5,000 years, with most answers (23%) lying between 1,000–5,000 years. 14.7% of participants stated humans have lived in Canada for more than 100,000 years. 37.2% participants identified that there are between 100–1,000 archaeological sites in Canada, with 2.7% identifying the reality that

there are over 100,000 (Pokotylo, 2002). Respondents identified that archaeology is most important to the scientific community and Indigenous peoples, and having only some importance to the public and governments. When asked what value archaeological objects have, 70.2% of individuals assigned historic value to archaeological artifacts, with the second largest (24.8%) category being monetary value. Monetary value assignment decreased with increasing age and increased with the amount of formal education individuals had. Participants generally put more emphasis on archaeology aiding in understanding the cultural diversity and history of Canada (Pokotylo, 2002). Generally, those who identified themselves as women, put a higher emphasis on the protection of archaeological sites. In summary, results from this national survey showed that individuals more concerned with archaeology tended to identify as female, be middle-aged or older, and/or have some formal post-secondary training (Pokotylo, 2002).

The survey also revealed very little understanding of the association of archaeology with Indigenous peoples, although some emphasis was placed on conferring with Indigenous peoples on the discovery of human remains. Participants also stated that they received their information on archaeology from television. Due to this survey being conducted almost 20 years ago, this has likely changed as a result of the internet being a major resource, yet likely contains similar problems of representation. Pokotylo (2018) revisited this topic on a regional scale to evaluate public opinion based on qualitative analysis of comments from online news articles. The three articles that hosted online comment discussion concerned the protests for development on Grace Islet, British Columbia. This island is part of a larger pre-contact village site, Shiya'hwat, or the Ganges Harbour village site first recorded in 1966. Subsequent surveys also revealed the

island was home to many shell midden burial sites and cairns containing human remains. In 2014, construction commenced on the island and was met with strong opposition from the Cowichan First Nation, local residents, and other supporters. The Cowichan First Nation filed a claim that granting private ownership of Grace Islet infringed their Aboriginal title. The provincial government halted construction in 2015 and partnered with the Cowichan First Nation and a land conservancy to purchase the islet for \$5.45 million CAD (Pokotylo, 2018). Nearly half of the online comments concerning the press coverage of Grace Islet were negative and expressed distrust in the Indigenous locals, the provincial government, and professional archaeologists (Pokotylo, 2018). Pokotylo's (2018) qualitative survey, despite being nearly 20 years later than the 2002 survey previously mentioned, revealed that those who engaged in discussion reflected a continued low level of understanding of archaeology and heritage conservation laws. Those who also engaged in online discussion showed an increased negative attitude towards Indigenous management over archaeological sites and a decreased support of Indigenous rights to use archaeological sites in their cultural practice. This is not representative of a national population, and it would be worthwhile to continue investigating results across the country to understand public perception.

More recent data about public interest in and perception of archaeology comes from the United States. The Society for American Archaeology and Ipsos (2018) collected data on American perception on archaeology between 2017–2018 based on 1,024 participants within the general American public. The poll found that 93% of survey participants view archaeological work as important. In this study, 54% of individuals associated archaeology with dinosaurs. Generally, there is support for archaeology being taught to students at some point in their academic career (87%) (Society for American

Archaeology and Ipsos, 2018). According to the survey, the preferred methods of learning about archaeology are in museums, classrooms and textbooks. There is no clear distinction of where the participants are from in the full report, and there may be regional biases.

Archaeology in Europe is incredibly prevalent as a career due to the concentration of archaeological sites within the continent. As such, public perception on archaeology generally differs from North American public perception. Kornelia Kajda et al. (2018) maintains that the 2008 economic crisis may have impacted public perception of academic research due to the decline in funding towards research and relevance of the subject to the public during economic stress. Typically, in times of economic decline, scientific research is not prioritized by the government, leading to a decline in funding and decline of media representation (Kajda et al. 2018). A survey was conducted on members of the general public in Greece, the United Kingdom (UK), France, Spain, Sweden, the Netherlands, and Poland. Participants associated archaeology with digging (excavation) and as a field of science that analyzed the past. Only 26% identified it as a profession (Kajda et al. 2018). Approximately 90% of the 4,516 respondents viewed it as a field with great value and as a useful tool for teaching people about the past. Over 50% of respondents also expressed interest in participating in archaeology, meeting archaeologists, and going to museums where there are archaeological materials. 58% of individuals stated museums pay too little attention to archaeology (Kajda et al. 2018). While there is a positive general sense that the countries involved with this study support archaeology, responses differ from country to country. Individuals from Greece and Italy generally view archaeology as important, likely because archaeological research invites tourism to the country as an economic resource. In Sweden, interest and participation is lower among young people and those of

lower economic status. Poland views archaeology as most important for education and is integrated into teaching the history of Poland. In the UK however, only 26% of respondents viewed archaeology as important for understanding the past. In Spain, more respondents placed emphasis on the protection of resources than the education on archaeological sites (Kajda et al. 2018).

Amy Gotshalk-Stine's 2011 study has explored the presence of misconceptions and media influence on how the public understands archaeology. In public surveys, researchers can come across misconceptions about what archaeologists do, as seen in many of the recent studies featured in this paper. Misconceptions often include a romanticized idea of an archaeologist influenced by fictional characters such as Indiana Jones or Lara Croft, or that archaeologists only dig for dinosaurs or conduct geological research. Another misconception that the public has on archaeology, even within the field, is that this is a male dominated field when, in reality, the opposite is true. In Gotshalk-Stine's thesis (2011), first year geology and anthropology students were asked to draw an archaeologist on the first day of class. One study included a test called a DART (Draw a Researcher test) and is used to test implicit bias of gender stereotypes in the sciences. After the emergence of female scientists from popular television shows such as CSI, female scientists became a more common theme in these tests, emphasizing representation in popular media as an important influence (Gotshalk-Stine, 2011).

Following the DART test, the university students were asked to answer questions on their perception of archaeology. The answers were used, and the pictures were coded to find similar themes of how students and the public perceive archaeology. Students often presented a Lead Researcher or scientist, indicating that they perceive archaeology to be a team related science (Gotshalk-Stine, 2011).

Men were represented by characteristics classified by the author or pronouns more often than women. Digging, researching, or looking for artifacts was a common theme in the drawings as actions of the archaeologists, which presents a generally accurate representation of excavation. Most (91%) identified an outdoor setting for the workplace of archaeologists, with laboratory settings being presented less often (6%). Digging tools were also dominantly presented, along with recording devices such as books and cameras, field clothing (cargo pants, hats), GPR, flashlights and other accurate tools researchers may use. While some of these representations are accurate, 40% of students still mentioned dinosaurs in some form such as a fossil. Only 35% of the drawings contained what the Gotshalk-Stine (2011) labels as an accurate depiction of archaeology. When asked what sources of information were the most important on archaeology, the respondents listed museums, documentary television and movies as their top three choices (Gotshalk-Stine, 2011). While there is some awareness of accurate archaeological practices, all three misconceptions mentioned were represented in many of the drawings (Gotshalk-Stine, 2011). Like many of the studies mentioned in this paper, there is a basic understanding of archaeology with plenty of misconception. In saying this, there is likely room for perceiving pseudoarchaeology as possible "reality." Minimal understanding of the field and reduced access to education about archaeology allows the public to become perceptive to false representations in accessible media. This can be especially problematic if media representations of archaeology present information from a colonialist standpoint. Inaccessibility to accurate information creates opportunity for pseudoarchaeological theory to propose ideas to the public that would otherwise be rejected by archaeologists and descendant communities

CONSEQUENTIAL IGNORANCE: THE RISE OF WHITE SUPREMACY AND SCIENTIFIC DISTRUST

Since the outbreak of the 2020 SARS-CoV-2 virus (commonly known as COVID-19), misinformation has become more mainstream on social media platforms, especially regarding public health measures such as vaccinations and masking. In the Reuter's 2020 Digital News Report, Facebook was seen as the main channel for spreading false information but also consistently one of the top forms of receiving information about the pandemic and world news for the public (Newman et al. 2020). Even so, the results of this study also found a rise in conspiracy theories and pseudoscientific theories on social media platforms (Newman et al. 2020). Due to the continued prevalence of these applications, this is still an ongoing issue in many fields, including archaeology as seen with pseudoarchaeology.

As viewed in the studies presented in the previous section, many people have a minimal to very basic understanding of archaeology and there is plenty of room for engagement. Popular media can, however, introduce pseudoarchaeological theory to members of the public who otherwise do not have accessibility to or the desire for formal education in archaeology. There have been many commentaries on why false histories and imagined pasts have appeal. It is worth noting that not all history transforms into popular narrative. A possible appeal of pseudoarchaeology is the apparent certainty and simplicity in theory. Archaeology can take years to form a viable explanation for a phenomenon with no absolute certainty, but there is attraction in a writer who creates an apparently simple explanation for complex phenomenon by suggesting that aliens are a reason, or perhaps Europeans were the first in North America (Derricourt, 2012; Feder, 2006). These theories are often formed with motive, perhaps based on prejudice and

racism. Pseudoarchaeological theory also contain huge claims, selective or distorted presentation, selection of evidence from a wide range of different fields, and vague definitions of complex concepts or terminology (Derricourt, 2012). Despite the false and problematic viewpoints of these theories, pseudoarchaeological thought still resonates with members of the public. This may be largely due to integration of pseudoarchaeology into popular media presentations of the field. David Anderson discusses in a 2019 paper that in 2018, 57% of American survey participants responded that they "Agreed" or "Strongly Agreed" with the statement that ancient, advanced civilizations, such as Atlantis, once existed. While 41% of respondents supported claims of ancient alien contact.

While most archaeologists view these theories as completely absurd and lacking scientific validity, pseudoscientific theory can contribute to dangerous ideologies such as widespread white supremacy. For example, narratives such as the Ancient Astronaut theory, while seeming harmless, removes autonomy from non-white and Indigenous archaeological histories. Narratives that remove this autonomy completely disregard the research of scientists and scholars attempting to understand human cultures in the past and present, human evolution, and the development of society to today. Perhaps unintentional, these theories are proposed in favor of a problematic and colonialist origin story, deeply rooted in racist narratives of "great civilizizers," bringing knowledge and technology to the "unenlightened savages" (Matić and Žakula, 2021). None of the structures on Ancient Aliens were built by non-white or Indigenous peoples in favour of a racist and colonialist narrative (Card and Anderson, 2016; Anderson, 2019). What many of these theories fail to recognize is that similar human experience and thought can exist independently across time and space, and

without influence from otherworldly beings. Moreover, these theories actively dismiss and omit Indigenous archeological sites and world wonders such as Pueblo cities, the Newark Earthworks, Cahokia, among many others.

Additional racism can be found in the creators of such theories. Atlantis, another example, is said to have been the origin of a “Master Race.” Archeologist Frank Joseph (born 1944), also known as Frank Collin, is cited for many of his works on the existence of Atlantis. Most of these works suggest that the Atlanteans were a Master Race of Aryan blood, and brought forth advanced writings, inventions, and technologies (Kaplan, 1997). Joseph was also a convicted pedophile and was a member of the American Nazi Party (Kaplan, 1997). To ignore this is to simply disregard the underlying issues with supporting biased pseudoarchaeological theory. Presentation of pseudoarchaeological theories may also gloss over the figures that popularize pseudoscientific theories such as Joseph and their history, leaving the public unaware of the entire context behind pseudoscientific theory.

Presented in popular media like television is the support of a theory that promotes a European First model in the peopling of the Americas. The Solutrean hypothesis, which archaeologists have widely rejected, proposes people from the Solutrean culture of southwestern Europe were the first to settle on the east coast of North America between 17,000 and 20,000 years ago. It is often proposed that these people would have been white (Raff, 2018). The theory, popularized and supported by two prolific archaeologists Dennis Stanford and Bruce Bradley, form most of this theory based off a similar projectile point style in Northeastern United States (Stanford and Bradley, 2012). Their argument contains little to no reputable environmental evidence that a land bridge occurred between Europe and North America 20,000 years ago, and little to no evidence of similar genetics between Solutrean people and Indigenous

groups. There is also no other defining archaeological evidence to support this claim, other than a diffusionist perspective. Clovis-first and coastal migration site dates in Alaska, Yukon, and British Columbia challenge the dates proposed by the Solutrean hypothesis (Raff, 2018). Although there is little evidence to support the Solutrean hypothesis, this theory is often used to support white nationalist groups that claim Europeans arrived first in attempt to assert white connections to North American lands over Indigenous ones (Raff, 2018).

Due to the positionality of such racist pseudoscientific theory as explanations for the origins and history of humans, it is no coincidence that they are used to support modern white supremacist agendas. According to a 2019 report from the Southern Poverty Law Center, the number of white nationalist hate groups in the United States increased by 55% between 2017 and 2019. Social media and the internet have helped extremists extend the reach of racist ideologies and conspiracy theories (California State University, 2019). White supremacists, in fact, are increasingly congregating online, often not formally joining hate groups but networking, raising funds, recruiting and spreading propaganda that radicalizes young people and stokes violence against immigrants, Jews, Muslims, Black people, Indigenous peoples, and other minority groups (California State University, 2019). As absurd as some theories may be, their problematic stances and uses can be incredibly dangerous.

One issue that creates a barrier between the relationship of researchers and the public is inaccessibility to peer-reviewed information, access to misinformation, and barriers to researchers attempting to understand how to improve communication between researchers and the public. For example, social media platforms such as Twitter, Facebook, and Instagram are widely used as a source of information on various scientific thought.

However, data that allows social researchers to understand public perception on such platforms are often effectively inaccessible to the average researcher. The year 2018 marked the beginning of the end of easily accessible data on social media engagement—at least, for the poorly resourced scholar, or the researcher without a relationship with a proprietary platform, or one funded by government or other large organisations (Richardson, 2019). Application Programming Interfaces (APIs) of social media platforms provided access to social science data for researchers. However, Facebook and Instagram limited access to public APIs and Twitter has offered premium paid access to its data at a price usually beyond what research funding can allocate (Richardson, 2019). As long as there is a boundary between researchers conducting both qualitative and quantitative analysis on information spread through popular platforms, there is little room to build on the understanding of how misinformation spreads on social media. If researchers are going to better understand public perception of their respective fields and attempt to prevent the online spread of misinformation, then data on social media engagement must be made accessible if it remains a primary form of communicating pseudotheory. If misinformation is more accessible than peer-reviewed data for both researchers and the public, then there will be a stronger reliance on dishonest science and distrust in candid research.

Anderson (2019) notes that many of those who engage in pseudoarchaeological thought are engaged and interested in exploring traditional archaeology if researchers are not immediately dismissive. All accounts are not equally valid or legitimate. Certain viewpoints which some of us may feel compelled to refute and dismiss others will see a strong need to respect and defend, each reaction based on specific values and personal choices. However, there is an extremely fine line

between alternative belief and religious or spiritual explanations for the past (Holtorf, 2005). For evaluating different versions of the past and their impact it is essential to understand the local contexts which they reflect and originate. Similarly, when conflicting interpretations directly compete, all local sensitivities need to be carefully studied and pragmatic solutions found that allow peaceful coexistence. Critical understanding and dialogue, not dismissive polemics, is the appropriate way to engage with the multiple pasts and alternative archaeologies in contemporary society. Committed and informed dialogue brings about mutual appreciation and the possibility of working together in studying past remains and rendering landscapes meaningful (Holtorf, 2005). If the world has learned anything from the recent COVID-19 pandemic and resistance to information in a dire time, it is education and not dismissal of belief that ultimately benefits everyone

CONCLUSION

Considering the ideas presented within pseudotheory and pseudoarchaeology, it can be easy to be dismissive instead of engaging with those who perpetrate these false ideas. However, with the lack of research in exploring public perceptions of archaeology, the lack of understanding of the field, and the barriers for the public to accessing accurate information, it enhances opportunities for individuals to believe misinformation. As seen with the rise of white supremacy, this can be inherently dangerous. While this paper aims to both draw attention to this issue and explain the relevance of pseudoarchaeology to archaeologists, it also invites people to resist ignorance when found, and to opt for engagement and honest conversations about the field with the public. Science, from any standpoint, is the process of learning about and making sense of the universe, not the process of dismissing ideas and people who may not

understand or accept an explanation.

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