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Talk like an Egyptian? Epistemological problems with the synthesis of a vocal sound from the mummified remains of Nesyamun and racial designations in mummy studies

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Abstract

The paper examines epistemological problems behind a recent study claiming to provide a synthesis of a vocal sound from the mummified remains of a man named Nesyamun and behind racial designations in Egyptian mummy studies more generally. So far, responses in the media and academia concentrated on the ethical problems of these studies, whereas their theoretical and methodological backgrounds have been rarely addressed or mentioned only in passing. It seems that the media reaction has targeted the synthesis of a sound rather than other, equally problematic, assumptions found in Egyptian mummy studies. By focusing on the epistemological problems, it will be demonstrated that the issues of greatest concern are endemic to a general state of a considerable part of the discipline of Egyptology and its unreflective engagement with the material remains of the past, especially human remains.

Keywords: Nesyamun; Egyptology; mummies; scientific racism; ethics; epistemology

Introduction

In a recent article in *Nature. Scientific reports*, D.M. Howard *et al.* present the results of their research which led to the reproduction of a vowel-like sound based on measurements of the precise dimensions of the extant vocal tract of the mummified remains of Nesyamun using computed tomography (CT) scanning. This enabled the creation of a 3D-printed vocal tract. They argue that a vowel sound is synthesized which compares favourably with vowels of modern individuals (Howard *et al.* 2020). Indeed, this is not such a surprise as ancient Egyptians, contrary to variable ideas in pseudoscientific circles (for a recent overview see Nielsen 2020, 127–156), were indeed *Homo sapiens sapiens*, just like modern humans.

In this paper I want to critically address the epistemological background of this and some other Egyptian mummy studies and their place in contemporary debates within world archaeology and Egyptology. The studies reviewed in this paper are surely not representative of all Egyptological thinking (compare, for example, with, among others, Carruthers 2014; Riggs 2014). However, as will be discussed in the paper, they are covered in the veil of science, but actually rely on outdated ideas often deeply entrenched within a colonial background based in scientific racism.

I will first present a short biography of Nesyamun and then analyse the content of the article as published in *Nature. Scientific reports*, together with reactions to this study in the media and academia. Due to ethical concerns related to this study already having been voiced, in this paper I will concentrate on other problematic assumptions underlying it. To this end I will refer to some other recent Egyptian mummy studies besides the one that focused on Nesyamun. This paper demonstrates that it is crucial for Egyptology to be reflective concerning theory and method

in order to detach it from the label of a 'cursed discipline' (Moreno García 2014). Indeed, as already pointed out by J.C. Moreno García (ibid., 51), not much has changed since 1979, when D.B. Redford wrote that 'the idea of advancement in the discipline centres more on the discovery of a new stela than on a new interpretation' (Redford 1979, 7). Although critical reflection has been under way since the early 2000s (among others, see Jeffreys 2007; MacDonald and Rice 2003; Matić 2020; Riggs 2014; 2020), Egyptology is still making slow steps in taking this seriously. A notable exception is, for example, the book series Encounters with ancient Egypt, consisting of eight published volumes dealing with ancient Egyptian perceptions of Others, Other perceptions of ancient Egypt and the reception of ancient Egypt.

Even the histories of Egyptology focus more on persons, events and their socio-historical background (e.g. Bednarski, Dodson and Ikram 2020; Thompson 2015; Gertzen 2017) than on the histories of ideas in Egyptology and their own sociohistorical and sometimes even personal background (e.g. Carruthers 2014; Matić 2018a). The early history of Egyptology is often glorified (e.g. Wilkinson 2020) at the expense of the darker side of its assumed glory (Riggs 2020). Critics of the colonial discourse often running under the broad term 'decolonialism' or 'postcolonialism' are most recently dismissed as disrupting the discipline (Gertzen 2020, 202–203). This could lead to a hasty dismissal of important aspects behind such criticism (for some examples see Matić 2020, 43–52). My aim in this paper is also to demonstrate the importance of 'decolonizing' Egyptology as others and myself have already done and are still doing (for example, see Carruthers 2014; Matić 2018a; 2020; Riggs 2014).

If Egyptology is to be taken seriously it has to be more aware of the general criteria by which the validity of observations or research statements is claimed (Babić 2018). The 'cursed' epithet may best apply to some recent Egyptian mummy research. The study undertaken by D.M. Howard *et al.* nicely exemplifies this problem and will be used in this paper to address other pressing issues we face in Egyptology, demonstrated by further examining other research on ancient Egyptian human remains.

A history of the body of Nesyamun

Nesyamun was a scribe of the temple of Montu-Re (*zš ḥw.t-nṯr Mnṯ.w-Rᶜw*) and 'god's father'-priest (*jt nṯr*) at the Karnak temple in Thebes (modern Luxor) during the reign of Ramesses XI (*ca* 1106–1077 BC, datings in the entire paper after Hornung, Krauss and Warburton (2006, 493)). He was the tenth and final pharaoh of the 20th Dynasty and the last ruler of the New Kingdom. We are informed about his name and occupations by the funerary texts on his outer coffin. During the reign of Ramesses XI, Nesyamun was a priest with important positions in the Temple of Montu. The dating to the reign of Ramesses XI is indicated by now lost red leather braces found on the mummified remains of Nesyamun and studied by W. Osburn, a Leeds wine merchant and a founding member of the Leeds Philosophical and Literary Society, whence Nesyamun was acquired by Leeds Museum. These leather braces had the names of Ramesses XI (throne name *Mn-mꜣᶜt-Rᶜw stp.n-Ptḥ*) on them (David and Tapp 1992; Howard *et al.* 2020; Sitch 2015, 328; Wassell 2008, 10–26).

In 1823 wealthy banker J. Blayds from Leeds bought the coffin of Nesyamun from W. Bullock, who was a showman and dealer in antiquities, well known from W. Bullock's Museum or the 'Egyptian Hall' in Piccadilly (for the sideshow, vaudeville nature of this setting see Glithero-West (2019)). The mummy and its two nested coffins were sent via Trieste, where they came through the antiquities dealer G. Passalaqcua (1797–1865), who could have found them during his excavations near the temple of Hatshepsut in Deir el-Bahari (Thompson 2015, 164–165; Wassell 2008, 1).

In 1941 after the Second World War blitz bombing which destroyed the front half of the Leeds Museum, Nesyamun was the only remaining mummy. His remains were intact, even though the

lid of the inner coffin had been smashed during the bombings (Wassell 2008, 2). In 1989, P.C. Brears, director of the Leeds City Museum, proposed that the Manchester Mummy Project team undertake scientific investigations of the mummy of Nesyamun, which was first autopsied in 1824 (David 2008, 7; Wassell 2008, 2). The autopsy and examination by the members of the Leeds Philosophical and Literary Society was published in 1828 (Osburn 1828). The mummified remains were unwrapped and the body was examined. Already Osburn identified the name of the owner of the coffin by reading his name following the then recent work of J.F. Champollion on deciphering Egyptian hieroglyphs in 1822–1824 (Wassell 2008, 2).

Radiological examinations were conducted in 1931 at the School of Medicine of the University of Leeds by A. Cave and in 1964 at the School of Dentistry of the University of Sheffield by M. Lehman, before the Manchester team led by R. David conducted research using endoscopy, histology and X-ray and early CT scanning. The results of these studies indicated that Nesyamun was about 1.68 metres tall, had various early indications of degenerative conditions associated with middle or older age (osteoarthritis in his left hip), suffered from a gum disease, had severely worn teeth and died in his mid-50s. They suggest that he possibly died from an allergic reaction to a bee or a wasp sting (Wassell 2008, 2). This is, however, not backed up with sufficient arguments.

The CT images from the study of D.M. Howard *et al.* confirmed that a significant part of the structure of Nesyamun's larynx and throat remained *in situ* due to dehydratation caused by mummification. This enabled them to measure the vocal tract shape (Howard *et al.* 2020). The authors justified their study with the statement that 'his documented wish to be able to speak after his death, combined with the excellent state of his mummified body, made Nesyamun the ideal subject for the "Voices from the Past" project' (Howard *et al.* 2020). The authors further state, 'The team concluded that the potential benefits outweighed the concerns, particularly because Nesyamun's own words express his desire to "speak again" and that the scientific techniques used were non-destructive' (Howard *et al.* 2020).

Talking dead: Nesyamun's voice in the media

Reactions to the study of D.M. Howard *et al.* soon followed in the media. The *New York Times* wrote, 'Now, some 3,000 years into the afterlife and with the aid of a 3-D-printed vocal tract, Nesyamun can once again be heard'. The *New York Times* quoted D.M. Howard as saying, 'He certainly can't speak at the moment. But I think it's perfectly plausible to suggest that one day it will be possible to produce words that are as close as we can make them to what he would have sounded like.'[1]

However, the media reports slightly contradict the statement of the authors in the original article when they wrote,

> This acoustic output is for the single sound for the extant vocal tract shape; it does not provide a basis for synthesising running speech. To do so would require knowledge of the relevant vocal tract articulations, phonetics and timing patterns of his language (Howard *et al.* 2020).

Clearly we should bear in mind that the media often do not accurately represent scientific results. Indeed, it is questionable whether we will ever be able to reconstruct the phonetics and timing patterns of Late Egyptian, the spoken language of Nesyamun's Egypt, to the extent that we can reproduce running speech with accuracy (for recent attempts showing how limited our knowledge is, see Kilani (2019)). According to *The Guardian*, D.M. Howard stated, 'What we have done is to create the sound of Nesyamun as he is in his sarcophagus. It is not a sound from his speech as such, as he is not actually speaking.' Furthermore, relating the results of the study to the hypothesis on the cause of his death by a bee or a wasp sting, *The Guardian* stated, 'If the

insect-sting theory is correct, the last gasp of Nesyamun may have been expected to be "ow!" or "argh!", but the team found that the vocalisation produced sounded rather like "eeuuughhh."[2] This reminds one of the tendency in the media to depict archaeological discoveries in cartoon-esque manner. Part of the blame for this is certainly on the part of the archaeologists who embark on such projects without clearly stating the epistemological potential of their expected results. One is reminded of cartoonist S. Appleby, who in one of his caricature drawings explains 'Air Archaeology'. The drawing shows an archaeologist listening to tiny vibrations still left from sounds which occurred in the past. He uses an echo catcher and stores the sounds in sound museum. Among them are the buzzing of a prehistoric fly, a Roman orgy, a lecture given by Galileo and a belch attributed to Wagner. His drawing is an indication of the public distrust of the possibility of retrieving past sensorial phenomena (Hamilakis 2013, 5). To these one can now add the voice of a mummy.

However, negative criticism also appeared in the media soon after the results of the study were published. According to the Museums Association, C. Parent, a conservator at the Royal Ontario Museum, tweeted, 'Everyone involved in this needs to take a step back and think – about ethics but also about what information they can really get from those CT scans.'[3] According to the same source, J. Kannenberg, an artist, curator and director of the Museum of Portable Sound, called the research 'bad science'. He added,

> This sound is playing a dead human being like a musical instrument – demonstrating a complete lack of respect (would you do this to your dead grandfather?), empathy and respect for the ancient culture and religion in which this body was buried.[4]

Kannenberg's comment nicely illustrated the claim of J. Day (2014, 41): 'The Egyptian mummy display debate is not really about museums, but about Western public values: the failure of our culture to educate people to look at bodies, living or dead, and see anything other than pornography or horror.'

In the article, D.M. Howard et al. (2020) state,

> While this approach has wide implications for heritage management/museum display, its relevance conforms exactly to the ancient Egyptians' fundamental belief that 'to speak the name of the dead is to make them live again'. Given Nesyamun's stated desire to have his voice heard in the afterlife in order to live forever, the fulfilment of his beliefs through the synthesis of his vocal function allows us to make direct contact with ancient Egypt by listening to a sound from a vocal tract that has not been heard for over 3000 years, preserved through mummification and now restored through this new technique.

One has to stress that there are some logical fallacies in the statement of Howard et al. Ancient Egyptians did believe that to speak their name after their death meant not forgetting them and thus, in some sense, sustaining non-physical aspects of the self (Assmann 2005, 54), but not making them live again per se. The desire to have a voice in the afterlife is not being answered by a scientific study in the 21st century as its results are not helping Nesyamun in the afterlife. There is a difference between Nesyamun's wish to be able to address the gods and the idea that by reproducing a vowel using his mortal remains somehow contributes to his afterlife. The BBC claimed, 'Scientists have fulfilled a mummified Egyptian priest's wish for life after death – by replicating his voice with artificial vocal cords'.[5] The statement by Howard et al. and its media interpretation have also provoked a negative reaction. A. Stienne, an honorary research fellow in museum studies at Leicester University, and founder of Mummy Stories, a participatory project on mummies in museums, responded on Twitter and questioned this as 'some very patchy reading of ancient funerary beliefs'.[6]

The media claims that modern scientific studies help ancient Egyptians to fulfil their spiritual quests oversimplify ancient Egyptian beliefs. Presumed ancient beliefs should not be used to defend dubious scientific ethics and, in particular, epistemologically unsupportable methodology. Such claims are also neo-imperialist and orientalist, since they position the modern Western scientists as the saviours of the mummies. Egyptologists giving back voices to the mummies is a common trope in 'mummymania' movies and the same trope can be traced back to early 19th-century literary works dealing with revived mummies (Lupton 2003). It was also already pointed out by C. Riggs, who has dealt extensively with the ethical background of research on mummies, that Nesyamun would have wanted to remain wrapped.[7]

Also, by hearing a reconstruction of a generic vowel, we do not gain a direct contact with ancient Egypt. To think that this approach 'has wide implications for heritage management/museum display', as stated by Howard *et al.*, means thinking about museum displays as a sort of amusement park in which one finds roaring, moving, life-sized dinosaurs and the talking dead. One of the co-authors, J. Schofield, stated for *Live Science*, 'When visitors encounter the past, it is usually a visual encounter. With this voice, we can change that'.[8]

In the article itself (Howard *et al.* 2020) the authors state,

> Having considered and accommodated all ethical implications, the transmission of sound resulting from his actual vocal tract after a three millennia silence would mean that those who come to see him would also be able to hear a sound from his vocal tract as an initial step, emphasising his humanity with the potential to excite and inspire.

Museums are primarily educational institutions which can also provide some aspect of entertainment (Falk, Dierking and Foutz 2007) as much as they can structure power and knowledge (Bennett 2013; 2018), being part of modernist 'dispositives' which also include schools, prisons and clinics (Foucault 1995). But in a case such as this, one should ask what message archaeologists, Egyptologists and scientists are delivering to the public – essentially that ancient Egyptians could speak? We certainly do not have to demonstrate to an audience that most of them could. But what this case reminds us is that some ancient Egyptians certainly could not voice their concerns in certain social contexts. It is not really necessary to produce a sound in order to emphasize Nesyamun's humanity. A society in which one derives entertainment from 'talking corpses' is an unsettling one. Indeed, since the late 1980s some have understood archaeology among other disciplines as sociopolitical action in the present (Tilley 1989). This understanding of archaeology, and our responsibilities to the public as archaeologists, are as valid today as they were in the 1980s.

Concerning the place of their study in heritage interpretation and Egypt's tourist economy, Howard *et al.* (2020) further state, 'Similarly, the well-preserved temple of Karnak in which Nesyamun undertook his duties is the destination for over a million visitors each year, providing further exciting possibilities for heritage interpretation within Egypt's tourist economy.' This statement neglects the underlying problems with the Egyptian tourist economy and increased risk to archaeological sites due to the ever-growing desire for profit (Sonbol 2018). Before we examine the claim that the results of the Nesyamun study could be used to attract even more visitors, the logistics of this increase and its effect on heritage in Egypt should be considered. Furthermore, Nesyamun's remains are kept in Leeds in northern England and the temple of Karnak is located in the modern city of Luxor in southern Egypt. It is doubtful that his remains will ever be exhibited in the setting of the temple and the suggestion of Howard *et al.* that their study will provide exciting possibilities for heritage interpretation actually opens the question of repatriation of cultural heritage, which is beyond the scope of this paper (Cuno 2014; Ikram 2011; Voss 2012).

Another ethical issue raised by reactions to the study of Howard *et al.* was that of the wishes of descendant communities. M. Press, in his article in *Hyperallergic*, asks,

But should we care about the wishes of ancient Egyptians? To me, the answer isn't clear. Perhaps it depends upon the wishes of descendant communities. Certainly, for Native American bodies we would not tolerate such cavalier treatment of ethics, or such sensationalism. Over the last few decades, especially since the enactment of the Native American Graves Protection and Repatriation Act (NAGPRA) in 1990, museums and other institutions have worked with Native American tribes to treat the remains of their deceased ancestors more respectfully. Does it matter if modern Egyptians might be as offended as present-day Native Americans? There is little sign in the study or in the coverage that the researchers and journalists really thought to ask. Whatever the answers to these questions, I think we are well past due to consider them.[9]

This issue is important because it demonstrates the clear connection between ethics and epistemology. The question of claims of descendance from past communities is a political question with a clear agenda in Egypt (compare with Ikram 2011; Sonbol 2018; Wood 1998) as much as anywhere else (Díaz-Andreu and Champion 1996; Kohl and Fawcett 1995; Meskell 1998). In the absence of those practising the religion of ancient Egyptians, the question is who has the claim in the debates on exhibiting their human remains. Are modern Egyptians those whose wishes should be respected where the display of human remains from ancient Egypt is concerned, just as wishes of Native American communities are argued must be respected in dealing with Native American remains? Should archaeologists, Egyptologists and scientists take into consideration that those who claim descent from ancient Egyptians could be offended not only by the study of Nesyamun, but also by other Egyptian mummy studies and studies of human remains in Egypt? Certainly, however, one should not lose sight of the fact that modern Egyptians are a heterogeneous population; they are themselves not only Egyptologists but also non-Egyptologists with different class, gender and religious backgrounds. We should not assume that all of them share the same opinion on this topic. The social diversity we proudly claim for the West should not a priori be denied to the rest of the world. However, even when we consider all these nuances, we ultimately face the problem that although some have criticized and acted against this practice, the display of human remains from ancient Egypt is more tolerated than the display of remains from other societies (see the discussion in Jenkins 2011, 31, 130; Price 2020, 212–214).

Furthermore, we should always be reminded that each nation needs a narration (Bhabha 1990, 1). Narratives using the remains of the past in tracing ethnicity backwards in time and thus legitimizing territorial claims are as old as archaeology (Díaz-Andreu and Champion 1996; Kohl and Fawcett 1995; Meskell 1998). Not many Egyptologists deal with these matters, with critique coming rarely from within the discipline (Colla 2007; Langer 2017; Reid 2003; Sonbol 2018; Wood 1998). The recent initiatives to decolonize Egyptology by bringing back into its history the local workmen, for example (Quirke 2010), by including the perspectives of contemporary local workmen (Beck 2016) and by engaging both colleagues from Egypt and local non-specialist communities is certainly welcomed.[10] However, we should be aware of the possibility that cultural heritage can also be pressed into service for nationalist projects (Cuno 2014, 119–120). Therefore the biggest challenge of contemporary Egyptology, and any other historical discipline, is how to decolonize it and avoid pitfalls of nationalism at the same time.

This overview of media and scholarly reactions to the study conducted by D.M. Howard *et al.* demonstrates that most of them were concerned with the ethical issues behind the vocalization of Nesyamun and only some have pointed to its other problems. These will be addressed in several points below by further referring to some other recent Egyptian mummy and human-remains studies. It will be demonstrated that ethics and scientific epistemology are interrelated and that epistemological failure, among others, offends ethics.

Critical voice

Prehistorian R. Tringham already in the early 1990s pointed out that archaeologists tend to populate the past with 'genderless, faceless blobs' (Tringham 1991, 97). Indeed, the effort to bring back individuals and their agency to the past has been one of the hallmarks of postprocessual archaeology in the 1980s and 1990s (Hodder 1982, 6; Johnson 2020, 114). The so-called paradigm shifts in archaeology, if at all applicable to archaeologies outside British and North American academia (Babić 2018, 46), did not seriously affect Egyptology. Its designation as a 'cursed discipline' (Moreno García 2014) is certainly justified if one bears in mind its general lack of reflection towards theory and method. The case of Nesyamun demonstrates this in several ways.

First, to the best of my knowledge, no one suggested that the study of Howard *et al.* is an attempt to bring back individuals to archaeological narratives on the past in the postprocessual sense of this endeavour. Nevertheless, one could easily mistake the attempt to revive Nesyamun's voice for giving his remains personality. In fact, as the discussion on the media reception of the study conducted by Howard *et al.* has demonstrated, Nesyamun's mummified remains were in the process attributed with personality. It is not only the flesh and the wrappings which are discussed, but also his voice and his potential wishes during his life and in his afterlife. Still, reconstruction of how Nesyamun might have pronounced one vowel sound does not mean either giving him his voice back or giving him personality. The effort to bring voices back to the past in the early days of postprocessual archaeology did not equate to the reconstruction of actual, accurate sonic traces of the past. Rather, it meant enriching the past with individuals and experiences, stressing that people of the past are also men, women, children with different identities, who have different status or rank in a society, different access to wealth, different health etc. (e.g. Meskell 1999). Reproducing a vowel using Nesyamun's extant vocal tract is far from this.

Here one should also point to the fact that Howard *et al.* fail to express necessary criticism of previous studies of Nesyamun which they quote. One of the studies they refer to, without any criticism whatsoever, uses craniometry to attribute race to Nesyamun and justify it with superficial arguments. J. Prag and R. Neave, whom Howard *et al.* quote without pointing to the problems behind their method, write (Prag and Neave 1997, 52, emphasis mine):

> Both the mandible and the maxilla were *prognathic* – in other words both jaws were rather prominent – but not markedly so. This rather curious mixture of features suggested a *broad flat nose and rather full lips* but a face without the marked forward projection which one might expect from a *negroid skull*. Intriguingly, the face finally emerged was not one that those who had been expecting a *classic Egyptian physiognomy* had anticipated. Yet it fitted with the provenance of the mummy, coming as it did from Upper Egypt where there was a strong Nubian influence on the population, still to be seen today … Clearly *Nubian blood* had once coursed through his veins as he went about his business under the pitiless Egyptian sun.

The methods used by Prag and Neave in their facial reconstructions based on craniometry has, as one reviewer of this book wrote, 'overstated the scientific value of the technique' (Evison 2004, 59). These facial reconstructions are far from being a definitive face of the past, but rather speculative and contingent (Price 2020, 216). The use of craniometry to attribute race is methodologically flawed for an individual coming from a population such as ancient Egypt at the end of the New Kingdom. One also wonders, what is considered to be 'a classical Egyptian physiognomy'? The discourse around 'classical' has a white colour. That Nesyamun lived, worked and was buried in Thebes in Upper Egypt does not necessarily mean that he was born there. Prag and Neave jump from 'negroid' to 'Nubian' in the text and justify this with the demography of (contemporary) Upper Egypt. In the process they fail to recognize that they moved from a racial designation to an ethnic designation without bearing in mind other aspects of Nesyamun's identity, such

as his Egyptian name and burial. The lack of any critical remarks by Howard *et al.* is disturbing at least. However, it is not an isolated case in contemporary studies of human remains from ancient Egypt.

The discourse of scientific racism in Egyptology poses a serious problem and has not been sufficiently addressed. 'Races' and features such as 'prognathism' usually do not feature as scientific categories in modern studies of ethnic identity which consider it a sociocultural construct coming from observed differences in habitus (compare Jones 1997; Matić 2018a; 2020). There is no biological validity for the racial construct (Zakrzewski, Shortland and Rowland 2016, 219–220) as agglomeration of physically diverse peoples into 'races' is culturally determined (Williams, Belcher and Armelagos 2005, 340–342). For example, according to the rules of the US government on race and ethnicity from 1997, all people originating in Europe, the Middle East and North Africa are classified as white. However, M. Hefny, an Egyptian immigrant to the USA, considered himself black. He filed a lawsuit to change his official classification from white to black (Saini 2019, 4). Prognathism has been used as a feature indicating 'black', 'Negro' or 'negroid' race in physical anthropology of the 19th and the early to middle 20th century, but its roots are in 18th-century racial anthropology. Most Egyptologists would agree that there is no such thing as race in the minds of ancient Egyptians and there are some critical examinations of racial science in early Egyptology (Challis 2014; Matić 2018a; 2020, 15–24). The origins of the Egyptological obsession with the race and skin colour of the ancient Egyptians can be located in the attempts of 19th-century scholars to show that Egypt, a high culture, must have been produced by white men (see most recently with additional references Challis 2014; Matić 2020, 15–24; Saini 2019).

However, there are still those who turn to craniometry as a relevant method in attributing 'race' to ancient inhabitants of the Nile valley, even though they do not explicitly use this word. For example, a number of bodies buried in an early New Kingdom cemetery at Tell el-Dabᶜa have been interpreted as belonging to Nubian soldiers using weak arguments, one of them being prognathism observable in three skulls (for further references and criticism see Matić 2014; 2018b). In one recent publication it was even suggested that the strong prognathous macrodont features pointed to an Upper Nubian origin of these people (Aston and Bietak 2017, 503).

Scientific racism is thus not a ghost of the discipline's past, but a spectre haunting it even nowadays. This is further demonstrated by ancient-DNA analyses suggested as the method to reveal the actual ethnic identity of a high-status Egyptian man named Maiherpi, child of the royal nursery and fanbearer probably under Thutmose III (1479–1425 BC), buried in the Valley of the Kings (KV 36), a rare privilege (Lakomy 2016, 308). In vignettes of his Book of the Dead papyrus (CG 24095), Maiherperi is depicted with dark brown skin colour and in one case with curly hair reaching his chin (ibid., Tf. 135, Abb. 530, Tf. 148, Abb. 556). The idea that his 'real' identity can be uncovered using ancient DNA demonstrates a primordial understanding of ethnic identity not much different than the concept of race (Matić 2020, 35–36). The same concept is described using an inappropriate term (ethnic identity) and craniometry is replaced with ancient DNA.

A study of ancient Egyptian mummy genomes published by V.J. Schuenemann and her associates aimed to investigate changes and continuities in the genetic make-up of the inhabitants of the Abusir el-Meleq region of the Fayum in antiquity. The study was based on ninety mitochondrial genomes and genome-wide data sets from three individuals from Abusir el-Meleq in Middle Egypt dating from the sixteenth century BC to the Roman period (30 BC to 7th century AD). Some 166 samples were taken from 151 mummified individuals. The study grouped the individuals according to radiocarbon dates into three clusters: pre-Ptolemaic (from *ca* 1550–300 BC), Ptolemaic (from *ca* 300 to 31 BC) and Roman (30 BC to 7th century AD). This is problematic if one bears in mind that the individuals from the first group come from a time span of almost 1,250 years, the second group almost 300 years, and the third group almost 700 years. There are also some statements which are made rather uncritically. Namely the authors assume that there was a large-scale immigration of Canaanite population which they describe as 'known as

the Hyksos' into Lower Egypt during the second millennium BC (Schuenemann *et al.*, 2017). Although numerous authors have stressed that 'Hyksos' is a designation for a ruling class (for further references and discussion see Candelora 2018; Matić 2020, 28–30) and not the entire population of their kingdom centered in the eastern delta and expanding into Lower Egypt and even parts of Upper Egypt, there are still those using the term to designate a tomb, a structure or pottery from Second Intermediate Period in this region as 'Hyksos'.

Another example is the use of stable-isotope analyses to identify the origin of a small group of people buried at Tell el-Dabᶜa before and during the rule of the Hyksos (*ca* 1650–1550 BC), a dynasty of rulers of Levantine origin. Isotope analyses were made in order to address the origin of the population of Tell el-Dabᶜa and the authors of the study opened the paper by stating that they understand the term 'Hyksos' as a designation of a ruling class. However, by the end of the paper the term transforms into a designation of the entire population group as the results are used to argue that 'in combination with previous archaeological evidence, this research supports the concept that the Hyksos were not an invading force occupying this city and the upper Nile Delta, but an internal group of people who gained power in a system with which they were already familiar' (Stantis *et al.* 2020, 9).

This demonstrates that results which directly contradict 19th- and early 20th-century narratives are not used to open new questions and interpretive possibilities. Instead, they are masked by references to stories that Egyptologists are familiar with and still find convenient as explanatory history.

The second problem is that the ethical-issue background to such studies concerns not only Egyptological relations to human remains but also investment in similar research. Receiving funding is not only a labourious and stressful process; it also comes with insecurity and risk, and therefore we have to seriously consider which research is financed and why. Bearing in mind that, even if we wanted to, we cannot resurrect Nesyamun and let him speak, one wonders, do we need to know the 'colour' of his voice? Or the colour of his or other peoples' skin? What is this information contributing to? How do we use it to better understand anything about ancient Egypt? Is the vowel sound produced by the reconstruction of the extant vocal tract of Nesyamun valid archaeological data (Babić 2018, 15)? Is reconstructing a vowel worth moving a mummy in order for the CT scanning to be done? Does the risk involved (Riggs 2018, 259) match the expectation of results? A comparison can be made with the blowing of an actual trumpet from the tomb of Tutankhamun by bandsman J. Tappern for the BBC in 1939. The sound produced by blowing into the trumpet does not help us to understand how it could have been interpreted by different people who could have heard it (Matić 2018c, 103). In fact, in the process the fragile object shattered. Of course, Howard *et al.* did not use the remains of Nesyamun as a musical instrument, as some have critically implied. However, we should bear in mind that the results of mummy studies, just like the results of other contemporary studies of other human remains, can be used as the instruments of racists and nationalists (Hakenbeck 2019). One should think twice before writing that someone in the past '"had a strong well-developed mandible", which, like the maxilla, was "prognathic", and "clearly Nubian blood had once coursed through his veins"' (Howard *et al.* 2020 quoting Prag and Neave 1997, 52).

Third, the fact that the study was published in *Nature. Scientific reports* raises a number of problems. Concerns regarding the accuracy of the reconstruction have been articulated in several media reactions, bearing in mind the effects of taphonomy.[11] One has to bear in mind how taphonomy and mummification could have affected the tissue images that are produced (Cox 2015). As already stated by M. Press, 'If each vocal tract produces a unique sound because its shape is unique, then the voice produced was neither the sound of Nesyamun when alive, nor that his mummy would make today. It was a vocal tract that has never existed'.[12]

There seems to be a tendency in the last few decades to create a dichotomy between the results published in journals such as *Nature* and *Science* and those published in more specifically archaeological, historiographical or Egyptological journals, which have fewer readers and less impact.

Archaeologists tend to favour the former. Whereas those published in highest-impact-factor journals are credited as basic facts and proper scientific contributions, the ones published in journals in the field of humanities are silently labelled more interpretive, 'theoretical', more likely to be edited and therefore of little epistemological value (for example, compare the arguments on Hyksos identity presented in Matić 2020 and Stantis *et al.* 2020). This pairs well with the shift to a modern system for studying ancient Egyptian mummies 'in which technologies of revelation yield evidence so dazzling that the objectivity of science cannot be in doubt' (Riggs 2016, 16). In such a discourse, the methodology of the hard sciences is privileged at the expense of that of the humanities, with the inevitable result that the scientific status of the humanities is contested (Naujoks and Stelling 2018, 10).

Conclusion

It might come as a surprise that discussions such as this one are even necessary in an age when debates in archaeological theory are focused on a 'third science revolution', ancient DNA, stable-isotope analyses, migrations and an ontological turn. Yet time and time again one is reminded of different, specific conditions of knowledge production in different archaeological communities (Babić 2018). Discussions of the uses and misuses of ancient DNA and stable-isotope studies are present in other archaeological communities too (Hakenbeck 2019; Nielsen 2020, 163–164). Therefore, if we understand epistemology in archaeology as concerned with the questions of how knowledge is produced, justified and rationalized, we should be aware of the fact that some archaeologies are more concerned with these issues than are others. Egyptologists are largely absent from such discussions. This is certainly a question of disciplinary maturity. Egyptology is often understood as being formed as a discipline in 1822 when J.F. Champollion deciphered the ancient Egyptian hieroglyphic script. Although this will soon be 200 years ago it seems that the discipline is far from its 'loss of innocence' understood as achievement of 'critical self-consciousness' (Clarke 1973, 6). We need to bring Egyptology to contemporary world-archaeological debates, but we equally need to bring these debates to Egyptology.

Bringing ancient Egyptians their 'voices' back and attributing 'race' to the inhabitants of the ancient Nile valley does not have an epistemological potential. Even if the bringing back of voices is understood literally, as a production of a sound by reproducing vowels using Nesyamun's extant vocal tract, one is doing more damage than good to the already disturbing image of Egyptology, both in the media and in broader scholarly circles. Therefore the concerns with the study of Howard *et al.* should not only be ethical, but also epistemological. This is equally so in the cases of mummy studies and studies of human remains in which race is being attributed or ethnic identity assigned based on the results of ancient-DNA analyses or stable-isotope analyses. If some modern Egyptians genuinely believe that they are descendants of ancient Egyptians, although the results of ancient-DNA analyses or stable-isotope analyses show a complex picture of ancestry, how would an Egyptologist answer them? Ancestry is in a sociocultural sense, as if there were any other, a relation with the past we choose, or the past chosen for us by others, but it is certainly not written in blood and bones.

Notes

1 See www.nytimes.com/2020/01/23/science/mummy-voice.html. A similar report was published by *The Guardian*, at https://www.theguardian.com/science/2020/jan/23/talk-like-an-egyptian-mummys-voice-heard-3000-years-after-death.
2 See www.theguardian.com/science/2020/jan/23/talk-like-an-egyptian-mummys-voice-heard-3000-years-after-death.

3 See www.museumsassociation.org/museums-journal/news-analysis/30012020-new-research-into-egyptian-mummys-leads-to-calls-for-major-ethical-review.

4 See www.museumsassociation.org/museums-journal/news-analysis/30012020-new-research-into-egyptian-mummys-leads-to-calls-for-major-ethical-review.

5 See www.bbc.com/news/world-middle-east-51223828.

6 See https://twitter.com/Angela_stienne/status/1220422704035254272.

7 See https://hyperallergic.com/539573/attempts-to-reconstruct-a-mummys-voice-are-cursed.

8 See www.livescience.com/ancient-egypt-mummy-voice-reconstructed.html.

9 See https://hyperallergic.com/539573/attempts-to-reconstruct-a-mummys-voice-are-cursed.

10 See the text by Charlotte Parent, Heba Abd el Gawad and Katherine Blouin at https://everydayorientalism.wordpress.com/2020/07/22/eotalks-your-mummies-their-ancestors-caring-for-and-about-ancient-egyptian-human-remains.

11 C. Parent and M. Press, at https://twitter.com/cparen/status/1220434589023449089.

12 See https://hyperallergic.com/539573/attempts-to-reconstruct-a-mummys-voice-are-cursed.

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