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Konzuk, Katrina

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Twisted Archaeology:

The Consequences and Effects of 21st Century Pseudoarchaeology in North American and Western European Professional Archaeology.

Katrina Konzuk
BA3 Thesis, 1083VBTHEY
Prof.dr. L.W.S.W. Amkreutz

Leiden University, Faculty of Archaeology

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Chapter 1. Introduction

To start with a broad generalising claim; it could be said that just about every person with at least a passing interest in archaeology is aware of pseudoarchaeology. Perhaps not by that name (maybe they know it as alternative, fringe, or cult archaeology*)*, but it is unlikely that they have escaped the vast wave of pseudoarchaeological television shows, movies, magazine and news articles, or social media posts that have been hugely prevalent in popular media since the common use of the internet (Anderson et al., 2013). As it presents itself in varying forms and degrees of intensity, pseudoarchaeology has grown to be a thorn in the side of archaeologists. Garret G. Fagan (2006b, pp. 30–43), who has become one of the leading outspoken academics on this topic, has assembled a non–exhaustive list of the most prevalent characteristics of pseudoarchaeology. At the forefront of this is selective and manipulated data paired with vague definitions of the subject matter which ultimately make grand generalising claims that are 'revolutionary' to archaeology. The majority of this research does not stand up to the scientific standards that the professional archaeological field aims to abide by. The most recent example would be the massively popular 2022 series *Ancient Apocalypse* hosted by Graham Hancock: an infamous figure in the pseudoarchaeological scene since his hit novel *Fingerprints of the Gods: The Evidence of Earth's Lost Civilization* was first published in 1995. Many professional archaeologists have found fault with this television show, among other pseudoarchaeological pieces of media, and have been widely vocal about their displeasure with it (e.g., Dibble, 2022; Onion, 2022). They illustrate that the attention and credibility this media receives is actively harmful to the public and to the field of archaeology. These programs which masquerade as educational, are purposefully untruthful and misdirecting in order to push a certain narrative. This vocality and advocation from archaeologists however, is a relatively recent event: before the turn of the 21st century, it was seen as bad taste to interact with pseudoarchaeology as an archaeologist, even if it was to denounce their work (Cole, 1980, p. 26; Feder, 1990, p. 391).

Now, books such as *Archaeological Fantasies: How Pseudoarchaeology Misrepresents the Past and Misleads the Public* (Fagan, 2006a) and *Alternative Egyptology: Critical Essays on the Relation Between Academic and Alternative Interpretations of Ancient Egypt* (van den Bercken, 2024) have been written on the topic*.* These have arisen as archaeology recognizes the need to act on the matter; pseudoarchaeology had become an undeniable part of mainstream media (especially with the rise of the internet), and had put genuine archaeology into the fringe (Hoopes et al., 2023, p. 28). Articles have also set forth to debunk pseudoarchaeological theories and assert their dangers to science and to the public (e.g., Fagan, 2003; Rome Griffin, 2023). The language used however, often squarely differentiates between Us (the professional archaeologists) and Them (the pseudoarchaeologists), which can be damaging to the field and to the public (Holtorf, 2005). There is this confidence that archaeology and pseudoarchaeology are separate fields; that there is some moral, ethical or academic division between us that keeps the two topics completely separate. I believe that they are much more entwined than we might want them to be; pseudoarchaeological media is, and has likely always been, affecting our field of work. By now, research has well established that pseudoarchaeology is damaging, and it has been said

many times before that better science communication is the way to solve this. What time has proven however, is that there is no way to solve this; pseudoarchaeology is, and always will be around.

Since at least the 1980s, recommendations for what to do about pseudoarchaeology have been giving similar suggestions: the way to resolve this problem is to simply have better science communication (Cole, 1980. pp. 24-28). Arguably, if we have been giving the same generic advice since the 80s and the presence of pseudoarchaeology has only grown, then the advice may not be entirely effective. Previous literature on the topic is so focused on the divide between the two subjects that they often fail to see the similarities. They also therefore do not look for the benefits that pseudoarchaeology could give to us. This divide that we have created is necessary to an extent, but at times can be damaging to the public, and does no service to putting behind archaeology's past of elitism and gatekeeping. What would be useful then, is a different approach to investigating the current issue at hand. I aim to summarise the current state of archaeological and pseudoarchaeological media within their contexts and see how they have changed since the late 20th century; place importance and urgency onto the topic, as more people consume pseudoarchaeological media than ever before; and lastly give a different outlook on what we as archaeologists should do about the issue of pseudoarchaeology. I intend to point out the changes it has brought to our field, the dangers it poses and what we could stand to learn from their media and science communication techniques. Pseudoarchaeology can be both harmful and beneficial, depending on how archaeologists choose to interact with it. To lead my research, I have been guided by the research question:

- With a focus on Europe and North America, what effect does popularised pseudoarchaeological media have on current commercial and academic archaeological practices?

With sub-questions:

- How have archaeologists dealt with the effects of pseudoarchaeology and should they continue to engage with such media?
- How has society changed to allow pseudoarchaeology to become so established and accepted?
- As a result of pseudoarchaeological media, how will changing public perceptions and attitudes towards archaeological research affect archaeologists?

To conduct this research, I will analyse and evaluate a large variety of primary and secondary sources. I aim to gather opinions of archaeologists as individuals on the topic of pseudoarchaeological media, and see how these have changed over the years. I will also find evidence for how archaeology in general has changed in relation to pseudoarchaeology. I purposefully chose to include sources from amateurs, enthusiasts and professionals: the public is invested in the topic of archaeology and pseudoarchaeology, and so should be given a voice. I have limited the focus of research to North America and Europe, as they are areas which publish about pseudoarchaeology in English. These sources will predominantly be found online, and include: news articles, journal articles, books, television programs, YouTube series, social media posts, blog posts, conference papers, book reviews,

and codes and principles of archaeological societies/associations. Through this dataset, I will answer my research questions by comparing my findings against the development of pseudoarchaeological media. Although my arguments are not limited to, and evident of, any particular archaeological theoretical paradigm, I intend to position this research in a contemporary archaeology background. Especially so with regards to González-Ruibal's (2018) position on the responsibility of contemporary archaeology and its ethical duties.

The past of ignoring pseudoarchaeology has only recently gone, and while the topic is now much more openly spoken about among archaeologists, I believe that it is important to catalogue the effects that it is having on our field. For clarity, I will present a brief summary of pseudoarchaeological and archaeological media in popular culture throughout the 20th and 21st centuries in Chapter 2. Despite the best intentions of archaeologists, oftentimes the way their work is represented in popular culture and media closely resembles that of pseudoarchaeology. I intend to investigate why this is by briefly reviewing the widespread changes that have affected how we consume entertainment in the 21st century. This pervasive popularity of pseudoarchaeology, and how much more visible it is in popular media than genuine, accurate representations of archaeology has pushed the field to adapt and change. In Chapter 3 therefore, I will investigate in what ways it has done so via changes visible in archaeological educational institutions, professional societies and associations, guidelines, and grant awarding bodies. I will also investigate how individual archaeologists have taken to social media and other online spaces to bring awareness to the public on the harm of pseudoarchaeology. This harm and danger to the public and to the field of archaeology will be explored in Chapter 4. To fully catalogue its effects and understand in what way the field of archaeology should move forward, I will also detail the benefits that pseudoarchaeology can bring to archaeology in Chapter 5.

Chapter 2. Twisted archaeology in popular media

The current presentation of archaeology in popular media is in a dire state; through its immense popularity, pseudoarchaeological media has pushed genuine archaeology into the fringe in the eyes of the public (Costopoulos, 2018, para. 9). By examining how (pseudo)archaeology has been presented in the media in the 20th and 21st centuries, and investigating how technological changes have played a large role in creating the current media industry, a base for later understanding how pseudoarchaeology is affecting the archaeological field can be established.

To define some important terms: I use the term media to mean any form of communication with an audience for entertainment or education purposes; television shows, journals, the news, research reports, books, social media posts, and so on are all forms of media. Popular media therefore is media that is received by more than its originating niche; it has, to point out the obvious, become popular, and many people will have interacted with it in some way. I use the phrase twisted archaeology to mean any (not only pseudo) archaeological media which does not accurately, truthfully, or sincerely communicate archaeological research. In a sense, the goal of archaeology has been twisted to serve a purpose beyond delivering reliable knowledge. The line between twisted archaeology and pseudoarchaeology can be very thin, and they can be differentiated at times only by subjectivity. Outside of pseudoarchaeology, this twisting is often seen in news reports, which exaggerate or simplify the results of archaeological research to the point of removing all necessary nuance or plainly misinforming the reader. This twisting also happens with archaeological television programs, which can give the viewer a completely inaccurate sense of what archaeological research is like. The line between pseudo and non-pseudo archaeology can sometimes feel rather thin, and these pieces are often created with motives such as politics, recognition or wealth in mind. Colin Renfrew succinctly summarises this thought: “archaeology is being misused and its finds misrepresented, on the one hand by the forces of bigotry and on the other by those of crass commercialism” (2006, p. xii).

Chapter 2.1. The recent history of pseudoarchaeology in popular media

The person that could be considered one of the most famous founders of modern pseudoarchaeology is certainly Erich von Däniken. While he did gather his ideas from other, earlier authors in the same line of work as him (Gansemer, 2018, p. 6), his 1968 book *Chariots of the Gods? Unsolved Mysteries of the Past* is the one that gained worldwide popularity, and brought the mainstream public's attention to the topic. The popularity of the novel meant that throughout the 1970s, von Däniken more or less moved pseudoarchaeology from the fringe and out into the eye of the public, and kept it there. Historical television programs ran episodes about his ancient astronaut theory (Costopoulos, 2018, para. 6) and other best selling writers such as Graham Hancock, Gavin Menzies, Colin Wilson and Robert Schoch soon followed over the next half century (Derricourt, 2012, p. 524). Pseudoarchaeological texts have been printed in astounding masses. By the count of De Camp (1970, as cited in Feder, 1990, p. 390), there had been over 2000 publications alone on Atlantis, the vast majority of which were not written by archaeologists. It has been over 50 years since De Camp conducted this

research, and there have been many more waves of interest in pseudoarchaeology. Atlantis is no longer the hot topic, and subsequent areas of interest have been the Ancient Astronauts (Nugroho, 2022), the Ice Ages, the Orion correlation theory (Bauval & Gilbert, 1994), or crust displacement theories. All of these have undoubtedly spurred hundreds, if not thousands of their own pseudoarchaeological publications.

With the rise of the internet in the 21st century, many forms of media have moved off print to online. Pseudoarchaeology is no exception as its main form of communication switches from printed books to documentaries, television shows, online forums and social media. Strong contenders for *Chariots of the Gods?* of the 21st century are the television programs *Ancient Aliens* and *Ancient Apocalypse. Ancient Aliens* has been running since 2009 with immense popularity on the History Channel. The program, which is now on its 20th season, attempts to convince viewers that varying cultural changes in the past can be attributed to the influence of aliens. It is a show widely mocked for its outlandish claims, which seem to correlate just about anything to ancient aliens. Netflix's *Ancient Apocalypse* of 2022, has a much more credible appearance. Over 8 episodes, Graham Hancock travelled around the world looking for evidence of ancient, highly advanced civilisations from the Ice Age, continuing research conducted in his earlier books. He brings on a wide variety of "experts" to support his theory, although oftentimes they are not in fact experts of the subjects they are portrayed to be (Hoopes et al., 2023, p. 29). The program was immensely popular, but widely spoken about and debated online. Besides these two hit shows, there is truly an immeasurable amount of misinformation about archaeology online that could be classified as pseudoarchaeology. Pseudoarchaeology has found a home in online chat forums (for example Graham Hancock's: https://grahamhancock.com/phorum/), blogs, social media pages (Khan, 2022, pp. 454–455), and within films, documentaries and global news stories.

As its impact is so widespread, it is worth questioning why pseudoarchaeological media is so much more popular and prevalent than that of archaeology. Archaeologists have considered this question (e.g., Fagan, 2003), and the simplest explanation is that oftentimes it is just more entertaining and marketable. For this reason it gains popularity with those responsible for getting media into the awareness of the public (such as television producers and broadcasters, news networks, book publishers and so on) and it gains popularity with the public itself.

Pseudoarchaeological media can be so entertaining because it does not have to hold itself to scientific or archaeological standards. They are free to essentially say whatever they want without repercussion from their peers, making for outlandish claims that grab the audience's attention. They are also free to present their claims as absolute certainty, whereas archaeologists have to be more aware of the subjectivity and uncertainty of the past. Because of the high entertainment value, more broadcasting channels, publishers, and production companies will choose to pick up on the pseudoarchaeological story than the archaeological one, which might be seen as more educational and niche and therefore less interesting for the general public.

Another reason for why pseudoarchaeology has found such popularity is its connection to alternative and conservative politics. The way pseudoarchaeology is presented as a haven for "free thinkers", the other media it associates with (like Graham Hancock on the Joe Rogan Experience podcast) and the underlying beliefs behind many of their theories (which are often discriminatory in nature) all tend to connect people of certain political leanings and beliefs. Many alt-right groups in the U.S. find a home with pseudoarchaeology, and have used its theories to substantiate their own often white supremacist claims (DeVega, 2021). While the history of archaeology is also rooted in racism and colonialism, pseudoarchaeology seems to currently be making a home for itself there now. Jason Colavito's review (2022) of *The Empires of Atlantis: The Origins of Ancient Civilizations and Mystery Traditions Throughout the Ages* by Marco M. Vigato, published in 2022, is quick to point out the associations the book has with neo-nazism (para. 1), and its reuse of theories from other conspiracy theorists, occultists and pseudoarchaeologists (para. 9).

Chapter 2.2. The recent history of archaeology in popular media

While pseudoarchaeology appears to be overwhelmingly present in modern media, archaeology is still visible and has had share of the media spotlight. It can be found on many similar platforms and media types as pseudoarchaeology, and has been consistently present in the news and on television for decades. Don Henson (2013) provides an excellent recount of such archaeological science communication techniques up until the 21st century. Currently however, archaeology does not seem to be truthfully depicted in many of its mainstream media portrayals. In fact, it is currently being portrayed quite similarly to pseudoarchaeology. Producers of mainstream media such as documentaries, television shows, movies and news, sensationalize and twist archaeology to better catch audience's attention and make programs more exciting. This occurs most prevalently on television shows and in the news.

Chapter 2.2.1. Archaeology on the television

Archaeology has been broadcast on television since the beginning of the concept of television. Even earlier than that, clips of excavations were shown in cinemas. Sir Mortimer Wheeler for example, was heavily involved in creating the British public perception of archaeology in the early 20th century and attained the status of a celebrity through it. He readily allowed Pathé News to film and show clips of the Verulamium excavation he and his wife worked on in the 1930s (Coleman, 2018, para. 2–3). 20 years later he was invited to be one of three panellists on the new BBC show *Animal, Vegetable, Mineral?* (Coleman, 2018, para. 7)**.** Two decades after his entrance into the world of entertainment, Wheeler was still well known and respected in the eye of the public, although his academic peers condemned him for opening archaeology to beyond their elite circles (Henson, 2013, p. 15). Since then, archaeology has continued to be broadcast, and there has been a string of educational and more strictly entertainment-based television programs and documentaries. Currently however, these portrayals of the archaeological research process or its results are being exaggerated, distorted or simplified, and do

not convey the necessary nuance or context. Garret G. Fagan (2003, pp. 45–50) has summarised some of the problems that accurate portrayals of archaeological research face on television. He states that "the unspectacular and painstaking nature of the discipline does not make for particularly scintillating television" (2003, p. 47). Few audiences would find the years of paperwork and report writing that many archaeologists complete particularly interesting. While television can be educational, the industry ultimately is built around trying to capture the largest amount of viewers for as long as possible. What has been proven to do this is to make something entertaining, and the cautious nature of archaeology has less appeal than the grand unyielding claims that pseudoarchaeologists are able to make (Fagan, 2003, p. 49). The nuances and angles of delicate research are placed at the whims of producers and those with different motivations than that of the archaeologist, and so the archaeologist loses control of their own narrative and research in the process of making a piece of media more appealing to audiences.

One of the most famous long running programs related to archaeology would be *Time Team*. Running from 1994 to 2014 in the UK, with a revival in 2022, the premise of the show was that a team of archaeologists would conduct a new excavation each episode over the course of three days, uncovering as much as possible and describing to the viewer what they were finding and the reasoning for what they were doing. The show was widely popular and introduced viewers to what archaeological excavation is like. For all that it did well, it also imparted massively unrealistic standards on viewers. It did not portray any of the months or years of work that comes before and after an excavation spent in offices, labs and wet rooms. The show had access to funding that most archaeologists would dream of, allowing them to conduct a truly extraordinary amount of work over their years on air. In this sense, it showed viewers only the most interesting and successful parts of our field. While this was necessary to continue its existence, it still glamorised aspects of the field to a point of misrepresentation.

Chapter 2.2.2. Archaeology in the news

Archaeology in the news is even more so unlikely to be accurately represented. This similar issue of twisting archaeology into the most sensational stories also exists. News providers or article writers aim to create eye-catching articles to entice viewers, drive revenue, or serve the political agenda of their company. Whatever nuance or respect for subjectivity the researchers may have originally put into their research is stripped away, and bold generalising claims are created to quickly catch readers.

A recent example of this can be found in the media storm resulting from the culmination of joint work between University College London and the London National History Museum on the infamous Cheddar Man (Natural History Museum, 2018a). In 2018, using new revolutionary genetic sequencing techniques, they were able to determine the hair, eye and skin colour of Cheddar Man (Lotzof, n.d.). News outlets and social media platforms subsequently erupted because the genetic sequencing revealed that Cheddar Man most likely had blue eyes, brown hair and dark skin. Since the discovery of Cheddar Man's skeleton in 1903 (Davies, 1904), he has been heralded as the "first Brit" or "first Englishman", linking him with British nationalism and the idea of the longevity of "Britishness" on

the island. The skin colouring of this “first Englishman” therefore came as a shock to many because the nationalist view of Britain often accompanies light skin, not dark. This notion of “first” is also incorrect, as there were periods of migration before Cheddar Man’s group (Lotzof, n.d.). A variety of different reports on the topic occurred: some news outlets wrote that white skin colour is a relatively new concept and that the history of the place currently called Britain has been filled with immigration (Rincon, 2018); others cultivate the idea that the research is a ‘leftist’ attack on traditional (meaning white conservative) British values and that it must have been falsified (Collins, 2018). Regardless, the news had in general oversimplified this very complex research and twisted its outcomes to suit whatever political purpose they have. An almost identical situation took place in the Netherlands in 2021, where a reconstruction of a prehistoric person who would have inhabited the Doggerland region in the current North Sea was commissioned by the Rijksmuseum van Oudheden (the National Museum of Antiquities), Leiden. The reconstruction drawing also featured dark skin and light eyes, and was based on the recent, massive amount of genetic research for Ice Age and Holocene European skeletal remains (Posth et al., 2023). This was featured in a national dutch newspaper article (Keulemans, 2023) which chose to focus solely on the skin and eye colour of these ‘earliest Dutchmen’, instead of the huge advancement in scientific research that had just occurred. Subsequent media that followed also mostly only commented on the skin and eye colour of this drawing.

As this pattern of cherry-picking and sensationalising repeats for every new ‘news worthy’ bit of research, the general public hardly sees any genuine archaeological research, nor do they ever hear about the much larger portion of work that does not get covered by the news. They do not get acquainted with archaeological methodology, and are subjected to interpretations of research that are conflated and lacking. It can place doubt onto the integrity of the field, and that of the scientific community in general, harming the relationship the public has with archaeology.

Chapter 2.3. The internet is to blame

(Pseudo)archaeology can be found in many different types of media, and the majority of these have only existed in their current forms for the last 3 decades, if not less. The current common use of the internet has completely changed the media industry, and with it, how archaeology is communicated to the public. Despite how it seems that there are so few genuine depictions of archaeology in the public's eye, the volume of archaeology related content has drastically increased since the 20th century. Unimaginable amounts have been produced on just about any and every topic because it is now much more accessible to create such content. Pseudoarchaeology has taken full advantage of this very fact:

> Technological change has made the spread of alternative ideas much easier. No longer does the proponent need to persuade a publisher that he is not crazy (or alternatively that even if he is, his book will sell). Self-publishing in print has become easier but, far more important, the internet has allowed a viral spread of new ideas. A Google search presents links to nearly two million web pages mentioning the ‘lost city of Atlantis’, and the same for ‘mystery of the

> pyramid'. The electronic networks that can be set up for spurious arguments are far greater than were ever achieved by print or speech. (Derricourt, 2012, p. 526)

To name some of these "electronic networks" that are either new or are now much more accessible, (pseudo)archaeology has been spread over social media such as X, formerly Twitter (Nugroho, 2022), Facebook, Instagram, or Snapchat; over online magazines, newspapers or blogs; over short form video content on platforms such as TikTok, Instagram Reels, YouTube Shorts and Snapchat Stories; over long form video content on YouTube, Patreon, Twitch, films, documentaries and television shows; and it can be found on mobile game apps or PC gaming.

Chapter 2.4. Conclusion

The point is, there has been a recent flood of archaeology related material with the rise of the internet in the 21st century. Whether that material is pseudoarchaeology or not is sometimes difficult to determine: pseudoarchaeology masquerades as genuine archaeology to gain credibility, and genuine archaeology attempts to look like pseudoarchaeology to get mainstream recognition. No representation of archaeological work once in popular media seems to accurately represent the field; documentaries and television shows glamorise only the good parts and stretch the truth to fit their narrative, and the news which does report on archaeological research cherry-picks and sensationalises. While this certainly also happens to other scientific fields, archaeology especially suffers for it because of just how much misinformation and misrepresentation there is on the topic. So much so, that pseudoarchaeology holds authority over archaeology: in what topics the public consume, and in what types of opinion they form about it. This popularity has pushed archaeologists to recognize how dangerous pseudoarchaeology can be, and has encouraged them to do something about it. In this sense pseudoarchaeology has affected and changed the professional archaeological field.

Chapter 3. How pseudoarchaeology is changing professional archaeology

The rise of pseudoarchaeological media has forced archaeologists to address the situation. Pseudoarchaeology has become so much more commonplace than genuine archaeology, that it has pushed it into the fringe of public media. As archaeologists have realised this, they have changed their attitudes and responses accordingly to try and rectify the issue. Pseudoarchaeology is now a topic much more openly spoken about in academic archaeological circles, and it is even now the subject of university courses. Science communication efforts have increased, which has affected grant processes, and archaeological associations have been holding conferences and workshops on what to do about pseudoarchaeology.

Chapter 3.1. Pseudoarchaeology and academia: Avoidance to engagement

Before the 21st century, it was not seen as entirely acceptable to discuss, address or interact with pseudoarchaeology as a professional archaeologist. In the 2000s however, it became clear that pseudoarchaeology had become so popular, and had started to push archaeology out of the way so much, that archaeologists had to start discussing how to address this problem. The change in academia from this avoidance to action can be seen in how the interactions between archaeologists and pseudoarchaeology have evolved over the past 40 years, and in how the topic of pseudoarchaeology has entered the teaching space in universities.

Chapter 3.1.1. Academics have only recently started interacting with pseudoarchaeology

The attitude of academic archaeologists towards pseudoarchaeology before the 2000s was typically that of disregard. There seemed to be an understanding that archaeologists should not interact with pseudoarchaeology, even if it was to denounce it or debunk its claims (Costopoulos, 2018, para. 1). It was seen as a waste of time, and colleagues would make criticising comments on your choice of research topic if you chose to interact with it (Feder, 1990, p. 391). Pseudoarchaeology was regarded as being on the fringe of the subject, and such fringe archaeologists were not to be interacted with if you wanted to be a reputable researcher. Regardless of this attitude, there were still archaeologists who attempted to do something about the issue. The anthology *Cult Archaeology & Creationism: Understanding Pseudoarchaeological Beliefs About the Past* was published in 1987 to discuss what the topic was, how it came about, and what archaeologists and anthropologists should do about it. There had previously already been efforts by other researchers to debunk pseudoarchaeologists, and so the anthology intended to do something new for its time by aiming to understand these beliefs, and consider how the field should move forward (Pimple, 1988, pp. 90–92).

The opinions and attitudes of current archaeologists has since completely changed. There has been a shift in mindset from the disregard of the 20th century to now openly interacting with it. New books such as *Archaeological Fantasies: How Pseudoarchaeology Misrepresents the Past and Misleads the Public* have arisen, and the topic is now being debated and discussed in articles just as any other archaeological topic would. The response of Garrett G. Fagan and Kenneth L. Feder (2006) to Cornelius

Holtorf's (2005) 'Beyond crusades: how (not) to engage with alternative archaeologies' greatly mirrors that of a traditional scholarly debate. This would not have taken place, or been so accepted, in the atmosphere of pre-21st century archaeology.

Chapter 3.1.2. Universities now teach classes dedicated to the topic

Another example that clearly shows how archaeology is no longer ignoring the topic of pseudoarchaeology is that since the late 1990s, it has started to appear as the focus of university courses. As institutions which teach future professionals and fund research, the topics universities choose to engage with can be taken as a serious reflection of their attitude towards them. In 1999, Garett G. Fagan ran a seminar titled "Ancient mysteries: fact and fiction about our human past" at Penn State University, U.S., (Fagan, 2006c, p. xvii). The goal was to introduce incoming students to the methodology of conducting research on ancient history. This was done by analysing bad examples, mainly found in pseudoarchaeology, to learn from their inaccuracies and omissions. In the mid-2000s, Stephen Chrisomalis taught a course at McGill University, Canada, titled "Pseudoarchaeology", which aimed to prepare students of archaeology for interacting with and encountering it. He did so by debating with students from the viewpoint of a pseudoarchaeologist (Costopoulos, 2018, para. 8). Much more recently is the "Lost Tribes and Sunken Continents: Pseudoarchaeology and Why It Matters" course taught by Whittaker Schroder at the University of Florida, U.S., 2024. The course specifically investigates the popularised belief of alien-built archaeological sites, and aims to understand how these theories become so widespread and how they are erasing genuine history (Schroder, 2024, p. 1).

Students have been wanting to learn about such topics well before universities began to formally offer these courses. Kenneth L. Feder describes that when freshman students at Central Connecticut State College, U.S., were given the opportunity to design their own syllabus for a class intended to introduce them to the topic of archaeology in 1977, they chose to talk about topics commonly found in conspiracy theories and pseudoarchaeological novels of the time (Feder, 2006, pp. 71–73).

The approach and teaching methods of these courses reflect the attitudes that archaeologists had about pseudoarchaeology during the times they were taught. The earliest course of Feder only delved into pseudoarchaeology because the students demanded it do so, as the academics were still ignoring the topic. By the late 1990s they were much more critical and aware of its dangers, and so it was used as an example of what not to do academically in Fagan's course. During the 2000s, archaeologists were much more outspoken and willing to debate with and debunk pseudoarchaeologists; Chrisomalis and Schroder's courses reflect this attitude.

Chapter 3.2. How pseudoarchaeology influences the broader field

Academic archaeology has changed accordingly to match the threat of pseudoarchaeology, however academia is not the only branch of the archaeological field. Plenty of professional archaeologists do not work within or through universities, but are still being affected by

pseudoarchaeology. They may belong to regional, national, or continental archaeological associations and societies, which have reacted to pseudoarchaeology through their principles and conferences, or they may rely on grants and funding which have also been affected by its popularity.

Chapter 3.2.1. Changes seen in archaeological societies and associations

The Society for American Archaeologists (SAA) has been a long-standing advocater against pseudoarchaeology, and it is dedicated to maintaining the ethics of the archaeological field, as it sets them forth. "The nine Principles of Archaeological Ethics adopted by the [SAA] on March 7, 2024, comprise a set of ideal values and behaviors that all SAA members aspire to uphold" (Society for American Archaeology, 2024, para. 4). Very few of these principles align with the behaviours and actions of pseudoarchaeologists. The SAA itself was created to emphasise professionalism in the archaeological field, thereby excluding those proclaimed by the field as fringe archaeologists or pseudoarchaeologists (Hoopes et al., 2023). The SAA concerns itself greatly with ethics (which pseudoarchaeology can seem to lack), as evidenced by a task force dedicated to revising their ethical principles (Childs et al., 2018) and the yearly intercollegiate Ethics Bowl which encourages universities students of archaeology to consider and solve ethical dilemmas that they may face in their future careers. In some cases, dilemmas put forward by the SAA in this competition have included situations bordering on pseudoarchaeology, such as what to do with television programs which promote treasure hunting and encroach on your excavations (Alleen-Willems et al., 2013, p. 8).

Similarly, the European Association of Archaeologists (EAA) has a code of practice and principles for its members to follow which also implicitly excludes pseudoarchaeology. The EAA urges its members to conduct and report research with full transparency, suppressing no information (Frieman & Kamash, 2022, section 'EAA Principles', principles 1.14 and 1.16). It also condemns any hypotheses that are founded on racist and discriminatory ideology (Frieman & Kamash, 2022, section 'EAA Principles', principles 2b). It is well known that pseudoarchaeologists exclude or ignore any data which does not align with their theories. Many of these theories also strip the accomplishments of indigenous communities under the guise of them being "too primitive" and attribute them instead to aliens or invaders of north-western European origin (Nugroho, 2022, p. 34).

Another, more immediate example of the anti-pseudoarchaeology stance the SAA holds, would be the open letter written to the Head of Global Television at Netflix and the Chief Executive Officer of Independent Television News (ITN) Productions by the President of the SAA, condemning the production and airing of the television show *Ancient Apocalypse* as a factual documentary (Sandweiss, 2022). In the letter, the President, Daniel H. Sandweiss, urges

> "both Netflix and ITN Productions to remove any labels that state or imply that this series is a factual documentary or docuseries and reclassify this series as "science fiction." We urge both Netflix and ITN Productions to add disclaimers to the series that its content is unfounded. We also request that Netflix develop a policy that balances such false narratives with the

presentation of scientific documentaries and accurate reporting on the knowledge that archaeologists have generated and continue to generate every day." (Sandweiss, 2022, p. 3)

Neither Netflix or ITN have taken any of the actions recommended, likely on the account that the show was incredibly popular and generated great revenue for Netflix. These examples show that archaeological societies and associations have recognized the harm of pseudoarchaeology, and have started to react accordingly. They have done so either by discouraging members from conducting themselves in a pseudoarchaeological manner, by excluding pseudoarchaeologists from joining, or by actively speaking out against media they consider harmful to archaeology.

The SAA and EAA, among other archaeological groups, host yearly conferences and annual meetings for all of their members to participate in. The topics spoken about at these conferences can be taken as a reflection of what the current relevant topics and interests are in the field. Therefore, when pseudoarchaeology was presented at these gatherings can be an indication of the attitude of archaeologists on the topic. Below in Table 1, I have created a non-exhaustive list of archaeological conferences which included papers, workshops or seminars on pseudoarchaeology. I searched for these conferences via search engines such as Google, or through allusions to specific events made by articles, books, social media posts or blogs. Within the table, data such as the year of the event, who it was hosted by, and how it included pseudoarchaeology as a topic can be found.

Table 1. A non-exhaustive summary of archaeological conference or meeting events that clearly feature the topic of pseudoarchaeology.

Year	Description of the event
1986	The Society for American Archaeology hosted a symposium which examined pseudoarchaeology from different academic fields. This led to the production of the 1987 anthology: *Cult archaeology & creationism: Understanding pseudoarchaeological beliefs about the past* (Pimple, 1988, pp. 90–91).
2002	The Annual meeting of the Archaeological Institute of American hosted a workshop on pseudoarchaeology (Fagan, 2006c, p. xvii). The event led to the production of the 2006 book *Archaeological Fantasies: How Pseudoarchaeology Misrepresents the Past and Misleads the Public.*
2012	The 77th Annual meeting of the Society for American Archaeology featured Symposium 56: "Answering pseudoarchaeology: Proactive dialogue and research in response to extraordinary", with eleven presentations (Society for American Archaeology, 2012, p. 63).
2019	The 84th Annual meeting of the Society for American Archaeology featured Symposium 215: "Interactions with pseudoarchaeology: Approaches to the use of social media and the internet for correcting misconceptions of archaeology in virtual spaces'', with five presentations (Society for American Archaeology, 2019, p. 143). A paper titled "Answering Pseudoarchaeology from the Repository" was also presented in session number 395 (Society for American Archaeology, 2019, p. 233).

Table 1. Continued

2019	"Archaeology in a post-truth world: An interdisciplinary philosophical conference", sponsored by University of California Humanities Research Institute and University of California, Irvine. The conference was intended for students, and aimed to teach them skills such as media literacy and science communication through the topic of pseudoarchaeology and archaeological conspiracy theories (Vickers, 2019).
2021	The Canadian Archaeological Association's 53rd annual conference featured Stephanie Halmhoffer's paper "Myth-taking and myth-making: Exploring the use of pseudoarchaeology in lost city explorers and arkworld" (Halmhofer, 2021b), which was presented and discussed in the "Archaeology and Heritage in the Contemporary World" session (Canadian Archaeological Association, 2021).
2021	The symposium "Alternative Egyptology" at the Allard Pierson Museum, the Netherlands, was held to create a space to discuss the vast topic of alternative Egyptology and to discuss its impact on mainstream media. The 2024 book *Alternative Egyptology: Critical essays on the relation between academic and alternative interpretations of ancient Egypt* includes essays from thirteen of the contributors of this symposium (van den Bercken, 2024, pp. 12–14).
2022	The Nordic Theoretical Archaeology Group 2022 conference presented Oula Seitsonen and Vesa-Pekka Herva's paper "Labyrinths and (sauna-)knots: An excursion into art, pseudo-archaeology and the extraordinary underground" (Nordic TAG , 2022, p. 81). The paper discusses the use of art and pseudoarchaeology in the real or imagined pasts of Finland.
2024	*To take place in November:* The American Society of Overseas Research 2024 Annual Meeting will include the workshop: "Contemporary perspectives on Near Eastern and Mediterranean pseudoarchaeology" which seeks to start a conversation on the context of the creation and distribution of pseudoarchaeological media, and how archaeologist have reacted to it (American Society of Overseas Research, 2023).

Pseudoarchaeology has clearly been featured quite a bit in the past five years, and the large and recent presence of it indicates that research into the subject is now taking place, and that researchers feel that it is a topic worth sharing with others. I do however have to acknowledge the limitations of this conference research. A possibility for why there are so few mentions of pseudoarchaeology in conferences before the early 2000s is because they may not have been advertised online, or the websites that they belonged to simply do not exist anymore. It is possible that these papers or conferences did take place, but there is not enough evidence left online to find. It is also worth pointing out that the average archaeologist may not have the funds or time to visit these conferences, and the papers presented only represent the thoughts of the creators, not of the wider conference. Still, it is visible that researchers across the globe feel that pseudoarchaeology is something that now needs to be researched and discussed.

Chapter 3.2.2. Changes seen in archaeological funding

A different way in which pseudoarchaeology affects archaeology can be found in current grant awarding and funding processes for independent research. There is a newfound emphasis that grant giving bodies place on the publicity that your research creates, which reflects the desire for archaeology to get into the attention of the public. The Royal Irish Academy (RIA) for instance, is a governmental grant awarding body which supports independent professional archaeological research in Ireland yearly. There is a wide range of different grants available, such as those intended for more general research, for conducting excavations, for radiocarbon dating, for contributing to the legacy scheme or for researching World Heritage sites (Royal Irish Academy, 2023). To be awarded the final 50% of your grant, you must submit an online report after your research is complete. This form requires standard information about the research undertaken and its results, but also has a section dedicated to what varying types of publicity your research has received (see Figure 1 below). The RIA asks how you publicised the project on social media or other web platforms, and what media coverage you gained.

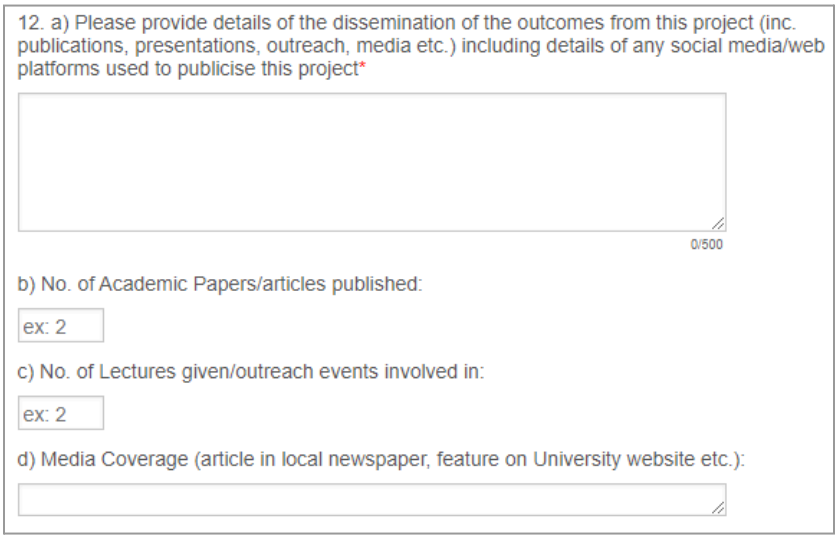

Figure 1. Question 12 of the RIA Archaeology Grants submission form, which asks about media promotion. Royal Irish Academy, & Department of Housing, Local Government and Heritage. (2024). *Archaeology Grants* [Screenshot]. https://form.jotform.com/92121771686966

There is now an expectation from grant giving bodies that the researcher must break into popular media and advertise their research. They are expected to engage with this media, to increase their scientific impact or to make their research known to a wider audience. This could pose a problem if archaeologists choose to forgo their scientific and ethical integrity in favour of gaining media attention to gain more funding (e.g., Pickering & Kgotleng, 2024). This push for more science communication could be linked to pseudoarchaeology, in that more efforts are being made to give the public more access to archaeology and therefore proactively reduce misinformation. There is also however, the recognition that archaeologists should be communicating the results of their research with the public regardless, especially if it has been funded by government grants.

Chapter 3.3. Social media is the new battleground against pseudoarchaeology

Archaeologists have realised that pseudoarchaeology is an issue that has to be addressed not only within the field, but also with the public. The misinformation that is being spread needs to be minimised, and archaeologists, as experts of the misused topic, have the most knowledge and authority to do so. What has greatly enabled this in the 21st century, is the advances and availability of varying new platforms on the internet. Social media is currently the frontier for combating misinformation by communicating genuine archaeology with the public, and by addressing issues and errors directly with pseudoarchaeologists themselves. On X, formerly known as Twitter, users John W. Hoopes, (@KUHoopes), Flint Dibble (@FlintDibble), Steph Halmhofer (@Cult_Archaeo), and Bill Farley (@ArchaeologyGame), are but some of many archaeologists who have vocally used their platform to counteract pseudoarchaeology.

There is also the infamous Facebook group 'Fraudulent Archaeology Wall of Shame' (https://www.facebook.com/groups/149844915349213/), which as of June, 2024, has over 145,200 members. While professional archaeologists such as Flint Dibble or John Hoopes post in this group, much of the activity comes from interested members of the public. The group is dedicated to finding outlandish pseudoarchaeological claims online, and then discussing together what they find faulty. For the public, it is an entertaining and easy introduction to discrediting pseudoarchaeology and to employing critical thinking.

On YouTube, the channel History with Kayleigh has dedicated a 30 minute long video to the harm of pseudoarchaeology (History with Kayleigh, 2023). As of June, 2024, her video has been watched by over 58,000 people. While by today's standards this would not be considered 'viral', it has still reached a much larger audience than any academic article on the same topic could hope. Kayleigh During, while trained as a historian, is a content creator who covers archaeological and historical topics. She is also very active on X (@KayleighHistory) denouncing pseudoarchaeology.

Another example would be the recent debate between Flint Dibble and Graham Hancock on The Joe Rogan Experience podcast (Rogan, 2024). While archaeologists have publicly debated pseudoarchaeologists before (e.g., Ruth Tringham vs. Erich von Däniken in 1973), this debate is a huge step forward for archaeological science communication for a number of reasons. The Joe Rogan Experience podcast has over 14.5 million followers on Spotify alone, excluding audiences which might choose to listen via YouTube or Apple Podcasts (Notopoulos, 2024). The episode aired mid-April, 2024, and as of June, it has 5.4 million views on Youtube. Dibble, while risking himself by agreeing to publicly debate one of the current largest pseudoarchaeologists on a platform with an audience known to be conservative leaning (Yokley, 2022, as cited in UnHerd Staff, 2022), recognized the necessity and opportunity of reaching those outside of his current echo-chamber. Instead of trying to debunk and mock all of Hancocks theories, Dibble took the unconventional approach of simply showing how interesting and vast archaeology is on its own, without the need for sensationalising or twisting (Dibble, 2024). The episode has been heralded as a success for Dibble and archaeology alike (Brewis, 2024, section 'So who won the debate?').

One of the reasons as to why social media has found itself to be the frontier for combatting pseudoarchaeology, as opposed to more traditional channels of communication such as news articles or television shows, is that it allows archaeologists to directly speak to their audience. Within minutes, an archaeologist can now reach the public without having to go through ulterior channels; they are able to freely speak their mind, and immediately see reactions through comments, likes, and shares. They can then address a topic further if required or adapt their strategy. While social media does expose archaeologists to online 'trolling', harassment, and hatred from pseudoarchaeological fans or believers, it is still one of the most effective channels of communication to reach a large audience by yourself.

Chapter 3.4. Conclusion

Pseudoarchaeology has become so popular that archaeologists have decided that they need to do something about it. We can no longer assume that the public views pseudoarchaeology as in the fringe. To combat this, archaeologists in the late 20th century recognized that our field needs to make it academically acceptable to engage with the topic of pseudoarchaeology. They recognized that ignoring the problem was doing more harm than good, and that archaeologists needed to see that their field was being threatened. Discussions on how to address this problem have been and still are taking place. Archaeologists also began teaching this topic to the next generation of researchers at universities. A push for more science communication also took place, in part because of the need to debunk the misinformation being spread, but also to advertise our own research more. Professional societies and associations have excluded pseudoarchaeologists, and discouraged their members from conducting research like them. Many individual archaeologists are also now communicating with the public to debunk misinformation and reclaim agency over how we are perceived.

Chapter 4. The harm pseudoarchaeology brings

As demonstrated, archaeology is being affected by popular pseudoarchaeological media, and will likely continue to evolve and change because of it in the future. It is not a neutral force on archaeology however; pseudoarchaeological media poses a danger to the field and to the public. It harms the public by spreading misinformation and prejudice, and it harms the archaeological field by misappropriating archaeology and normalising depictions of unrealistic research. To fully explore this interaction between the two subjects, I will also investigate the benefits of pseudoarchaeological media for archaeology in Chapter 5.

Chapter 4.1. Harm to the public

As previously mentioned, many pseudoarchaeological theories are based in racism and discrimination. For example, the concept of Atlantis has been used to further white supremacists ideologies, and ancient astronaut theories strip indigenous communities away from their past accomplishments and award them to varying types of white colonialists. When these discriminatory versions of history gain public traction, they push harmful narratives and teach the public an inaccurate version of history. Marco Vigato, one of the 'experts' that Graham Hancock brought on to *Ancient Apocalypse* to speak about the Great Pyramid of Cholula, Mexico*,* also published his book *The Empires of Atlantis* in 2022*.* Flint Dibble, in an interview with *Slate Magazine*, stated that Vigato's book was "one of the most white supremacist, racist books that [he had] ever seen" (Onion, 2022, para. 16). Vigato is not an archaeologist or historian, but has been given this privilege of being spotlighted as an 'expert' in front of an audience of millions of people by Hancock. If this audience was to then search for further work by Vigato, they would find an incredibly harmful book. Not only does pseudoarchaeological media take credit away from indigenous communities, it also takes away recognition of researchers who have devoted their life to genuinely studying these structures and instead uplifts people with further unsavoury ideas.

Pseudoarchaeology also offers credibility to many conspiracy theories (Halmhofer, 2021a). These theories base themselves in pseudoarchaeological research, and use it to justify bigotry and hatred (such as anti-semitism). A recent physical manifestations of this would be the direct connection that pseudoarchaeology and pseudoarchaeologists have with conspiracy theorist groups such as QAnon, who played an active role in the insurrection of the U.S. capitol on January 6th, 2021 (Halmhofer, 2021a). Participants of the storming were seen bearing QAnon related slogans and imagery, and some even displayed tattoos which, while based in Norse mythology, act as white supremacist dog whistles (Birkett, 2021). Online celebrities of pseudoarchaeology and conspiracy theory groups such as David Wilcock also openly endorsed the insurrection (Halmhofer, 2021a, para. 7). This event was obviously grossly illegal and actively threatened and harmed members of the public and U.S. government. While the insurrection did not take place directly because of pseudoarchaeology, the theories they produce do lend support to these wider harmful social issues. It can tap into and feed negative feelings about governments, public health and safety matters, and the general distrust of

science and authority. A manifestation of this was seen during the COVID-19 pandemic, where scientific conspiracy and misinformation was rife, and anti-mask and anti-vax sentiments spread in conservative political groups to the detriment of the public (Salvanto et al., 2021, para. 9–10).

As Robin Derricourt (2012, p. 524) and Cornelius Holtorf (2005) have pointed out, another reason that pseudoarchaeology harms archaeologists and the public alike, is the Us versus Them mentality that archaeologists' responses to this media create. The newfound fight against pseudoarchaeology is incredibly important to stop misinformation and harm, but it also creates a close-mindedness to the field that actively excludes voices that do not come from a background in trained archaeology. The fierce responses we have against anything that has even a hint of pseudoarchaeology come across as being patronising, biassed or elitist (Holtorf, 2005, p. 545), and may dissuade or exclude hobbyists, amateurs and anyone with an interest in archaeology. These are groups of people that either have the potential to make a positive impact on our field, or who already do (Henson, 2013, pp. 15–16).

Chapter 4.2. Harm to the industry

Pseudoarchaeology directly harms the archaeological field in a number of ways. One example of this might be the competitive nature that pseudoarchaeology has brought to archaeological media attention. Pseudoarchaeologists are not bound by university or governmental employers to uphold specific integrities or standards of research, and so are essentially free to make claims as they see fit. This has normalised spectacular and truly unbelievable headlines about archaeology. This sensationalization has set a standard, which the news reporting of genuine archaeology aims to match. Always needing to have the first, the largest, or the oldest discovery to be newsworthy pushes reporters to create unfactual and exaggerated articles out of archaeological press releases.

Since pseudoarchaeology is much more prevalent than genuine archaeology in popular media, it also inevitably gets to control the narrative on how archaeology is represented. The Chapman Survey of American Fears, conducted yearly since 2014, shows how pseudoarchaeological media has affected the beliefs of the public. In these studies, Chapman University asks a representative sample of Americans about their fears and worries, which are often related to the political situations of that year, and reports their findings. From 2015 to 2018, participants were asked questions relating to their paranormal and pseudoarchaeological beliefs, and a trend emerged that beliefs in pseudoarchaeological theories had risen dramatically. In 2015, 20.3% of people agreed or strongly agreed that aliens had visited Earth in the ancient past (Chapman University, 2015), whereas in 2018, 4 years later, 41.4% of people now agreed with this statement (Chapman University, 2018). Similarly in 2016, when they introduced the topic of ancient advanced civilizations having existed, 39.6% of people agreed (Chapman University, 2016). 3 years later, that percentage had risen to 56.9% (Chapman University, 2018). Further results of paranormal beliefs can be seen in Figures 2 and 3. Unfortunately, such topics are no longer deemed relevant enough to be asked about by Chapman University in subsequent waves of the survey.

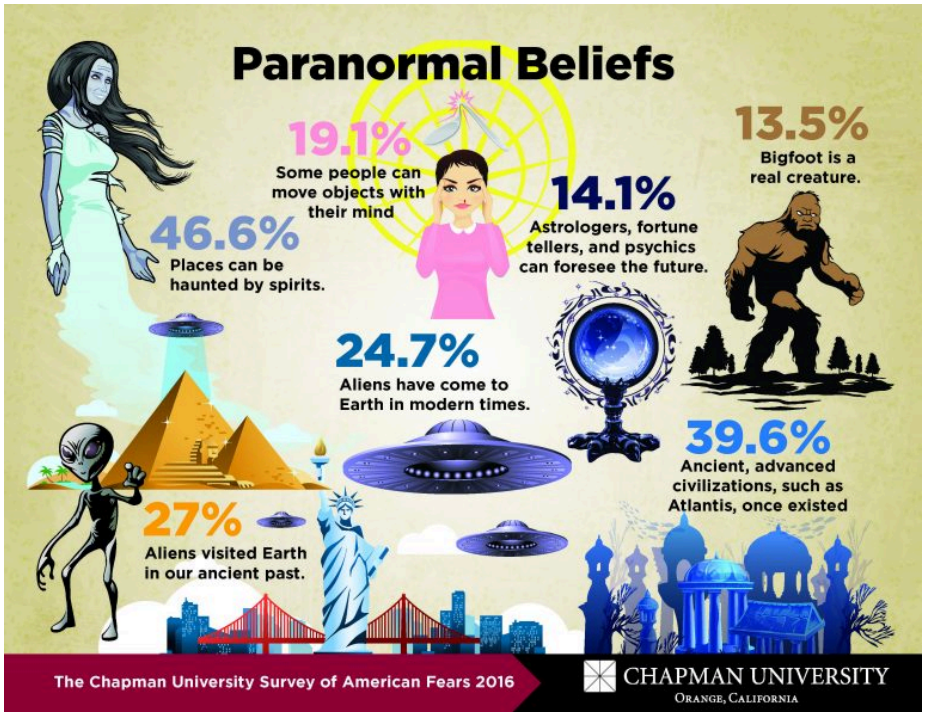

Figure 2. Paranormal beliefs results of the 2016 Chapman University Fear Survey. Chapman University. (2016). Chapman University Survey of American Fears paranormal beliefs results of 2016. In *The Voice of Wilkinson*. https://blogs.chapman.edu/wilkinson/2016/10/11/paranormal-beliefs/

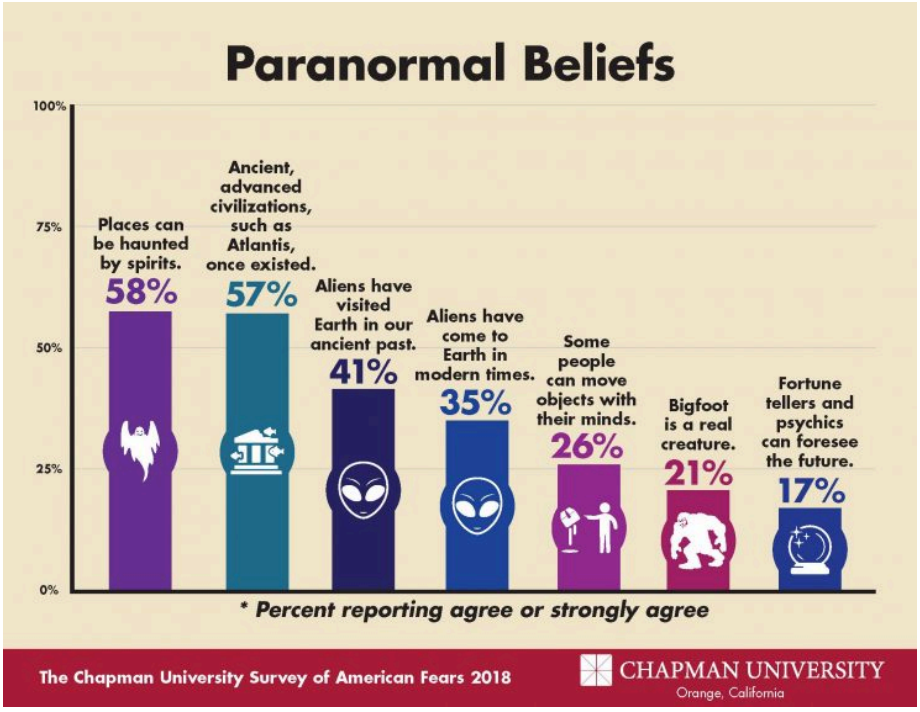

Figure 3. Paranormal beliefs results of the 2018 Chapman University Fear Survey. Chapman University. (2018). Chapman University Survey of American Fears paranormal beliefs results of 2018. In The Voice of Wilkinson. https://blogs.chapman.edu/wilkinson/2018/10/16/paranormal-america-2018/

Kenneth L. Feder (2006) has also conducted similar surveys on the beliefs of university students in the United States of America and later on abroad. Over the 20 years (1983–2003) that he has been conducting this research, he has found a similar rise and ebb of interest and agreement with whatever the current fad of pseudoarchaeology was at the time. While these surveys have only investigated whether popular theories such as Atlantis or ancient astronauts are being accepted by the public, little research has been conducted on what other beliefs and opinions are simultaneously being instilled into the public. Pseudoarchaeology does not often look kindly towards archaeologists; it portrays archaeology as being full of censorship and elitist individuals who do not want to be open-minded to new ideas (Onion, 2022, para. 2–3). Graham Hancock, in his novels and in *Ancient Apocalypse*, especially makes an enemy out of professional archaeology (Dibble, 2022). By passing on this opinion to the public, archaeology could suffer. John Hoopes gave an interview to *Slate Magazine* (Onion, 2022) in which he brings up an interesting point: "What happens to academic archaeology if university administrators and students and alumni begin demanding that departments of anthropology and archaeology at the university support this line of thinking [that pseudoarchaeological theories are true]" (Onion, 2022, para. 21). This doubt that pseudoarchaeology can cause could affect funding, outreach and employment.

The popularity of pseudoarchaeological media and its near-constant presence in popular media is also lending it the appearance of credibility. The legitimacy that comes with becoming a popular and successful pseudoarchaeologist has given these figures and their theories access to archaeological journals and research sites. A recent example is that of Gunung Padang, Indonesia. Recently featured by Graham Hancock in the first episode of *Ancient Apocalypse,* was the highly contested research of Natawidjaja et al. (2023), which claimed that the site of Gunung Padang was actually constructed 27,000 years ago, and is in fact a pyramid. Archaeologists were quick to find many flaws with the methodology used and how the data was interpreted (e.g., Rome Griffin, 2023), and consider the claims of the hill of Gunung Padang and its dating, as pseudoarchaeological and fueled by nationalism (Sulistyowati & Foe, 2021). Surprisingly however, the research was accepted into the peer-reviewed journal *Archaeological Prospection* in 2023. The article was quickly retracted after outcry from the scientific community, but it should still be questioned how an obviously flawed paper was ever accepted in the first place (Lewis, 2023). Pseudoarchaeology and pseudoarchaeologists are being given access to archaeological resources to the detriment of scientific standards, and even to the detriment of the sites and artefacts themselves when improper and careless research is conducted (e.g., Feagans, 2019a).

Chapter 4.3. Conclusion

Pseudoarchaeological media negatively impacts the cultures within their theories by reallocating their achievements; harms their audience by spreading misinformation; and impacts the general public by supporting conspiracy theory groups and the far right. Their media is actively changing public beliefs and is encroaching on professional archaeological spheres, casting doubt onto scientific integrity. These are issues that archaeology will have to deal with, however there could be some benefits in this situation.

Chapter 5. The benefits pseudoarchaeology can bring

There are quite obviously many negatives to pseudoarchaeology, but to fully catalogues its effects on archaeology, it is also important to consider the benefits it has brought. The mass popularity of pseudoarchaeological media can be an example for archaeologists to improve their science communication. This media and its creators also advertise archaeological sites, have pushed for protective legislation, and have inspired future archaeologists.

Chapter 5.1. Pseudoarchaeology encourages better science communication

In varying ways, pseudoarchaeological media can be used as a science communication example of what archaeologists should do, and also what they should not do. It can inspire us to create captivating media to reach larger audiences; or through pseudoarchaeology's more harmful qualities, push us to work harder to dispel myths or conspiracy theories, and encourage us to take agency over how our research is twisted and used for ulterior motives.

While there have always been famous archaeological public figures (Sir Mortimer Wheeler, Francis Pryor, Joann Fletcher and Alice Roberts to name a few), recently more and more archaeologists are stepping into the public eye to argue for scientific righteousness, or in general just to communicate their research. Much like interacting with pseudoarchaeology in the past, becoming a public figure and speaking about your research on the television or on radio programs was looked down upon until the later 20th century, where changing media formats forcefully opened the field if they wanted to keep their relevancy (Henson, 2013, pp. 14–15). The topic of whether an archaeologist should or can be a public intellectual is still widely debated (e.g., Almansa Sánchez, 2013; Svanberg, 2013; Tarlow & Stutz, 2013). While the majority of archaeology is behind a paywall for the public, there have been great strides made towards a more accessible archaeology. This opening could be due to pressure for more transparent research from universities and legislators. It could also in part be due to the recognition that archaeologists need to meet the interests of the public before pseudoarchaeologists do (Caspari, 2022, p. 1; Feder, 2006, p. 95).

Better outreach and communication with the public is therefore needed. Archaeologists could improve their science communication through mindfully considering the techniques and styles of pseudoarchaeological media and replicating it. The undeniably enrapturing storytelling of media such as *Chariots of the Gods?* and *Ancient Apocalypse* (Defant, 2023) are what pull in audiences despite the glaring inaccuracies presented. If we borrowed their storytelling techniques and methods of engagement, we could create accessible, understandable and captivating pieces of media, raising public engagement with archaeology on our own terms. Pseudoarchaeologists have also taken full advantage of the different modes of communication offered by the internet, and so should archaeologists. While social media has been around for two decades (Ortiz-Ospina, 2019, para. 6), its potential has only recently been recognized by archaeologists for the benefits it can afford to science communication. Platforms such as Instagram (Caspari, 2022) and TikTok (Khan, 2022) have been researched and recognized for their relative ease to reach wide audiences in an accessible manner. They have also been

examined on ways they can be used to combat widespread pseudoarchaeology and conspiracy theories. The personal nature of social media can also humanise archaeologists and add nuance to their public image (Caspari, 2022, p. 6), which is often sorely lacking in archaeological media.

While pseudoarchaeologists take advantage of different platforms, they also capitalise on the idea that all publicity is good publicity. Whether in a positive or negative light, being widely talked about online increases the chances of reaching a sympathetic audience. Similarly, the media frenzy that comes with potentially politically polarising archaeology related news can bring huge publicity to archaeology. With the earlier Cheddar Man example in Chapter 2, the idea that the "first" inhabitants of Britain were dark skinned was not received well by conservative communities. Because many people did not agree with the results of the research, or were shocked by it, they spent a large time discussing it online, which led to the research gaining wider attention. The original press release from UCL and the NHM was picked up by over 40 different newspapers internationally (UCL, 2018). All of this obviously led to publicity for the museum, which had just opened an exhibition relating to this research, and to their own social media pages. The Natural History Museum hosts a regular live web lecture series over YouTube, called #NHM_Live. Three scientists involved in the research of Cheddar Man's reconstruction who were heavily featured in the associated Channel 4 documentary, were on the episode titled 'Who was Cheddar Man?', streamed April 25th (Natural History Museum, 2018b). This came 2 months after the documentary, exhibition, and reconstruction were released to the public, and it is the most watched video in the #NHM_Live series on YouTube. This popularity and continued relevance shows how much the research was still in the public's awareness, likely due to the heavy media coverage, even if the research was twisted out of proportion and lost nuance during so. After the Cheddar Man episode, the following #NHM_Live series videos on YouTube have consistently higher viewership than those that came before. More people were made aware of this series, and new viewers were gained during the Cheddar Man frenzy. The series is devoted to making scientific research and archaeology more accessible and understandable to the general public, and it has benefited through this moment in the eye of the public. This example is not to say that researchers should purposefully be creating polarising and political research. I suggest however that if a similar frenzy should occur, it should be fully taken advantage of to promote their work while they have that opportunity to reach the largest audience possible.

In this similar vein of taking agency for how your field is represented in the public, there has been a recent call for scientists, not only archaeologists, to become responsible for how their work is used by others once published. Kenneth Brophy (2018) has written a very compelling argument for why archaeologists should be mindful before they publish of how their work can be twisted for political agendas, and how they should continue watching its life in the media afterwards. This argument is very relevant to pseudoarchaeology, which often misappropriates archaeological research and techniques. Through these negative twistings, archaeologists have learned that they need to be aware of how their work is received and used by others, which in the future could lead to more considerate and transparent research.

Chapter 5.2. Pseudoarchaeology inadvertently advances the field

Pseudoarchaeological media regularly reaches audiences much larger than standard archaeological media; it makes for captivating headlines and its controversial nature means it gains publicity from being widely debated online. This attention it garners advertises its contents, regardless of whether the audience agrees with what is being shown to them or not. What is being shown, wittingly or not, is archaeology, or at least hints of it. *Ancient Apocalypse*, through the millions of people it has reached, has shed light on sites not often visited or reported on. These programmes have promoted archaeological sites far more widely than standard communication techniques used by archaeologists have. This popularity could bolster tourism to these sites, which comes with its own benefits and negatives (Díaz-Andreu, 2013), but could aid local economies and communities. Through this newfound acknowledgement, chances for archaeological research and funding could be improved, as the topic suddenly becomes 'relevant'. This promotion and pursual of archaeology could also help protect sites, and create better heritage management. While not the most recent example, the Native Sons of BC, in Canada, were a nativist group established in 1899, which subscribed to the idea that before the Indigenous peoples of Canada, the country was inhabited by an advanced and intelligent white race. In their devoted search for evidence of this, they successfully pushed for the creation of a department of archaeology at the University of British Columbia in 1925. That same year they also lobbied for and drafted a bill which led to the creation of the Historic Objects Act which protects indigenous sites and belongings (Halmhofer, 2024). While they were actively pursuing a discriminatory pseudoarchaeological view of Canadian history, they did inadvertently advance the archaeological field and its regulations. This however is not a valid excuse for the abhorrent racism they displayed, and there are many other occasions of pseudoarchaeology supporting the destruction and removal of indigenous communities (Nugroho, 2022, p. 27).

An additional argument of pseudoarchaeological benefits that could be made, is that it is important to keep an open mind to new theories; some theories that seemed outrageous to archaeologists of the past have now been proven true. Archaeologists could be blinded by an immediate dismissal of anything seemingly 'pseudo', and therefore miss a genuine discovery. While this does sound possible, I find this line of thinking idealistic, and hopefully ignorant of the present issues that pseudoarchaeology poses. This is also the same argument that pseudoarchaeologists have taken to legitimise their work and victimise themselves. The most well-known example of this would be the Clovis-first hypothesis; in the 1970s, archaeologist Jacques Cinq-Mars found evidence that people had inhabited the Americas pre-Clovis culture, which was the widely accepted earliest inhabitant date at the time. It took multiple years before his theory was accepted, because it took multiple years for an undeniable amount of data to be collected. Pseudoarchaeologists such as Graham Hancock however, take this initial hesitancy to accept the existence of pre-Clovis people as proof that archaeologists are close-minded and outdated (Feagans, 2019b). They then apply this argument to themselves, to give authority and credit to their own theories by saying that in the future they could be proven right. Why should we then degrade and limit the research of pseudoarchaeologists? While pseudoarchaeology

could prove to be a valuable source of inspiration for research, holding out hope that our field will be greatly advanced by currently outlandish theories being proven true in the distant future seems unrealistic. This argument also inevitably gives validity to pseudoarchaeologists, who may then further spread dangerous and harmful ideas.

Other ways that pseudoarchaeology has benefited archaeology is through inspiring the next generation of researchers. I am certain that more students of archaeology and anthropology have been inspired into the study by watching pseudoarchaeological television shows, movies, and documentaries than by reading academic reports and journals. Archaeologists can use this foundation of interest that has been created for them, to then teach future generations the research values they want them to have (Feder, 2006, p. 95). However, if these larger-than-life programs are the only framework students have of what our field is like, they may be disillusioned or disappointed when going through formal education. It would be important therefore, for students to hear from actual archaeologists about how exciting and interesting the field is, in a realistic sense.

Chapter 5.3. Conclusion

If approached correctly, popular pseudoarchaeological media can offer archaeologists plenty of benefits. Whether by inspiring new or more effective methods of science communication, inspiring new students or research avenues, or advancing the field in other ways, archaeologists still stand to gain something. Table 2 below briefly summarises the strengths, opportunities, weaknesses and threats mentioned.

Strengths	Weaknesses
• Reaches a much larger, wider audience than archaeology media • It still advertises archaeology • Pushes archaeologists to open our field, and to take agency for how our work is used in the media • Inspires future archaeologists and amateur enthusiasts to get involved with archaeology	• Actively spreads discriminatory and hateful messages • Gives validity to dangerous conspiracy theories • Takes away indigenous accomplishments • Encourages distrust in the government and in science
Opportunities	**Threats**
• Could use it as an example for improved science communication techniques and media types • Could convert the negative press into a teaching opportunity • Could inspire new archaeological research • It could lead to improved tourism, funding and site protections	• Our response to this media can exclude and dissuade non-academic archaeologists • Its popularity and acceptance into archaeological spaces give it validity, leading to lower scientific standards • They are influencing the beliefs of the public

Table 2. A short summary of the varying benefits and harms that pseudoarchaeology can offer archaeology.

Chapter 6. Conclusion

Society has always been interested in pseudoarchaeology and conspiracy theories. Archaeologists will never be able to remove that interest, nor will they be able to stop pseudoarchaeologists from creating their media. The use of new technology in the 21st century has only made it easier to create such content and reach more people. Pseudoarchaeological material is accessible, entertaining, and seemingly open for everyone, whereas archaeological research can be exclusionary when behind paywalls and clouded with scientific jargon. Also, depictions of archaeology in popular media are not often created by archaeologists themselves, and give audiences false expectations of what archaeological research is actually like. Research is taken out of context and twisted to fit ulterior motives, or sensationalised to be more entertaining. It is exceedingly difficult to find genuine, accurate representations of archaeological research in popular media. Before the late-20th century, all of this was not seen by archaeologists as much of a problem, or was at least a problem that could be ignored. The rise of the internet however has made it much easier to reach millions of people with a very little amount of effort, and so pseudoarchaeology has increasingly found its footing and spread. The archaeological field has also recognized the importance of opening up to other voices, and the value of sharing the methodology and results of their research with the public. This has led to the realisation that the way we are portrayed in the media and who holds the narrative over our research is actually incredibly important.

Archaeologists have dealt with this spread of misinformation and misappropriation firstly by increasingly discussing it amongst themselves as professionals, and then by increasing science communication attempts to the public. Pseudoarchaeology has recently been the topic of a number of archaeological conferences, it is being taught as a subject in universities, and is increasingly being written about and researched in journals. It has pushed the field to consider their own values and morals, which is reflected in behavioural codes set forth by professional associations, and it has pushed the field to communicate more openly and freely with pseudoarchaeologists and with the public. Archaeologists have created plenty of enriching and entertaining online content to inform their audiences about their research, and social media is starting to be used as a place to debunk conspiracy theories and to interact with others in a more relatable, accessible manner. It is a space where archaeologists can directly speak to the public without having to go through other parties, and so are able to make genuine connections and hold impactful conversations. It is also a method of communication that makes it very easy to quickly speak your mind on a topic, and so has become one of the main channels in combating pseudoarchaeology.

This is important because the dangers of pseudoarchaeology are many; their theories can have discriminatory and bigoted foundations, which when featured in popular pieces of media, are broadcasted to millions of people. It and the people who create it, can have connections to extremist political leanings, and pseudoarchaeology is known as an accessible gateway into dangerous conspiracy theory groups. Pseudoarchaeology also actively inspires distrust in scientific institutions and disregards scientific methodology to a dangerous and damaging degree. With how prevalent pseudoarchaeology is

in popular media, it, rather than actual archaeologists, are dictating how the public interacts with archaeology and whether they see it in a positive, realistic light or not. As a result of pseudoarchaeological media, the public perception of archaeology has been negatively affected as people lose faith in authoritative voices and institutional research, and turn to alternative sources for their information instead. Despite all of these shortcomings, some small silver linings can be found; ultimately this media is, at its core, still promoting archaeology and sharing how incredible it is with millions of people. It has inspired people to become actively involved with the study, and it can shed light onto lesser known sites. Archaeologists could also learn from the storytelling techniques of pseudoarchaeology; if nothing else, they have created enrapturing and inspiring media that has reached millions of people. By using similar techniques and modes of communications, archaeologists could be more effective when reaching the public with our messages and information. This would be especially useful when trying to take agency over our research when it is misused, and when trying to stop misinformation.

The main recommendation given when considering what archaeologists should do about pseudoarchaeology is to increase and refine science communication attempts. If we are able to prove that genuine archaeology is interesting, and give the public a better understanding of how our field conducts research, then perhaps they would feel less inclined to put faith in pseudoarchaeological media. Efforts made to debunk misconceptions online have been proven to work (Compton et al., 2021), but it often feels like a fruitless task that takes more effort than it is worth (Costopoulos, 2020, section 'Choose your ground'). Archaeologists who are actively communicating and sharing on social media, trying to correct the public's perception of our field, do so at their own time and cost. There can be serious social implications (such as being harassed online) for saying something that people disagree with, and not everyone has the time or energy to debate with others online, or give interviews, or create television shows, movies, or documentaries that accurately reflect our field to the public audience. Still, continuing to communicate with the public about our research is obviously very important. What is required therefore is more support from academic institutions, government organisations and archaeological associations. Public engagement and science communication should be a dedicated part of our field, not something that professional archaeologists are expected to learn about and do in their own free time. A new subfield or branch of archaeology which can devote all of its time to creating more archaeologist-made and -led science communication ventures would be helpful. In the meantime however, individuals who try to create factual and helpful content about archaeology should be supported more for their efforts. What is seen time and time again is that the public wants to see archaeological content, but if archaeologists themselves will not fulfil that need, then pseudoarchaeologists will. We should be taking advantage of the fact that creating content that has the potential to reach millions of people is now relatively easy and low-budget. Social media platforms are an efficient and accessible way to reach a large variety of people, and can aid in reclaiming and rectifying twisted archaeological narratives. Archaeology should also continue to open further; different perspectives should still be welcome and the public should continue to be invited to interact with our

research (such as via public archaeology, community archaeology or citizen science). Attempting to barricade our study in the vain of separating us from pseudoarchaeology also excludes earnest amateurs and does more harm than good.

This topic could still benefit from more research. Since archaeology is oftentimes so closely related to pseudoarchaeology in popular media, how could we work with it instead of against it? Until we control depictions of our own research in the media, we will continue to be misrepresented and misused. We should however still find a way to create the best out of a bad situation. There could be ways to work alongside pseudoarchaeology to promote our own research without endorsing its harmful content. Further investigation into what ways we can dedicate more effort to effective science communication, and how best we can support those that are currently communicating with the public on their own would also be beneficial.

Abstract

The presence, availability and popularity of pseudoarchaeological media has erupted in the 21st century. This has affected the public, but has also affected the archaeological field. To better understand why this is happening, and if archaeologists should do anything about it, an investigation into how pseudoarchaeological media has changed the professional archaeological field in Europe and North America in the 21st century has been undertaken. Varying types of archaeological and pseudoarchaeological media have been examined to briefly consider the history of pseudoarchaeology in the eye of the public, and how the internet has aided in its rise in popularity. The current state of archaeology in the media is also discussed as it is often presented similarly to that of pseudoarchaeology. The professional archaeological field has been affected by this in different ways; academics have begun to discuss the dangers and power pseudoarchaeology wields, in articles, conferences, and university courses. Archaeological associations and societies also now exclude pseudoarchaeological behaviours and have actively spoken out against pieces of pseudoarchaeological media. Grant awarding and funding bodies have also been affected by pseudoarchaeology and this shift towards better archaeological science communication in general. Archaeologists have also taken it upon themselves to clear the misinformation about archaeology that is rife on the internet, and have done so through varying social media platforms. Pseudoarchaeology is not a neutral force in affecting archaeology; it can have both positive and negative impacts on the field and with the public. While it misinforms the public, spreads dangerous ideas and controls the archaeological narrative in the media, it can also be used as an example of science communication and it inadvertently advances the archaeological field in other manners. Despite how archaeologists debunk pseudoarchaeology time and time again, it is a topic that is likely to stay popular with the public. Archaeologists therefore need to take advantage of new channels of communication and keep opening the field of archaeology to said public. I also suggest that more support for individuals who have taken on the burden of defending our field should be available.

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