Journal of Ancient Egyptian Interconnections

Ideas about "Race" in Nile Valley Histories: A Consideration of "Racial" Paradigms in Recent Presentations on Nile Valley Africa, from "Black Pharaohs" to Mummy Genomes

S. O. Y. Keita
Smithsonian Institution; College of William and Mary; National Institutes of Health

Abstract
This paper reviews some concepts, comments, and studies from various time periods, as well as recent presentations in the media and studies, on Nile Valley peoples. It illustrates problems related to ongoing racial paradigms.

Prolegomenon

Literature on the Nile Valley, especially older literature, has often included some nearly obligatory identification of its range of peoples as belonging to one or several "racial" groups, with "race" meaning a variety of things, but usually a grouping based on biology. Some work has had the "race" of the people as a major focus. The use of the term "race" and/or a race concept or construct has an intricate and checkered history in various writings about Africa (and other places) that could fill volumes. It is beyond the scope of this paper to fully examine this discourse. Races in some received formulations are assumed to be natural taxonomic groupings or derivatives of them, with racialism referring to the belief that humans partition neatly into divisions that can be called races. Sometimes "race" is connected to a notion of hierarchy of worth such that some groups are deemed "better" than others. This has been a major feature of some discourses. There is a tradition of myths and stereotypes associated with racial thinking. It is appropriate to mention that race in zoological taxonomy is usually understood to be synonymous with the category or rank of subspecies, a level that is recognized officially with a trinomen. A careful reading of earlier work, including Darwin, would seem to indicate the idea that a race is population that is an incipient species, still fertile within the species but well differentiated, although the term has come to have different usages. No living human populations are incipient species. There are populations or communities that are called "races" due to a convention; this poses a conundrum for scientists and others who say that there are no

races but still have to work with government grants and applications that speak of "races" instead of populations or communities.

Race constructs often persist underneath language that is not explicitly the same as the taxa from perhaps the best known of the received racial schema: "Mongoloid," "Caucasoid," and "Negroid" in their adjectival forms. For example, one may see the terms "sub-Saharan African," "Eurasian," and "East Asian" and be forced to use them due to data-collection practices, tradition, or even algorithms; results or analysis may have to be discussed in these terms due to the way research is published or data are collected—or what government agencies request. "Sub-Saharan" actually refers to a vague "region" with highly variable populations with a range of traits including molecular traits.[1] One can find the term "Bantu" (a linguistic term) being used as a euphemism for "Negro" or black (and sometimes sub-Saharan) which is interesting for the historical reason that Bantu were conceptualized in some works as being an admixture of "Negro" and others, and distinguished from an entity called "True Negro."[2] There were other taxonomies of African peoples that will be discussed later. Interestingly these old taxonomies still sometimes function as an unconscious "guide" for a range of studies and undergird the conceptualization of discussions.

Where "sub-Saharan" Africa begins exactly (and when) and what it signifies in terms of people are topics that are very much connected to the history of racialist if not racist thought, because oftentimes and erroneously "sub-Saharan" is made synonymous with "real African" or just "African" in old and new literature that can be criticized on various grounds, including that of being typological in its approaches.[3] This is clearly connected to a racio-typological paradigm and not an evolutionary or biogeographical perspective.[4] It is often forgotten that the name "Africa" was once restricted to areas around Tunisia, and now ironically this and other parts of Saharan and supra-Saharan or supra-tropical Africa are often forgotten to also be African due to a particular notion of Africa. Based on classical texts and art it is known that these regions had populations with a range of physical traits expressed in such terms as *Melanogaetuli* and *Leukoaethiopes*.[5] Egypt and Nubia are largely in the eastern Sahara Desert. Tropical Africa, meaning between the tropics of Capricorn and Cancer, includes much of the Sahara and a part of Egypt. There is more than one way to be African, and even tropical African, in terms of physical and genetic traits. What conceptually undergirded "race" in older work and common conception is the idea that there is uniformity of the members of the race, or the designated defining traits—*idealized* as a non-existent type (versus extreme variant)—such that all members are more alike each other in all traits, including those beyond the traits used to define the type.[6] There was/is also a notion of races having origins in ancestors all deriving from identical lines of descent, and even different primate species in the past. Variation in typological thinking is usually attributed to admixture between groups. Western scholarship in some quarters decided what traits "belonged" to or could have emerged in the inhabitants of continents.

The achievement of modern biology was due to evolutionary thought leading to a shift to thinking in terms of populations characterized by variation in their members beyond any defining traits and understanding them as breeding units that could be affected by evolution.[7] Research over a generation has shown that human populations genetically grade into each other and illustrate clines (gradients of variation/differentiation at the genetic level) and are not isolated bounded populations without overlap in origin.[8] There is variation at differing levels of scale, and there has been ongoing contact between populations. Focusing on differences prevents seeing or acknowledging overlap. Emphasis on the names attached to populations will obscure the interconnections. This a relevant observation for the Nile Valley. These ideas will be repeated for clarity and emphasis.

According to the Jena/Jenaer Declaration,[9] racism preceded the development of a racial taxonomy of humankind, which can be taken to mean that a notion of ranking of humans in value preceded the actual construction of racial units, a position that is arguable using some variation of formal analysis. Racism has permeated studies of human biology, history, politics, linguistics, archaeology, and other fields. One cannot be disinterested in understanding its effects. In fact, to not address racism and colorism and some other biases would be to participate in, and promote, the biases or paradigmatic errors of much past scholarship and social attitudes before and during the colonial era, which perhaps has not ended. New research and evidence, and also critique of published work, must be actively deployed as a corrective. Sometimes the errors are buried in the zeitgeist of researchers and not fully appreciated by

them. The language of description often both constructs and constricts the narrative or explanation: bias can be embedded in the descriptors and therefore necessarily will influence the discussion unless there is a responsible vigilance. A range of literature will be reviewed and referenced to illustrate the variation in opinions and the ongoing influence of old ideas on scholarship about the Nile Valley, as well as findings and interpretations in newer work with a somewhat critical review.

The Nile Valley and "Race"

It is important to note, to be fair, that even in the 19th century there was a variation in opinion among the writers of the West on the "racial" "nature" or "origins" of Nile Valley populations. The formal studies of the 20th century also reveal a variability and sometimes a dissonance between expected and observed findings in studies of biology. The fact that this variability in opinion is forgotten is of interest. Genetic and anthropological work done on African populations still sometimes suffers from a residual bias that can be identified embedded in the language of description and oftentimes a circumscribed non-evolutionary notion of Africa and African peoples. Frequently cited papers whose titles suggest a grand narrative of Africa leave out regions of Africa, something rooted in the received racial paradigm and unrecognized by authors. For some, the need for a race construct seems to be a necessity and undergirds discussions even when the traditional language is not used. Racial thinking still persists.[10] Humans vary in many physical and molecular traits, but how this variation is understood or deployed as "explanation" are the issues. There will always be new findings; for example, it is now known that genes for light skin color also evolved in Africa and that dark skin apparently existed at least in some places in Europe until recently relative to the length of time of the presence of *Homo sapiens sapiens* there. Science and humanities have to grapple with their biased pasts. It is not enough to say that the era of colonialism and racism is over—a dubious claim in any cas—but rather one must honestly assess and admit to how these things influence ideas, research and the treatment of people. Some researchers are seemingly unaware of the operations or persistence of biased ideas. An explicit acknowledgement of, and opposition to, old ideas is necessary so that they do not continue as paradigmatic detritus.

To go beyond the problems with what can be called raciotypological thinking requires using evolutionary models that take into account the evidence for the evolution of modern humans in Africa and of early remains in the Nile Valley and Africa in general and to disavow racism, colorism, and any lexicon or conceptualization rooted in these. It requires thinking and working in terms of local populations, biological history, and biogeography and in terms of the locale of the emergence of identities. Interactions between groups can be expressed in non-racialist terms, and the racism of the past that was directed against specific groups of Africans whose physiognomy was caricatured and seen as the "authentic" African, or even "sub-Saharan" African, can be acknowledged. This was the product of the imaginary produced by some Europeans, which was a part of a schema of racialized ethnicities that can still be found in scholarship. It is useful to expand or explicate this phrase by speaking of "phenotypicized ethnicities," which enlarges this concept and may help explain the cognitive dissonance experienced by some when they do not encounter expected matches between physical features, molecular data, cultural practice, and/or language. The author makes the distinction because sometimes race is divorced from its zoological root and applied conceptually to note differences that may not be observed. The strictly biological issue is only one aspect of this discussion. Some researchers have repeated errors such as using genes or phenotypes in the classification of language families. Examples from older literature include the idea of classifying the Fulani language as Afro-Asiatic due to the phenotype of the idealized pastoral Fulani, an idea that linguists dismissed with evidence and in principle,[11] or the resistance to classifying Chadic as Afro-Asiatic due to the [black] phenotype of its speakers.[12] In both cases, their phenotypes were interpreted as genetic markers of ancestry, usable as a guide to their population and linguistic connections. Unfortunately, work such as this still gets published using genomics. Language classification is to be based on linguistic principles, not the genetics of past or present speakers.

In a review of the debate in the 18th and 19th centuries about the "racial identity" of the ancient Egyptians, Bernasconi discusses the opinions of various writers.[13] It was Volney and Denon who are most remembered for suggesting the idea that the ancient Egyptians were "black" in some sense or, as Denon reported, in a continuum of real Africans that

included "Negroes" as a variant at one end of the continuum.[14] Ancient Aegean literary sources were sometimes cited to support this idea—the well-known statements of Herodotus and Diodorus. Bernasconi notes that Cuvier, Lawrence, and others did not accept this idea largely based on an *a priori* ideological position held about "black" inferiority. Samuel Morton, the physician and anatomist, presented a morphological analysis of a series of dynastic Egyptian crania, stating that the ancient Egyptians having what he called the "old Egyptian type" were "Caucasian" and non-African, with other individuals showing some "Negro" admixture. Morton did allow for Egyptians who had "Negro" ancestry, in spite of his racism.[15]

The *a priori* ideas about "race" held by Cuvier, Morton, Nott, Gliddon and others contain what can be called a form of epistemic hermeneutical injustice,[16] meaning that these men could not conceive of a world, or place themselves in a world, where "blacks" had produced something of cultural interest according to their standards. Bernasconi concludes, after noting that Nott and Gliddon made their ultimate appeal to Morton's "science," that "[I]f so much is invested still today in debates about the racial identity of the Ancient Egyptians, it is in large part because of this history according to which the scientific debate was instigated in support of a program to maintain the subordination of the Blacks. Nothing is to be gained by concealing this fact any longer."[17]

Adolf Erman, one of the major Egyptologists of the 19th century, stated:

> The question of the race-origin of the Egyptians has long been a matter of dispute between ethnologists and philologists, the former maintaining the African theory of descent and the latter the Asiatic. Ethnologists assert that nothing exists in the physical structure of the Egyptian to distinguish him from the native African, and from the Egyptian to the negro (*sic*) population of tropical Africa, a series of links exist which do not admit of a break. The Egyptians, they maintain, cannot be separated from the Berbers, nor the latter from the Kelowi or the Tibbu, nor these again from the inhabitants of round Lake Tsad (*sic*); all form one race in the in mind of the ethnologist, differentiated only by the influence of a dissimilar manner of life and climate.[18]

Erman's quote is interesting in that he is describing what would currently be called clinal variation in a network of [genealogically] related—to whatever degree—populations. ("Berber" here likely means certain Nubians, and "ethnologist" seems to be the equivalent of physical anthropologist or natural historian, in the language of the day.) He is clearly aware of the importance of the notion of a "break" as indicative of a boundary, in his citing of others. That this was a part of his conceptual universe is worth remembering, given contemporary and later commentary. This presages other similar views, such as Trigger's[19] assertion that all these populations are African and dividing them "racially" served no historical purpose (or any other for that matter). Several ancient Nilotic populations would seem to share some common origins in what is called the primary pastoral community that emerged in Northeast Africa.[20]

A part of the problem in discussing African variation is a failure to think in an evolutionary model rooted in the origins of modern humans. An evolutionary approach toward African populations and diversity remedies the problem of racial thinking and shows interconnections as well as differentiation. It allows for admixture as well, but also a modern human origin that likely involved multiple regional African populations versus only one. The interaction of these populations led to the emergence of modern humans within Africa who likely had some regional differences. Modern humans apparently left Africa via the northeast quadrant of Africa. Those populations that stayed behind are the ancestors of later Africans. Therefore, it might be expected that some Africans will be more similar to some non-Africans in aspects of their genomes than to other Africans. This idea has not been well explored but is consistent with evolutionary theory and dispersal biogeography. Even if other aspects of their genomes are due to back-migration pre-recent ethnic or linguistic groupings, the results of that gene flow have been there tens of thousands of years, and the populations have been shaped by African social and physical environments making the biological history African. "Sub-Saharan," oftentimes a camouflaged signifier of "Negro type" or "Negro race," or particular genetic profile, is not the only way to be African;

however, as noted previously, infra-Saharan variation had long been observed to be morphologically diverse by Westerners and tropical African variation—which includes some of the Sahara, even more so. Nile Valley populations fall along a continuum of populations in northeast Africa and have long assimilated southwest Asians into their societies, as will be discussed later. However, it has to be considered also that they have an old shared ancestral heritage with "non-Africans" if modern humans left Africa from this region—as noted earlier, an idea that has not been well examined if even considered.

A review of various literature by anatomists and biological anthropologists shows researchers doing skeletal analysis came to conclusions that would support Erman's report,[21] that is, showing affinity to a range of African populations, even if this was not stated. Other scholars had similar ideas to Erman's about the Egyptians. They criticized the idea of certain caricatured groups/phenotypes as being the only true Africans.[22] This is conceptually nonviable in light of the emergence and evolution of modern humans in Africa. Variation from this exaggerated variant and caricature, sometimes called "True Negro," was attributed to admixture. Persons with this morphology as expressed are not common on careful inspection. This "True Negro" construct is usually attributed to Seligman[23] but is actually earlier, at least in concept. This kind of perspective would be similar to interpreting either the "East Baltic" or "Nordic" "types" [from the old European race taxonomy], as the "True Whites," with all others being admixed with others coming from elsewhere. Even the Basque population, likely descendants from one of the original European non-Indo-European speakers in westernmost Europe, were and are not generally treated as the "standard" for defining "European." The fact that Indo-European is not "European" in origin, if the Asian-steppe origins is maintained, or that Hungarian and Finnish are not Indo-European languages, do not seem to influence the definition of "European." Basque ancestry and linguistic loanwords (or those of the Nordic) were not operationalized to decide the identity of the "true European" or "true White," concepts that never became a standard in discussing European biohistory or culture. Evolutionary thinking promotes understanding a range of morphological variation in Africa. The interest is in what emerged in Africa in terms of biology and culture and what was assimilated into the African world.

Egypt, Nubia and Kush: Biological and Sociological Population Classifications

Various "racial" taxonomies—schemes of classification of Nile Valley peoples—have been devised.[24] Ignoring momentarily the tripartite classification derived from Blumenbach's original scheme, perhaps the best-known 20th century racial taxonomy that was used in reference to the Nile Valley was that developed or at least popularized by Seligman.[25] In his classification, the Egyptians and Nubians were identified as Eastern Hamites, along with the Beja, Somali, and others. Sergi's Eastern Hamites (described before Seligman's) were slightly different in also including Maasai and Wahuma (Tutsi).[26] Seligman's Hamitic hypothesis postulated that the Hamites had originally come from Asia, although he acknowledged that other researchers gave them an African homeland. Regarding the Hamites as superior, he attributed to them most African culture that Europeans regarded as interesting or important. To some, but not all, scholars, these Hamites were interpreted as a branch of "Caucasians," or came to be regarded as such or as part of a distinct group.[27] Seligman is often credited with inventing or at least popularizing the aforementioned notion of the "True Negro" characterized by a particular extreme phenotype and conceptualized as a kind of original or foundational group. This group included certain West Africans, such as the Yoruba or Ibo. This is worth remembering because the Yoruba have been used in various recent studies inaccurately as a proxy for all of infra-Saharan Africa, tropical Africa, or so-called "Black Africa," and, due to a "tradition" for many, simply Africa, which would be like saying that Europe is only truly represented by certain northern Europeans or the Basques. The issue of what should be the units of analysis is rarely addressed in some population studies with a historical component.

In Seligman's theory many African peoples were simplistically conceptualized as fixed mixtures of "True Negroes" and/or Hamites and others—an interpretive typological model that can still be found in the literature, but stated in other terms. Typological thinking leads to thinking in terms of these admixed entities as not being malleable by evolution and becoming new entities. Admixed populations and genetics can be reworked by social and physical environments and other processes causing further

evolution.[28] There are other micro-evolutionary forces that shape populations. Interestingly, Seligman, unlike some others, apparently had no reflex bias against the idea that there had been "Negroes" in the Nile Valley in the earliest periods: he strongly disagreed with the idea that they only appeared late in Egyptian history, as suggested by Junker,[29] discussed later. Seligman and others saw a gulf between these different African peoples. The issue is understanding the emergence of the Egyptian and Nubian populations in the Nile Valley as evolutionary products that emerged in Africa, a point that will be continuously emphasized.

Morton, from the previous century, had labeled the core Egyptians as "Caucasians" based on his analysis of some Egyptian crania and called the ancient Kushites "Austral-Egyptians," making a distinction between them and those he would call "Negroes."[30] However, he also described some Egyptians as being admixed with "Negro" and thus "Negroid" to whatever degree he designated, thus allowing for admixed individuals in his schema, with the implication that crania designated "Negro" were foreigners to the northern Nile Valley. He wrote that the core Egyptians were not African. Ten years later, Nott and Gliddon, based on correspondence, stated that Morton had changed his mind, saying that the Egyptians were Africans, but Africans who had originated from a "Caucasian" cradle in Africa (*sic*). Nott and Gliddon had decided before Morton on this African origin and defined as the "Old Egyptian type" the *same crania* that Morton had identified as being "Negroid Heads." [31] They called them "African" and "Negroid." Morton, Nott, and Gliddon were all anti-"black/Negro" racists who favored the enslavement of trafficked tropical Africans and their descendants. This apparent dissonance around the terms "African" and "Negro" is not fully explicable and needs some further research. The variation in opinion and the dissonance is of interest.

In the "Hamitic hypothesis," Seligman conceptualized the Hamites as superior pastoral "Europeans" who came from southwest Asia, bringing "Hamitic" language and certain physical traits to Africa, as well as notable culture. This migrationist diffusionist paradigm was a common explanatory device at the time. He did acknowledge that other researchers thought that the "Hamites" originated in Africa—a very important caveat, whose implications he did not fully explore. Sanders noted that Seligman's Hamitic theory illustrated a colonialist model of interaction that had occurred in the distant past.[32] Seligman's Hamitic construct is what lies underneath the idea that supra-Saharan, northern Saharan, and even other regions of Africa were primarily peopled by migrants coming from outside Africa. As noted, it is of interest that Seligman took strong issue with Junker's[33] view that "Negroes" first appeared in "history" [in Egypt] in the later dynastic period, since the monumental palettes of the Pre/Protodynastic depicted people who for him were "Negroes."

Giuffrida-Ruggeri's taxonomy was different: in his schema, the early northern Egyptians were Mediterranean "whites" and the southern Egyptians were "Ethiopian" and African, but not "Negro," but the Nubians were "Negro." In contrast, Smith,[34] the anatomist-anthropologist, placed both the Egyptians and Nubians and some other Africans, some Europeans, and Asians into a taxon he called the "Brown Race," which had its origins in the Horn of Africa but extended to the circum-Mediterranean. Smith also presented a model of cultural change in Nubia, one in which Nubian culture flourished when influenced by the north (Egypt) and declined when "Negroes" from more southern regions had an impact on Nubia.[35] So Nubians—but more accurately some Nubians, often presented in contrast to Egyptians—are the same in his, Seligman's and Sergi's taxonomy, indicating that his examinations of remains revealed a large morphological overlap. Batrawi,[36] a well-known Egyptian anthropologist, initially followed Smith's model of cultural change and admixture but later altered his opinion about population change in the Nile Valley, although not necessarily about the identity of its aboriginal inhabitants.[37] Smith, Batrawi, and Morton (and others) would be surprised that molecular data show a common male ancestral haplogroup in high frequency for many groups of both so-called Negroes and members of his "Brown Race" in Africa, or the Hamites, an ancestry that long *postdates* the exodus of anatomically modern people from Africa and apparently originated in eastern tropical Africa or somewhere in its northeastern quadrant.[38] The Y chromosome marker, called P2, defines the E1b1 subclade, which is deep within the E haplogroup and has two branches that account for most of the male lineages in Africa. These lineages cannot be understood as being foreign to the Nile Valley. E-haplogroup Y lineages of African origin

can be found in the modern Egyptian population.[39]

Researchers Thomson and MacIver,[40] after an analysis of some 1,500 crania from the Thebaid from different time periods, came to the conclusion that the population was composite and admixed with "Negroid" and non-"Negroid" components from the Predynastic through dynastic periods. Thomson and MacIver acknowledged the anti-"black" racism of their day with "blacks" as colonial subject populations, noting also that the ancient Egyptians did not hold such views, based on the evidence of "Negroid" ancestry in different strata of the Egyptian population over time. Brace et al.[41] disagreed—somewhat disparagingly—with Thomson and MacIver's findings of a "Negroid" element/admixture, but their argument is invalid since they did not 1) study the same material, 2) use similar methods or discuss the "translation" of findings from one method to another, and 3) acknowledge that all Africans—or even "Negroids"—are not alike, thus preventing a thorough discussion of the fact that even in their study Egyptians could be found clustering with ancient Nubians and modern Somali, both tropical African groups. This is significant, since both groups are usually viewed as "sub-Saharan" to mid-/late 20th-century Egyptologists and would have been called "Ethiopians" by the ancient Greeks. Brace et al. apparently assume that all Egyptians from all periods and places would have been skeletally the "same," thus incorrectly attempting to justify extrapolation from a different sample, a problem now acknowledged in research[42] and also seen in genomics studies of Egypt, as will be discussed later. Brace et al. do not discuss the results of other work[43] that give a fuller picture or is at variance with their conclusions and interpretation. Nor do they discuss in an integrative fashion the findings of Howells,[44] whom they do cite and that problematize their claims. Brace et al. develop their paper by first discussing the argument recalled by Bernasconi, as noted above, and mentioning (with apparent acceptance) the notion of the "True Negro" and that "caste" of face and claiming that writers who called the Egyptians "black" had the "True Negro" in mind. This is a misrepresentation of those writers who were well aware of tropical African variation.[45] There are other problems with the study from a purely methodological perspective,[46] including misstating the underlying assumptions of canonical variates and principal component analysis used in others' work. (Howells, although not criticized, also used canonical variates—also called multiple discriminant functions.) Brace et. al.'s paper was received in some quarters as evidence in the "culture wars" against the claim that the ancient Egyptians had close affinities with any of those whom the ancient Greeks would have called Ethiopians (burnt faced or "black"). Even their results on careful review undermine this claim unless Nubians and Somalis are excluded.

Presentist Sociological Views of the ancient Nile Valley Constructed around Ideas of "Race" and Power: Chameleon Nubians and Black Pharaohs

Presentism refers broadly to interpreting past societies and phenomena with what are regarded as current values, theories, constructs, or ideas. In order for a presentist approach to be valid, there must be evidence for a commensurate theory of ideas or concepts. Presentism has had a role in interpreting the ancient world, and while analogies may sometimes be useful, this is not the case when they include value judgements or a zeitgeist rooted in recent colonial history around the issues of "race" and power as understood now, with one group assigned a perpetual place of superior power and the expectation of superior place and prestige. Here unjustified examples of presentism in interpretation will be presented.

Adams[47] stated that he did not call attention to the "race" (color?) of the Nubians [as "black"], since "race" was an issue of sociological ascription and the Nubians were only "intermittently" black. In this instance "race" is being used in a social, not biological taxonomic, sense. Adams stated that Nubians could be seen as "black" when they were being victimized by lighter-skinned northerners and then as "white" when they joined these northerners to attack or oppress more southerly ["darker"] peoples. It is clear that for him power and prestige are associated with "whiteness"-"lightness"/white identity in his "sociological" interpretation for the ancient Nile Valley. His explanation is clearly presentist in projecting back into the past some more contemporary notions born of a colonialist racism about power and "race" as though these were normative across time and cultures and that the Egyptians and sometimes Nubians were simply European racists. (What is not clear is if Adams personally ascribes to these views or values or is writing in terms of what he thinks is

the "common understanding" of his field.) Adams was apparently reacting to what he saw as the politicization of the scholarship of the ancient world on the part of some writers who were reacting to colonialist scholarship. He does not present supportive texts in which ancient Nubians or Egyptians present/define themselves in this manner (the black-white binary in the Western European imaginary). Such texts do not exist. There are no Egyptian texts that explicate a theory of biological human variation commensurate with the race theories of Western scholarship. While Egyptians show awareness of variation in skin color in Akhenaten's *Hymn to Aten*,[48] there is no evidence that they constructed a scheme of ethnicities or populations named by color (phenotypicized ethnicities)—and this would not have been possible due to variation in color among the Egyptians themselves. Also, there is no evidence for an Egyptian or Nubian "race" science in their texts.

Adams does not tell us what the "sociological race" would be of the Nubians/Kushites who aligned themselves with Egyptian Thebans and united the Nile Valley in creating the Egyptian Twenty-fifth Dynasty. The ancestors of those who became the first leaders of what is now called the Twenty-fifth Dynasty were apparently welcomed by some southern Egyptians—and it could be asked what is their "sociological race" in Adams's approach, as they aligned themselves with Kushites? It can also be asked, "(W)hat is the 'sociological race' of the Kushites, and for that matter the Egyptians, when they battled Near Easterners"? What was the "sociological race" of Christian Nubians when their armies went to the aid of Christian Egyptians at various times, or perhaps participated in the crusades? In his interpretation, deploying his version of a sociological race construct, Adams focuses on the Nubians when they are "victims" or siding with Egyptians to go farther south into Africa. In spite of his apparent disinterest, he did not ignore biology completely, since he stated in effect that Nubians had and have a range of brown skin colors and varying hair textures. He also noted biological population affinity, but in a restricted fashion: Adams cited one study that uses a legitimate distance measure to show the relative similarity (and relatedness) of various Lower Nubian remains and those from Kerma[49] but did not mention that early southern Egyptian remains (from Badari and Naqada) show more affinity with Nubians than with the later dynastic northern Egyptians, and this has been also found in other work. The mix of sociological presentism and biological evidence without discussion could be said to be ancestral in some sense to some of the dissonance and ongoing misrepresentations in current scholarship.

There have been recent "popular" presentations with the phrase "Black Pharaohs" in the title in reference to the Twenty-fifth Dynasty of Egypt—one an article in *National Geographic* magazine and one in a National Geographic film.[50] Aspects of this work are problematic for several reasons. First among them is ascribing to the ancient Egyptians a post-colonial Western "white" color-prejudiced identity and mindset. Secondly, it ignores the evidence of biological overlap between Egyptians and Nubians and other tropical populations.[51] For example, it was stated in some promotional material for the referenced film that the Egyptians (post Twenty-fifth Dynasty) had a shame that they wanted to hide—namely that they had been conquered by "black Africans," a recent Western construct—another example of presentism amplified by the idea that being conquered specifically by "black Africans" was the issue, as opposed to being conquered by any foreigner. (Neither ancient Egyptian nor ancient Greek writings ever reported this kind of attitude generally as a sociocultural trait of Egyptian society.) As noted above, there are no texts from the Egyptians or Kushites that present an identification scheme of peoples *designated* by *their color, i.e., giving them a phenotypicized ethnicity* designated with color terms, versus their sociocultural identities (Libyan etc.). There is histological evidence for overlap in the color variation of Egyptians and more southernly Africans.[52] Significantly, Baines,[53] in an analysis of the cognitive aspects Egyptian color terms, makes no reference to colors being applied as ethnic or social identifiers of known populations as is often done today.

The evidence used in the aforementioned film, namely erasure by chiseling out the names of Twenty-fifth Dynasty rulers from monuments (called by some *damnatio memoriae*), had been done to earlier Egyptian elites.[54] Thus, erasure cannot be attributed to some sort of apartheid-like institutionalized color policy. This erasure is spotty; the names of the kings are known. It occurred to others. It is interesting that the king who is perhaps best known for the erasure of the names of Twenty-fifth Dynasty kings, Psamtik II, did so some time after the end of the dynasty and notably also erased his own

father's name (Necho II):[55] are we to assume that he discovered that his father was also Kushite and that he must erase him from history? There is no evidence for this. Ironically the ancients (specifically Manetho) began the Twenty-sixth dynasty with a Nubian, which is not the current scholastic practice.

One of the other problems with the "Black Pharaohs" moniker is that it implies that none of the other Predynastic, Protodynastic, or dynastic Egyptian rulers could be called "black"—in the sense of the Kushites—which, while not particularly interesting, is not true. Even Sir Flinders Petrie,[56] father of the Asiatic "Dynastic Race" theory of dynastic Egypt's foundation, stated that various other dynasties were of "Sudany" origin or had connections there, based on phenotype, which implies [incorrectly] that particular traits could not have had been Egyptian, i.e., been a part of its ancestral biological variation. Of course, the traits may indeed have come from more southern ancestors, as well. Petrie is cited here to illustrate the variation in ideas in the history of the discipline, and in one sense some of his own ideas are being read against other of his ideas and against a field that sometimes ignores its own history. Upon critical reading, there are many examples of contradictions in the older literature. The history of ideas is also significant in not illustrating when some "general" consensus was reached about the "race" of the ancient Egyptians. Not all Europeans thought that the Egyptians were "lost" Europeans—or southwest Asians. There is evidence of overlap or similarity of Egyptians and Nubians in a range of biological traits—which is surprising only if there is no understanding of clinal variation and the interactions of populations perhaps extending back to the primary pastoral community[57] and before. The cultural origins and history are local to the valley and surrounds. Various Nubians and other Africans (and various non-Africans) have complex ancestral histories, based on history and DNA, that in some cases likely date to before the emergence of their ethnic and linguistic identities.

Various kinds of data have been used to assess affinity or describe populations. Histological studies of some New Kingdom Theban elites show them having findings consistent with dark skin "of negroid origin," as noted in some recent technical work on mummy tissues, and the following was noted from studies which use X-rays of the craniofacial skeleton in a technique called cephalometry[58]:

> From the viewpoint of the clinical field of orthodontics, the Eighteenth Dynasty represents a dentally heterogeneous sample ranging from Thutmose I and II with those craniofacial features characteristic of the Nubian people (dental and alveolar prognathism) to the straight profiles of Thutmose IV, Amenhotep II, and Tutankhamun.

This aspect of craniofacial biology is thought to have high heritability and has been used in various contexts. There are also Nubians with "straight profiles," and, furthermore, "Nubians" (southerners, generically) were not a single group of biologically uniform individuals (and they are not today). Sociocultural markers such as dress would distinguish otherwise physically similar Egyptians and Nubians (and others). King Seqenenre Tao, of the Seventeenth Dynasty, who participated in the liberation efforts against the Hyksos, had a lower facial complex "that … could be fitted more easily into the series of Nubian and Old Kingdom Giza skulls than into that of later Egyptian kings."[59] The Giza skulls referenced illustrate a part of what can be called Nile Valley variation, and it can be stated that they are not obligatorily of "Nubian" origin, and nor was King Tao, although a "Nubian" origin is most certainly possible. It can be inferred that populations with these traits were ancestral to various later populations.

Southern Egypt and Nubia are geographically coextensive, with populations grading into each other. The absorption of Qustul's people would have reinforced this. There is biological overlap of these populations in origin, but ongoing admixture is also apparent.[60] An evolutionary model makes these traits a part of shared local variability. The similarity is not simply observed here: it is the basis for Nubians and Egyptians (and certain other Africans) being placed in the "Brown Race" taxon of the Grafton Elliot Smith[61] and the Eastern Hamites of Seligman—both distinguished by these authors from "Negroes"—a term that has had a range of meanings[62] that in fact betrays an overlap with some of those in these other designations. Based on a range of evidence, they (the Egyptians) assimilated Near Easterners over a long period of time in a variety of contexts.[63] The evidence for this is very accepted and convincing.[64] Langer describes the forced deportation and settlement of Semitic-

speaking southwest Asians in Egypt, and foreign children were likely also a part of this.[65] Nubians/southerners, a diverse group—which cannot be over-emphasized—had ongoing interactions with Egyptians,[66] with whom they shared some origins in the "primary pastoral community"[67] that could also be called the Saharo-Nilotic pastoral complex.

Various skeletal analyses show overlap of groups in the Nile Valley, or some members in each group being more similar to some in the other group than to those in their own for some traits. This reality contradicts a conceptual notion that groups consist of collections of uniform individuals. Using the language of the common received racial taxa and the general concept that undergirds it leads to a predetermined discussion about biological and cultural variation in the Nile Valley embedded in a problematic history of ideas. Various taxonomic schemes have been applied to the peoples of the Nile Valley and Horn of Africa in an effort to deal with variation, although this may not be consciously theorized. These various populations are part of range of endogenous bio-historical African developments, with the idea of endogenous allowing for the results of gene flow from Asia into indigenous populations being shaped by the physical and social environments of northeastern Africa.

Unfortunately, the language and concept of racial taxa colors earlier work and sometimes continues with researchers not being conscious of the origins of a guiding zeitgeist. The focus on "race," whether this term is used or not, reflects to some degree a legacy of the general racism mentioned in the Jena Declaration. The Nile Valley peoples were Nilotic Africans who assimilated in biology and culture various migrants over time. There is evidence for the existence of communities of foreigners, or preferential sites where they settled or were forcibly settled, perhaps even sometimes related to occupation as in the case of women weavers and male soldiers based on texts and archaeological data.[68]

The ideas cited from Adams, and some related tropes found in the presentations using "Black Pharaohs" that can be found in numerous publications on the Nile Valley not cited here, are problematic for other reasons. Adams' presentist ideas, or similar ones, can be found in the works of numerous other scholars, and other biased perspectives are to be noted in early bioanthropological work.[69] The trope of the "Black Pharaohs" is problematic for another reason: it is presented as though there has not been a discussion about the *validity of the race concept in general*, as well as broad critiques of racism and racialist/colorist thinking by many scholars. Why a color or racialist term for the title? Why not a title that accurately says something about the dynasty in local terms? Kush was the name the people used themselves. Why not "Rise of the Kushite Pharaohs"—and then go on to discuss that they ruled as restorationists with an interest in older styles while also creating some innovation? The Egyptians did not call them the "Black Pharaohs" at any point, based on current information. Nor did the Kushites announce themselves as the "Black Pharaohs." Data do not speak or suggest for themselves. Data are always interpreted in terms of a theory or paradigm. The very use of the term "Black Pharaohs" is an example of presentism and rooted in a particular kind of worldview and bias.

Finally, in the magazine article[70] the impression is given via artistic representation of an aggressive "conquest" by [male] Kushites whose physiques and physiognomies as presented are more of reminiscent of stereotyped western and central Africans than of well-known Nilotic groups, who tend to be more linear in body build.[71] There is nothing in the artistic "re-creation" that suggests biological variation or cooperation with Egyptians or an alliance.

In theory, the education of non-specialists is a major concern in these kinds of presentations. Accuracy and a lack of bias of any sort are needed to maintain intellectual honesty and integrity in these public education enterprises. These titles and explanations tell us more about recent ideas than about those of the ancient Egyptians and Kushites. The decolonization of the historiography of Egypt and Nubia is an ongoing process,[72] although there will be different perspectives as to how this is to be accomplished, or even how it is to be identified.

Frameworks of interpretation based on the received racial schema, whether social or biological, can still be found in historical and scientific work, even if the traditional names are not used and the authors deny a "belief" in "race," which can mean various things. These frameworks are often a part of the zeitgeist/paradigm and sometimes are built into algorithms that use the divisions of "Eurasian," "East Asian," and "sub-Saharan African."[73] When such algorithms are used, the interpretations should be appropriately critical, taken beyond the built-in/prewired racial perspective. An evolutionary

model shows the way in additional to a critical reading of the theory and history of ideas.

The Abusir el-Meleq Genomes Study: Critical Considerations

When considering presentism, racial models, the history of Egypt from the Middle Kingdom to the Roman period, geographical variation, and the history of ideas, it is of interest to explore the results of a population narrative presented about Egypt extrapolated from genomic findings based on small samples from a single late dynastic northern Egyptian site.[74] The paper shows that it is possible in some cases to successfully extract ancient DNA from mummies, a major achievement. The study and its results were widely reported in the media. Attention was also given to an interpretation that seemingly suggested that the population that created the core original culture of Egypt was southwest Asian and/or European, that "Egyptians" were primarily of that origin, and that later in the Islamic period the population was admixed with "sub-Saharan" people (read: "Negroes") via the assimilation of "slaves." This was an extrapolation to all of Egypt from one site that overlapped the Greco-Roman colonization and is known to have been settled by southwest Asians since the Middle Kingdom. There was no discussion of the archaeology of Egyptian beginnings in the primary pastoral community or of an understanding of the original indigenous Egyptian-Nilotic population.

Stated another way, it in effect implies to some that the developments along the Nile are really not of the Saharo-Nilotic world of Africa because the people were not locals, at least not in terms of "ultimate" "origins." Its historical genetics conclusions have been cited uncritically[75] in spite of the small and restricted sample sizes and lack of a full and critical integration of contextual evidence. (A small sample, even of one, may work for species- or genus-level questions or "discoveries" but is inadequate for population questions with large sizes spanning a lengthy time and expansive geography.) The paper provided confirmation bias for those who wish to see Egypt's foundational origins as Semitic southwest Asian or European, an unsupportable general conclusion. It is important to note that historically not only was Upper Egypt the source of the core identifiable Egyptian culture, but that it was primarily southerners of the Eleventh/Twelfth, Seventeenth/Eighteenth, and Twenty-fifth Dynasties who politically reunited Egypt and reinvigorated its culture after periods of fragmentation. However, Egypt was complex on all levels, and no claim is made for "purity" in any domain.

An analysis of DNA from mummies from Abusir el-Meleq in the Herakleopolite nome that date from the New Kingdom to the Roman era is presented; the DNA is treated essentially as one sample, a period of over 1,000 years. Notably this timespan covers not only the Egyptian empire in southwest Asia, which increased social interaction between the regions, but also the Third Intermediate Period (which includes the Twenty-fifth Dynasty, among others) and the Ptolemaic (Macedonian) and Roman periods. The data can be interrogated in many ways. Comparison of the published radiocarbon dates for the individuals (provided in the supplemental material) and the dates given by Egyptologists for the length of the periods shows that the numbers of individuals from each historical phase are not equal. For example, the New Kingdom sample had about four individuals. A total of 90 mitochondrial DNA (mtDNA) female lineages (haplogroups) and three whole genome sequences from males including Y chromosome lineages were successfully recovered. The geographical origin of the majority of the mtDNA lineages is interpreted as being southwest Asian or European. The data were compared to those from living Egyptians and to a recent sample from Yoruba-speaking people from southwestern Nigeria used to represent "sub-Saharan" Africa. The living Egyptians, based on samples from a wider geographical provenance than Abusir el-Meleq, are interpreted as having more ancestry from "sub-Saharan" Africa, which is explained by what the authors call the "Islamic" "slave" trade, a problematic term. That analysis is largely based on a very small sample, and a comment on a light skin color is based on one individual. (The "trade" in people from Europe and migrations during the Ottoman period are not discussed.) A SkyGrid plot, from a Bayesian analysis, is interpreted as indicating a longstanding presence of this profile in Egypt with paradoxically decreasing variability and/or population size at the same time that there is increasing migration from southwest Asia. This contradiction is not reconciled. The authors offer two caveats: 1) that their ancient Egyptian "sample" is from one locale and may not be representative of all of Egypt—which is true—and 2) that a sample from southern Egypt may have given different results.

These are major limitations of interpretive importance that indicate the possibility of the construction of a very different population narrative for Abusir el-Meleq and the rest of Egypt. Nevertheless, the authors speak of their results as applying to all of Egypt, and the press and others have treated those results in that way.

The fundamental question in work that attempts to synthesize findings from genetics and history (including linguistics), excepting some macro-evolutionary- (species-, genus-) level studies is when, if ever, should genetics/genomics *lead* the narrative in questions that are historical and not basic science? How should other information be used to illuminate the genetic/genomic profiles that are obtained? Should the genetic data be placed into the context of frameworks from archaeology and texts? When using the data from genetics, what is the role of understanding the various debates and difficulties addressed in historiography? Archaeologists and historians have been found to have some skepticism about what may be a new kind of biological determinism and the overemphasis given to laboratories when geneticists get involved in historical questions; incredibly, although the study admits *not* having sampled ancient genomes from southern Egypt—the source of core Egyptian culture–their paper has been cited for their claim of increased later (post Greco-Roman) "sub-Saharan" admixture by a psychology group that postulated that intelligence differences between contemporary southern and northern Egyptians might in part be due to greater "sub-Saharan" admixture in the south. Racism and Eurocentrism are alive and well with claims ultimately based on a very small sample of autosomal data.[76] Geneticists "working" as historians should be aware of the concerns of historiography.[77]

The study can be described as an inferential population history, one that largely uses Bayesian statistics, not primary historical evidence, for the suggested duration of its implied narrative. A Bayesian approach is seemingly used to suggest something about the age of the population and its specific genetic identity via the genetic markers obtained from the samples, but, as was noted about the SkyGrid plot, there is a conceptual problem. The major criticisms of the paper stem from over-generalizations that can be related to the title, samples, temporal framework, inappropriate extrapolation, and a lack of alternative explanatory interpretations/narratives—or hypotheses. Their caveats are not substantially integrated into their discussion, and a false sense of certainty is given. There are several concerns that call into question how much weight the interpretation in the paper should be allowed, given the kinds of observations and concerns expressed by historians.[78] What kind of history is population history and when should it be written in narrative versus scientific form? The technical feat of sequencing ancient DNA is not questioned here. The review process is.

First, the title is misleading in that it implies, as noted earlier, that they had actual data for the Egyptian base population that is representative of all of Egypt across space and time (from north to south) or from the core areas and times of the founding period of base Egyptian culture in the primary pastoral community or the Predynastic.[79] The title is at variance with the noted limitations.[80] The authors suggest that the population has had a similar effective population size—and the same lineages for at least 5,000 years, which would give a date of ~3000 BCE, based on a Bayesian analysis, which is problematic with this kind of sample/data. Ironically, the conclusion that the population that had the same genetic profile as their "sample" was there 5,000 years ago places it in the same time range as in Petrie's famous thesis. There is no evidence of an unpopulated Egypt being initially peopled en masse by southwest Asians at this (Protodynastic) time, contra the old "Dynastic Race" theory. Such a mass settlement (actually settler colonization) would have brought a Semitic language and culture, given the known developments in southwest Asia at the time. The burial traditions found in the Early Dynastic were derived from local Nilotic or even Saharo-Nilotic sources, not southwest Asia. The sole surviving language of Egypt in its texts is a branch within Afrasian with one member, and not an import. Finally, the title, upon careful scrutiny, reveals a racial model of interpretation.

Secondly, the sample from Abusir el-Meleq is a convenience sample, not chosen based on a model that would assure that it is representative of the entire country across time and space. The sample by definition is not representative by time or geography. Abusir is a site in an area that is known from historical sources to have had significant immigration from outside the Nile Valley, as will be discussed.[81] Past work has shown that the mating structure and history of a group should ideally be

taken into account in the sampling strategy. Geographical range and social structure have to also be considered. Kraus and White[82] found this in their study of the Western Apache, a group that would have been labeled an "an anthropological population"—conceptualized as homogeneous from place to place. They found that one community's gene frequencies, somewhat unexpectedly, were very different from others, although all were Western Apache. Some Western Apache were more similar to non-Western Apache. They discovered that the one community studied was not representative. They note that this had also been described for Puerto Rico, a place with a complex population history: not every community would or could be representative of the entire population. The linear Nile Valley in Egypt had a north-south geographically variable population[83] and known ongoing historical interactions with southwest Asians, who settled or were forcibly settled in northern Egypt[84] for more than 1,000 years, enough time to alter a genetic profile in context of biocultural assimilation.[85] Furthermore, the sample used in whole genomic comparisons is extremely small (n=1–3) and inadequate for a populationist approach; small samples may work for species-level macroevolutionary research but cannot convincingly be used for population history work in a place such as Egypt.

Thirdly, the sample used to "identify" a "sub-Saharan" component in later living Egyptians is from a Yoruba-speaking population in Nigeria. This sample is used (problematically and incorrectly) as a proxy *for all of infra-Saharan Africa for ancient and modern times*. Considering the discussions of a generation around "race" and study design in general, what is the basis for using the Yoruba as a representative of all of "sub-Saharan" Africa—a questionable unit of analysis, in any case, on careful consideration? It is of interest that the Yoruba are a part of Seligman's "True Negro" taxon. This is a kind of stereotyping consistent with racial thinking with assumptions about homogeneity and uniformity or, in this case, picking a population that is deemed to be the "real" sub-Saharan African, or just "real" African, rooted in the colonial tradition. Yu et al.[86] have found that there is greater difference among "Africans" than between them and "Eurasians," but that study is flawed in that the samples focus on "sub-Saharan" Africa. Furthermore, the results can reflect only Yoruba or some regional Nigerian ancestry in the modern Egyptians (analogous to "ancestry testing"), but no evidence has been presented of Yoruba migration—forced or otherwise—to Egypt. It is stated that the Yoruba are being used as a proxy sample for something called "sub-Saharan" African—and of a particular sort, and it is both a stereotype and typological. Critically, it must also be asked what is philosophically behind making a comparison with some sort of genericized "sub-Saharan" Africa when no effort has been made to use the southern Nilotic basin region adjacent to Egypt. Curiously, in past work across disciplines, Nubians and Kushites are sub-Saharan Africans (as in the Black Pharaohs presentations written with Egyptologists), so why not use them? Only if there is some underlying notion of a pure Negro type does not using them make sense. An interesting conceptual comparison is that of Crichton, who used a Teita series from eastern Africa in a cranial morphometric study to evaluate if there had been "Negro" admixture in the early Egyptians. His study was clear in its aims; in the parlance of the day, it was a racial study. In his discussion he admitted that he may have used the "wrong" "Negroid" group, an insightful observation that indicates knowledge of variation. That study was candidly a "racial" analysis, which was not admitted in the case of the mummy genomes study, but its title nevertheless suggests this. This is in part because explicitly stated "race" studies, using the received racial taxa, are understood to be conceptually problematic, out of fashion, potentially embarrassing, or just wrong. Regional population comparative studies using various contextual evidence are the most appropriate approach to these kind of data. Based on the current understanding of human variation in the academy, is there a place for "race" studies?[87]

A review of the literature indicates no scientific justification for this choice—the Yoruba—in an evolutionary or historical/archaeological model. The infra-Saharan region is perhaps the most molecularly diverse in the world. "Infra-Saharan" is preferentially used here because it does not carry the unspoken baggage of "sub-Saharan," the meaning of which is malleable and has a colonial association: does it denote a region, a specific people in a region, a concept related to Negro or "Black," some combination of these, or something else? And is it colonial detritus? When does the "sub-Saharan" construct gain ontological reality in terms of various kinds of data or the *longue durée* of human evolutionary history? Populations in tropical Africa

with dark skin and tropical limb proportions vary molecularly but may also vary in anatomical features. They may have assimilated southwest Asians or other Africans who may resemble southwest Asians due to common heritage in Africa, an issue yet to be resolved. There is the textual and other evidence of "black" people in northern Saharan Africa. If the purpose is to ascertain which tropical African populations a late dynastic northern Egypt population might have affinities with, then populations other than the Yoruba are required in a valid model—if this is even a valid kind of question. And what is the time depth? The authors do not consider an indigenous/endogenous Nilotic or Saharan population in a populationist approach as though northeastern Africa was to be understood in terms of southwest Asians and "sub-Saharan" Africans (a two-race model), as though there might not be other populations along a gradient of differentiation even if they do not have data for them. The binary is raciotypological.

It is not clear if the purpose was to determine the "race" of the Egyptians across space and time, from an Egyptian sample from late dynastic northern Egypt, far removed in time from the origins of Egypt, and geographically between two areas known to have had southwest-Asian populations during and after the Middle Kingdom: Ilahun and Tel el-Daba'a-Avaris and its surrounds. Most certainly a lot of interest in the piece is by people interested in "race" and any authority given to Egyptian "identity" by European scientists.

The textual and burial data are informative and give context. The Egyptian sample's individuals—which do not come from one stratigraphic horizon by dates of the individuals, but several—are from periods known to have had ongoing migrations from southwest Asia into a pre-existing Nile Valley population including the deliberate settlement of southwest Asians.[88] For example, many women weavers were brought into Egypt—Thutmosis III is said to have presented 150 Asiatic weavers to one official. Southwest Asians were settled, sometimes forcibly, into Egypt after conflicts, and some served in the Egyptian army. Bietak[89] presents evidence for the ongoing migration of southwest Asians, probably from the northern Levant, into the northeastern region—possibly encouraging chain migration; the Illahun papyrus indicates a Middle Kingdom presence of Asiatics in the Herakleopolitan nome, where both Illahun and Abusir el-Meleq are located. There is evidence for an Egyptian state presence in the Levant even in the Protodynastic Period;[90] Redford[91] suggests evidence that southwest Asians settled in Egypt at this time, but Egypt was obviously not initially settled in this time frame. Documents indicate variation in the way people were assimilated, sometimes using Egyptian names in some contexts, but their Asiatic names in others, and illustrating cultural entanglement in other ways. At one point after the Old Kingdom, the term for someone from southwest Asia was synonymous with "slave,"[92] with the possibility of extensive concubinage. The Adoption Papyrus shows how an enslaved woman might be brought into a family for procreative purposes—and given rights.[93]

There is evidence that large numbers of Semitic-speaking southwest Asians came into northern Egypt and lived in their own communities as designated by the terms *wnt* and *sgr*, both Semitic loan words.[94] "…(T)he Wilbour papyrus mentions seven *sgr* in the area of Fayum and northern Middle Egypt (one of them was situated near Heracleopolis),"[95] which is in the same nome as Abusir el-Meleq. It is also noted that the same papyrus mentions towns of the non-Egyptian Sherden and allotments of land being given to them in the same region. *"Towns" and "allotments of land" mean communities and breeding populations* whose descendants became Egyptians. Extrapolating from other situations, a small percentage of gene flow per generation with offspring remaining in the receiving population will lead to major genetic change, perhaps obscuring the original genetic profile in 20 generation.[96] Continuing immigration per generation would have a large impact and create conditions for swamping, founder effects, and genetic drift. There is no evidence that these folk, workers, settlers, and the enslaved went back to Asia, or that they were worked to death, as been known for some slave-holding societies—or that there was an anti-southwest-Asian sentiment expressed by the Egyptians.

A full explication of later social custom and settlement pattern is needed: did the Greeks (Macedonians) and others live in full integration with the Egyptians even after they may have adopted some Egyptian customs in line with being where they were? A need to understand the socio-logical aspects of southwest-Asian and European migrants and context of contact, the New Kingdom occupation of southwest Asia, and the various

dynasties of the Third Intermediate Period is in order. More interestingly if the periodization of the samples is considered—for example, the Ptolemaic period—it might be possible to map the mtDNA haplotypes to regions outside of Egypt where they are most common (and perhaps originated) and *relate them* to historical events involving migration. A number of the mtDNA haplotypes are M1a derivatives; M1a variants likely originated in Africa,[97] even if in the background of an M1 haplogroup that back-migrated during the Paleolithic, which is not proven. They may have been transmitted during the Twenty-fifth Dynasty. M1a variants can also be found in tropical Africa, and where M1a exactly emerged cannot be said with certainty. There was an L3, also. The E haplogroup, found in one of the samples whose whole genome was sequenced, is of African origin, likely in tropical Africa (meaning between the two named tropic lines); the clade defined by M78 found in the one individual is also of African origin.[98] (Older reports that suggested that it was "Middle Eastern" likely reflect a bias due the "kinds" of people it is also found in—a non-scientific consideration.)

It is of interest that a skin color gene for *one individual* was mentioned and said to indicate light skin—which would not be surprising for the locale and time period in Egypt, but the gene does not "prove" light skin. One cannot generalize from a sample of one in a population study. Consciously or unconsciously, this adds to one aspect of the nature of the paper and its enthusiastic reception in some quarters. Histological studies of earlier Theban elites are a far more convincing indicator of skin color.[99] In this regard, the comments of Diodorus, Herodotus, and others would mean just as much, but the meanings of words in such distant times may not be fully interpretable. While it is of interest to understand the biological variation in the Nile Valley and its causes, it has no bearing on the emergence of culture of the Nile Valley. The core primary Upper Egyptians were indigenous Saharan and Nilotic Africans—who assimilated others over time. This process occurred in the northeast quadrant of Africa, not southwest Asia or Europe. The local northeast African environment shaped their biology and culture.

The data from Abusir el-Meleq are interesting and could be accounted for in various ways that use the historical record of the Middle Kingdom through Roman periods if the "sample" is examined by its constituent periods. The processes of chain migration or its equivalent, sexual selection, and genetic drift/founder effect have much more explanatory power than that implied by the extrapolation. It is clear that there was documented migration into the area during the times covered by the sample of mtDNA. The data would better serve the writing of a local regional history than a "racial" one for all of Egypt across time and space, and specifically better for a woman's history of the region of Abusir el-Meleq and surrounds. Contextual data are consistent with most of the mtDNA being likely temporally dynastic in that area of Egypt, but quantification of this is difficult. Isotope analysis of skeletons has shown evidence of substantial first-generation migration from southwest Asia (see next section). However, even if pre-Neolithic in "origin," they have still been assimilated into an African milieu and are thus endogenous. At what point in time the migrant's DNA becomes indigenous becomes interesting in the historical and evolutionary sense. There was a local Nilotic African population that assimilated others. The Bayesian temporal extrapolation based on the type and amount of data is statistically problematic, but it is also decontextualized from other kinds of evidence. However, the implied dichotomy of a sub-Saharan versus the rest of the world is far more disturbing as a construct, for it suggests that racial thinking is still paradigmatically embedded in academics and is deployed by scholars who otherwise formally disavow it.

If only the Y chromosome is considered, the evidence indicates that humanity divides into a subsets of "Africans" and "the rest of the world," with the latter including most African regions and populations. Ironically, if the Bayesian analysis is reliable and certain haplotypes could be extrapolated back into the Upper Paleolithic, their origin time is broached, making it possible that they originated in northeast Africa. The early modern human population in Africa likely was substructured, with interregional intra-African differences. Therefore, regional indigenous African descendant groups would be different: if migrants out of Africa were from one region, then there would be some Africans who were more similar to those migrants outside than to other African populations. While a construct of Eurasia exists, a construct of an early Africasia could also be developed on careful consideration of a range of evidence, or just con-

structing a different model of how the human narrative is presented.

Other Data and "Narratives" Relevant to Nile Valley Biocultural Enquiries

It is worth further exploring the mummy genomes paper because it has engendered general interest and ideas about how to think about Egypt. The authors do not consider other data or evidence in their analysis. They ignore morphometric biological distance and other skeletal analyses of early origins—whose sometimes old descriptive (sometimes "racial") language has to be interpreted, as is done in recent literature.[100.] These also have some genetic basis. There are also other data. One study indicates that Ramesses III carried the E1b1a Y (haplogroup) lineage[101] (transmitted father to son). This lineage originated in eastern Africa and is most common in tropical Africa, based on current work; he had a number of sons, so the lineage would have been propagated, and he had a father. Ramesses III would be a sample of only one, but the likelihood that a late dynastic king would be the only Egyptian with this lineage is small. More importantly, it provides the impetus for additional exploration. Where and when did it get into Nile Valley and then into a royal lineage. There are our ancestors and our genes' ancestors. Analysis of the short tandem repeat (STR) data published on Ramesses III and the Amarna ancient royal family (including Tutankhamun) showed a majority to have an affinity with "sub-Saharan" Africans in one affinity analysis,[102] which does not mean that they lacked other affiliations—an important point that typological thinking obscures. (Also, different data and algorithms might give different results, which would illustrate the complexity of biological heritage and its interpretation.) This analysis was performed using an available algorithm[103] that unfortunately only has three choices: Eurasians, sub-Saharan Africans, and East Asians—the best-known received racial schema by another name, but it still gets used; this is problematic when it is local populations that constitute the historical reality of interactions. One can imagine a database with numerous global local populations. Local populations are the culture bearers and social actors in any historical or ethnographic sense. It has been found that the global human population will structure into five "divisions" using a basic forensic set of five STR,[104] which is heuristically interesting for showing that one can find structure in the species. Depending on which data are used, it is likely that different results would be obtained. In the Nile Valley one would need substantial data, current and ancient, from the along the Nile Valley and its Saharan flanks.

The claim that the "Islamic slave trade" is the source of "sub-Saharan" African genes, called sometimes just "African," is problematic in the Nile Valley context from geography and an evolutionary model and considering all of the evidence, including the "Green Sahara." The African persons trafficked to Brazil, the United States, or Europe (no matter their origin) are not usually said to be products of the *Christian slave trade*. It would probably be more often accurate to speak of a trade of captive/trafficked persons who were reduced to the status of slavery. Also, the [incorrect] idea that the only source of *other* Africans into Egypt would/could only be "slaves" is a trope, which can be called *the black slave trope* and has also been invoked to explain evidence of some distinct tropical African admixture found in some Jewish populations in Europe.[105] Jewish populations are alleged to have obtained this ancestry from [black] "slaves" when they were in Egypt; the possibility that a part of the Jewish population's ancestry was due to intermarriage with Egyptians and Nubians or others with certain genetic markers is not considered, nor is the possibility that it goes back to even earlier ancestors in northeast Africa. Either way, it is there.

More important are the early periods of origins in the primary pastoral community and other key events. King Aha of the First Dynasty apparently incorporated the rival Qustul Kingdom of Ta Seti—with the result possibly contributing to the reason that the southernmost nome of Egypt was called Ta Seti; this became, at least in part, Egyptian Nubia[106] with the apparent biocultural assimilation of the population. Analysis of skeletal remains from post-Badarian Predynastic Egypt, including from elite tombs, shows affinity with Nubian samples,[107] which is not surprising. The "black slave trope" is often or nearly always used to explain certain admixture in Arabs or Europeans. The presence of free "blacks,"s whoever they or their ancestors were in origin, in early Islamic communities has been reported,[108] and there were also enslaved persons of various origins in the Islamic world at various times. How many were slaves versus free people in their homelands before being trafficked is unknown.[109] The presence of the M78 Y-lineage in Egypt (and even Europe),

which originated in the northeast quadrant of Africa, cannot be explained this way,[110] and there is no evidence that the "Lady of York," likely from "Roman" Africa and apparently the wife of an elite in Britain, was a slave. In a newspaper article written decades ago, the "black slave trope" was applied to a "Negroid" Neolithic skull found in the Fayum (Egypt); why wasn't the skull that of a free person?[111] This is explanation by racial assumption and presentism. Its bias is obvious. As noted, the engagement of genetics and biology with archaeological/historical/linguistic data has often been, and continues to be, problematic, and context can be complex; for example, the habitation of the Nile Valley is not considered; archeological data indicate that the Nile Valley was not continuously inhabited during a period from the late Pleistocene to mid-Holocene, with cyclical changes in aridity affecting the Nile Valley and Saharan flanks.[112]

The paper fails to integrate its caveats into the discussion or title, thus allowing for misrepresentation and over/mis-extrapolation of its results in the press and among others who wish for an Egypt that was not in Africa. The title is misleading in that implies a specific singular Egyptian origin by juxtaposing Egyptian and "sub-Saharan." No alternative narratives or hypotheses are offered for the DNA results. Some of the data characterized as "Eurasian" may be understood in a different way, since genes and lineages may have entered populations via individuals from the distant past—and this would have nothing to do with the culture or ethnicity of the immediate ancestor who transmitted it. One could fairly say that they have used a "racial" key to explain their findings, which itself may not be accurately characterized. This point needs to be emphasized repeatedly.

The authors imply by the style of presentation that "the Egyptians" *were* southwest Asians because of the recovered haplotypes and genome sequences, thus allowing some to think, by extension, that the origins of Egyptian culture and people were Semitic southwest Asian and affirming a kind of confirmation bias. The Egyptians were not Semitic southwest Asians. A distinction has to be made between having southwest Asian ancestry due to gene flow into a pre-existing population versus ancestry that is due to original settlement either as sole colonists or as one of a founding group. It is of interest that the Bayesian SkyGrid plot is presented as suggesting 5000+ years BP (or even earlier) for the population profile based on the presented data. The assumption that the data from Abusir are representative across all of Egypt from its earliest times is not justified with any kind of data. The coalescence model associated with the Bayesian analysis is suspect when the issue of cyclical habitation is considered. If one sampled Madagascar analogously, or did a Bayesian analysis producing a SkyGrid plot, one would get old coalescent times, but Madagascar was not inhabited by all its elements until around 2000 BP, according to standard accounts—of course, this may change; it was uninhabited, so the statistics would be giving information about events that took place elsewhere.

There is no evidence, no archaeological signal, for a mass migration (settler colonization) into Egypt from southwest Asia at the time of this writing. Core Egyptian culture was well established. A total peopling of Egypt at this time from the Near East would have meant the mass migration of Semitic speakers. The ancient Egyptian language—using the usual academic language taxonomy—is a branch within Afroasiatic with one member (not counting its temporal forms as separate languages): Afrasian's place of origin/*urheimat* is within Africa, using standard linguistic criteria based on the locale of the greatest diversity, deepest branches, and least moves accounting for its five or six branches[113] or seven, if Ongota is counted. Only one branch, Semitic, is found outside Africa. Ancient Egyptian has loanwords from other African language families[114] likely explicable in part by the contact of source populations in the less arid Sahara and the primary pastoral community.

The data could be used to construct a narrative about Abusir el-Meleq, taking into account history and social custom. In some sense the title and discussion are a kind of ahistorical assertion for the whole population in terms of the pre-New Kingdom population (because the Bayesian analysis used to predict how "long" a population was there, based on uniparental markers, is inadequate for the task of the backward projection on the data available and its temporal and geographical contexts). There are too many unknown variables about the sample. Geneticists have been reported as saying that they do not want to be "biased" by historical, linguistic, or archaeological evidence.[115] This seems to be a position that holds that genetic data somehow outrank all other information, which is clearly problematic. This can be seen as bordering on a kind

of genetic determinism.

In an evolutionary model with dispersal biogeography, the modern humans who settled in Egypt en route out of Africa would not have had the same genetic profile as people in southern Africa. Therefore, the first modern humans who migrated across the Sinai and settled in southwest Asia would be more related to, and more genetically similar to, their source populations in "Egypt"/northeastern Africa than to those in more distant regions of Africa. Ancient DNA is not needed to "prove" this. Significantly, the converse is true: the populations in Egypt would have been more similar to these newly spawned "non-African" groups than to other more distant African populations. A specific African history begins after this, or perhaps an "Africasian" history. It is beyond the scope of this presentation to fully discuss when it is appropriate to speak of the beginning of "African" and "non-African" population *identities, perhaps a problematic construct in this context,* in human evolution or population history, but any discussion—implied or direct—of "original" population genetic profiles has to take this point into account. Aspects of what make some African populations in Saharan and supra-Saharan regions (or northeast Africa) more similar to those in southwest Asia are due to what evolved in Africa, not settler colonization from southwest Asia. However, it can also be said that any migration back to Africa tens of thousands of years ago has led to "admixed" gene pools being shaped by African environments such that their biology reflects an African history.

Recent work on the Y chromosome shows just how variable the source population(s) migrating out of Africa may have been.[116] The defining mutations of various haplogroups thought to have arisen outside Africa apparently emerged within Africa. This has implications for the autosomal picture and what may have also been in Africa. Subsequent immigration into Africa is attested from the historical record with assimilation (see below), and this would have had a genetic impact. However, back migration into Africa would not de-Africanize the populations because ethnic identity is not coded in DNA. Genes received from migrants in the distant past get processed into the population under local physical and social environments, such that, in the end, the populations reflect a genuine local history. The presence in the Greek population of the Benin-type sickle-cell variant, M78 lineages, and certain HLA types likely of eastern African origin does not negate the "Europeanness" of Greece. Paleolithic migration in any direction is just a part of the evolutionary process of early human migration and settlement: attaching quasi-ethnic labels is an invalid exercise. Genes for light skin apparently arose fairly late in Europe and also separately arose in Africa—which is not surprising, given the length of time that modern humans existed there before migrating out.

It is of some interest that the results of the Abusir paper are expressed in binary form—sub-Saharan versus some other, which is consonant with traditional racial thinking/schema, but not using that terminology. Thus, in some way, the old debate about the "racial" origins of the Egyptians mentioned previously is seen to carry on without modern populational thinking.

It is important to note that, in terms of time, proximate ancestors are to be distinguished from the "ancestors" of genetic lineages they may be carrying—one's genes' distant ancestors.[117] One's *known* ethnically identified ancestors and one's genes ancestors are conceptually two different things when the idea of identity is included in the notion of deep ancestry. One heuristic example would be a living Afro-North American male of middle-passage descent who is carrying a Y-chromosome lineage that is defined by the M89 mutation—typed crudely only for that marker. Given the concubinage of African females even in the absence of known family history, it could be assumed that the M89 is of European origin. However, in this case this individual did not receive it directly from a person identified as European, but from a person ethnically designated as African American; the European ancestor is generations in the past—so how we conceptualize this makes a difference. Furthermore, and this is more interesting, it may be the case that the M89 came from a Cameroonian male who was captured and trafficked 200 years before; his M89 lineage may have origins in an African population that assimilated males from a back migration from Asia 20,000 years ago or even originated in Africa.[117] Bluntly speaking, a southwest Asian lineage can be transmitted by someone with a "black" body in other analogous situations-—the black Chadic speakers carry a high frequency of M89; this has to considered in the warp and weave in human history.

In the case of Abusir el-Meleq, this begs the question: do the mtDNA lineages actually represent an initial settlement of the northern Nile Valley in the

early Holocene or the middle Holocene or before, and if so, to what degree? Or do they connote the ancestors of women who came or were brought to Egypt during the Middle Kingdom through the later dynastic period and by genetic drift or assortative mating became elevated in frequency? Bietak shows an ongoing migration from the Near East into Egypt, with large numbers of people becoming Egyptianized and perhaps choosing mates from the immigrant, not native, community, [118] which has implications for what might be uncovered by DNA analyses in that region today. The data would also be served by constructing a narrative of a women's history of Abusir el-Meleq and evaluating how the DNA fit the texts and archaeology or how they "guide" the DNA. There is an alternative hypothesis/explanation to the one presented. One example of a study using a range of evidence to explain Y-chromosome patterns in Egypt is by Keita,[119] who did not have ancient DNA but could raise a question about whether the basic pattern over Egypt was more likely to be due to military movements during dynastic Egypt or to earlier settlement patterns from the mid-Holocene. Other work has found mitochondrial lineages often called Eurasian in Senegambian populations.[120] In eastern Africa one can find southwest Asian mtDNA lineages in various groups with different social systems. What are the social mechanisms by which southwest Asian women were incorporated into these societies, if this indeed is the sole explanation? What is the temporal framework? It may have well been long before the emergence of known ethnicities. These groups—as sociocultural communities—of course did not "come" from Asia. The transmission of lineages through populations modulated by the currents of linguistic change, migration, climatic change, etc. is of interest to local historians in Africa.

The authors of the Abusir study do not offer an alternative explanation for their findings. Rather, they speak in terms of a "sub-Saharan" versus others dichotomy, historicizing with the trope of the slave trade, and then fail to give a range of sub-Saharan Africans or to use a comparative population that might be related to an ancient one that would have been interacting with Egyptians. The results that are most memorable are expressed in terms of a categorical macrogroup interaction. As noted above, they assume that the findings represent Egypt at its founding or before; at least, they seem to suggest this. Ironically, if it is claimed that the results suggest a population migration/settlement into Egypt at 3000 BCE, this would coincide with Petrie's "Dynastic Race" theory. As noted previously, such mass migration from the Near East as a settler-colonist event of Egypt did not occur during this time. Egyptologists and archaeologists have established the existence of a Protodynastic Egyptian presence/colony and apparent control of parts of the Levant.[121] This presence would have established the social and political basis of Levantines coming into Egypt. The issue is not whether or not there was contact with southwest Asia. The title of their paper reaches to a grand narrative of "race," whether intended or not. Instead of noting the diversity of samples of the DNA and placing these in the context of known migrations from southwest Asia, they contrast their findings with singular "sub-Saharan" sample, a move concordant with a raciotypological model in which any population can represent the whole entity on the assumption of within-group uniformity.

A more explanatory model can be conceptualized for migration based on Avaris and its surrounds. Archaeological and textual evidence supports that this area likely received constant immigration from Canaan in southwest Asia before the Hyksos ascendancy, to the point of possibly nearly obscuring the presence of Egyptian communities. There is a suggestion in this case of chain migration, and there is no reason to think that this would have been a new phenomenon or restricted to just one locale. Bietak reports on physical anthropological studies that indicate numerous females with southwest Asian affinities and distinct differences from Egyptians.[122] He suggests that "the Canaanites who immigrated during the late 12th and 13th dynasties to Tell el-Daba took their female partners from the local population originating from *previous immigration*, but already Egyptianized"[122a]—therefore suggesting the existence of semi-endogamous Semitic-speaking southwest Asian communities who became culturally assimilated. Significantly, strontium analysis of remains from some communities demonstrates a "preponderance" of southwest Asian migrants, in Egypt from the Near East from the 12th–13th centuries in regions later associated with the Hyksos,[123] thus providing hard evidence for the thesis of migration into parts of Egypt from the Near East at times that can be placed into a traditionally defined historical framework. Strontium analysis can give the place of birth or early childhood of an individual. It is conceptually significant that they

have the burials of *actual migrants*. Based on the statistical nature of likely burial recovery, these findings may imply *that there was a lot of migration*. The mtDNA profile presented for the period at Abusir, along with the textual references to Semitic names and settlements of non-Egyptians, is very consistent with ongoing migration from Semitic southwest Asia into Egypt. Apparently the Herakleopolite nome, location of Abusir el-Meleq, was a place settled by southwest Asian migrants, whatever the cause of their migration. Ammar noted ongoing migration from southwest Asia more recently into parts of Egypt[124]—so sampling there for "the Egyptian" in the sense of "original" may lead to error. The place and timeframe of sampling is important to any question of a core original population in any situation. Other population diversity can be found in the descriptions of el-Maqrizi, who in the 15th century described the various Christian ethnic groups in Egypt of varying geographical origins; wide phenotypic diversity is described.[125] Over time, all of these populations became Egyptianized. Attempting to validate contemporary biological "Egyptian-ness" by asking families about the birth of X generations of forebears will not guarantee that one is finding a population that is a Nile Valley "original" from the early to mid-Holocene—if that is the goal, i.e., identical to those who participated in the fashioning of the foundational Egyptian Nile Valley cultures rooted in the primary pastoral community. This is a problematic proposition in any case, both in theory and practice. There is evidence for the ongoing assimilation of migrants into Egypt.

The results of the mummy genomes study were widely reported in the media with some fanfare due to the fact of recovery of DNA and some discussion of identity.[126] Although caveats about sample location and size were discussed as qualifiers, these were overwhelmed by what some in the public took as a "racial" claim for the sample, which allowed the caveats to be ignored. Notably also, there was no problematizing of the use of the Yoruba sample in the press. These issues were not seriously discussed. None of this was helped by one of the authors saying in some press interviews that he was "surprised" at how little sub-Saharan influence there was, or that the modern Egyptians had more "sub-Saharan" influence than the ancients, just the opposite of what many Egyptians think. Obviously, the issue of sampling and generalization comes up, but also a model of origins that does not assume a local indigenous Egyptian but something different. Not all sub-Saharan Africans would have the Yoruba genetic profile; in fact, it could be quite different. Typological thinking has to be avoided: is there one genome or haplogroup linked to phenotype across space and time? The answer is no, and the ironies are many in bio-historiography if one approaches it with typological expectations. The ancient Egyptian and Yoruba samples are inadequate for this task, which is philosophically problematic. There was no discussion of the subtext of what "sub-Saharan" means or implies, namely that it is equated with "African" or, worse, the typological "True Negro," thus ignoring diversity—or, worse, just equating northern Saharan African as simply being identical to Semitic southwest Asia, a position that is not supportable. What was the content of "sub-Saharan" 8,000 to 30,000 years ago? And what was the primary genetic profile of northern Saharan Africa or the eastern Nilotic-Horn range at the time, or at the time modern people left Africa? Other interpretations for the data that would have altered the singular narrative being presented were not equally discussed, nor were the defects in the samples fully discussed with the kind of required reservation when samples are small. The paper did not seriously acknowledge other kinds of data that would better speak to earlier periods in Egypt. A subject to address would be to evaluate with all of the evidence what was indigenous to the Nile Valley. A discussion of local population biology would then be easier. However, using the data to discuss a community or local population history would also have been valid.

As noted in the introduction, Bernasconi describes the origin of the concern with the "race" of the Egyptians as a part of the effort to justify anti-"black" racism. Clearly there was some concern about the Egyptians' "race" in which Trigger's[127] admonition that Nilotic populations are Africans is not always fully operationalized. All Africans are not the same, and why would they be, given human evolutionary history? The idea that ancient Egypt did not emerge in an African context from African elements and agency simply reflects an old bias that ignores the findings of the work of generations including recent findings and syntheses[128] and curiously also ignores more than a century of variation in opinion that included discussion of Egypt's being an African polity. The phrase "Near East" is a construct that is sometimes applied to Egypt, suggesting that it is

southwest Asian/Semitic and not in Africa. There is a need to decolonize ancient Nile Valley studies beyond European theoretical perspectives.[129]

Spin

A problem has been described in biomedical research papers that is relevant to this discussion. It has been noted that there is increasing misrepresentation of research findings, or the presentation of them in such a way that they can be misinterpreted in a fashion that is called "spin," a term from political reportage and debate.[130] Misrepresentation of the statistics of results and misplaced or misrepresentative extrapolation of findings, as well as misleading over-emphasis on some aspects of the findings, have been found to be frequent problems in work from a range of disciplines. The difference between statistical and substantive difference is important. Misrepresentation of results (by various means) has also resulted in misleading press releases and news coverage.[131] There is also a reported problem of inappropriate or incomplete samples for the proposed question. Titles and abstracts of articles have been found to be at variance with the actual evidence.[132] In summary, the notable findings in this body of work are the observation of a variance between the title/abstract and discussion and conclusions, as well as "unfounded extrapolation to a larger population or different setting" with resulting implications. Other problems include an emphasis on aspects of results favorable to a particular hypothesis or desire on the part of the investigators. These are clearly dangerous when the work concerns clinical research with implications for treatment. This bias need not always be conscious or deliberate. Unconscious over-enthusiasm at the prospect of data that reveal something that is thought to be "new" or exciting may be a driving force. The zeitgeist (scientific, cultural, or otherwise) may influence what is emphasized in a misleading way. The mummy genomes paper and the reaction to it illustrate many of these.

Discussion and Conclusions

A lot more could be said about these issues. Space does not permit. There are many interesting tributaries to these observations and the history of ideas. The discussions about origins and race in the Nile Valley as conveyed by terminology, concepts, and sampling are likely to continue. There is a zeitgeist related to the colonial enterprise that would strip Egypt and even Nubia from their African origins, although there has always been a variation in opinion about the Nile Valley and the rest of Africa. It is clear that Africa has been commonly constructed in the Western imaginary in a particular way. In terms of human variation, racial thinking and models are still to be found in a range of work. The evidence suggests that this still permeates scholarship, but not necessarily in a consciously biased way. The debate waged in the 18th and 19th centuries about the racial nature of the Egyptians was in its last iteration an effort related to the subjugation of those called "black" or whatever equivalent, and there was clearly lexical manipulation in order to deal with Egyptian variation, which did not conform to some European idealized norm. A close reading of various later work shows ongoing cognitive dissonance but also the acceptance of a population with multiple ancestries and showing a range of affinities depending on the place and date of the Egyptian samples.

The conclusions of some biological distance work using morphometrics have been discussed and related to larger issues concerning interpretation. Problems have been identified in interpretations that involve some sort of typological thinking. The presentations with the phrase "Black Pharaohs" have been shown to be problematic due to a kind of presentism. There are no ancient Egyptian texts that called the Twenty-fifth Dynasty the dynasty of the "Black Pharaohs," and they did not announce themselves as such. This is an imposition and is misleading about the variation in the Egyptian Nile Valley.

The interpretation of the mummy genomes data is problematic due to the sample size and location, comparative sample, over-extrapolation and in some sense misrepresentation of results, spin of one interpretation without sufficient qualification, and failure to consider other data and explanatory narratives of historical interaction with the Near East. The work can also be seen as an example, albeit likely unconscious, of the telling of a kind of passé grand "racial" story of the whole country with inadequate data—and we have seen the citation of the work in a racist interpretation of intelligence. Based on available textual and archaeological evidence, including strontium analysis, the conclusion reflects a kind of positivism in a racial narrative associated with the prestige of genetics/genomics in

work. The authors do not call it that, but the categories of analysis would seem to suggest it. Data do not speak for themselves but with other evidence may be suggestive. The data from Abusir el-Meleq likely more reflect a part of the local population history of women in the latest part of Egyptian history in a particular place if the sample is representative. The statistical inference back into the past is problematic due to the data and also other clear evidence that accounts for the origins. Other DNA data were found to reveal a more complex picture.

In summary, the work on the Nile Valley can be said to have given us "mixed" results in discussions about "race," understanding its place in Africa and biogeography, and also cultural origins. Better syntheses are needed, but a critical awareness of ingrained bias is needed. Methodologically there is need for better teamwork and also better paradigms that acknowledge the biases of past scholarship persisting in the zeitgeist. One of the Ptolemies said that there was always something new coming from Africa. It was true then, and it is still true.

Acknowledgments

There are no financial considerations to report. An earlier version of this paper was presented at the Origins and Afterlives of Kush Conference, held at the University of California, Santa Barbara, in 2019, where an excellent discussion followed the presentation. This contribution is presented to the memories of the late Geoffrey A. Harrison and Alain Anselin. I would like to acknowledge Betsy Bryan for sharing references on southwest Asiatic women in Egypt and John Baines, one of my former advisors, for references, comments, and insights. Anthony Boyce, my major advisor, was an influence in considering conceptual aspects of mapping diversity and relatedness. The lectures of the late Rom Harré were a major influence. I acknowledge the camaraderie of and discussions with Stuart Tyson Smith, Fawzi Gaballah, Audrey Smedley, Fatimah Jackson, Michael Blakey, David Wengrow, Steven Quirke, Sally-Ann Ashton, Chris Ehret, Ngugi wa Thiongo, Christiana Köhler, Jeremy Pope, Vanessa Davies, Salim Faraji, Debora Heard, Denise Doxey, and Jean-Philippe Gourdine. The late Montague Cobb was also an inspiration. We live in perilous times, when the biases of the past rear their heads in all kinds of domains. A critical approach to scholarship and acknowledgment of persistent biases is needed, but first we have to know how to recognize them, an ongoing problem. This paper is dedicated to the memory my late father, my friend Fekri Hassan, and others who struggled to help make lives better for other people in and outside of the academy, and to the memory of those who have lost their lives or suffered senselessly to whatever degree due to a biased world. It is not enough to say that bias is wrong in the abstract; conscious and unconscious epistemological bias and injustice have to be actively countered. Thanks to my wife and children, mother, sisters, and brother.

Appendix

"Race" can be understood in biology or zoology as a rank, that of subspecies, in the Linnaean taxonomic hierarchy. For Darwin, on close reading, this designation ideally applied to populations within a species that were well differentiated, and, on close reading, he seems to suggest that they should be incipient species or nearly so. Darwin believed that taxonomies conceptually should reflect genealogy, and with the rise of molecular biology it has been found that the traditional taxonomic schemes established for some genera and species are not accurate depictions of genealogical relationships or evolutionary history, as with chromodorid nudibranchs, of course far removed from primates, but serving as an example.[133] The commonly named so-called human races have been described as being macro-populational divisions of humankind whose members had more traits in common with others within their race than with those of other races. These human races were based on visible [morphological] traits: an instructive example found in some older books is the taxon called "Negroid," which contained Melanesians, including Papuan (called "Oceanic Negro"), and some African populations, but genetic data revealed that Melanesians are more related to Asian populations. They are not Africans in the recent sense. In some taxonomic schemes these populations were separated. In zoology races/subspecies there were sometimes based on different criteria as to what percentage of individuals had to be distinguishable in order to construct the classification and its taxa. In some formulations, "races" are populations below the subspecies level, i.e., found within designated subspecies. As noted, conceptually at its most extreme the term "race" expresses the incorrect idea that these units consisted of near-uniform

individuals, or individuals having some essential defining traits in common, described by the word "type" and connected to Plato's notion of essence; such a "type" is rigidly defined and necessarily tautological. Variation in racial approaches was/is conceptually attributed to admixture (gene exchange), which produces forms between the "types," with evolution accounting for little variation. In typological thinking, mixtures remain mixtures and never become something new, i.e., never move beyond the mixed construct. The populationist approach ended this perspective: evolution could alter various aspects of the genome of the organism or population of organisms. Human genetic variation at both the level of traits and populations is best described as exhibiting spatial gradients of change and not being collections of distinct "pure" populations even in the ancestral sense—an idea that persists, although not stated.[134] Mathematical approaches sometimes reflect the desire to minimize *within* versus *between* group variation in order to emphasize what is distinctive. Population thinking means acknowledging the variation.

Infraspecific classifications of animals and plants were originally based on morphological or metric, not molecular, traits. In practice, classifications were erected on the basis of certain index traits, and all other variation (old and newly discovered) was simply described in terms of the groupings/classifications based on these. It was assumed that there would be a concordance of traits such that other traits, both known and unknown, would result in similar groupings of examined individuals, but this was often not the case. The underlying assumption was that there was a coadapted complex. Similarity in some traits is not always predictive of either relationship or possession of the same traits, even at the human family level: one's sibling may not have the correct tissue antigen match for an organ transplant, but someone from an unrelated family in a population that is deemed to be very unrelated may have that match. Not all similarity is due to genealogy, and sometimes entities that are more genealogically related are not similar in ways that might be expected. Zoological taxonomists in the 1950s debated the scientific validity of the subspecies taxa that had been described for many species, and also the category itself.[135] Much of that debate centered on whether or not the subspecies as an entity was to be merely a cataloging device or an evolutionary unit.

For Darwin, on close reading, populations to be designated as subspecies would seem to nearly be incipient species, a level of differentiation that does not apply to the populations of living humans or many other species. In practice, Darwin's ideal was not usually realized. Subspecies designations (trinomens such as *Homo sapiens sapiens*) were given to populations based on few morphological traits as noted. Problems noted by zoologists with received subspecies classifications in various species were 1) the non-concordance of traits such that different groupings would occur with different traits, 2) the existence of demes, well differentiated populations within subspecies that may have actually had concordance of traits, 3) polytopicity, the existence of geographically distant populations that were morphologically very similar, and 4) an arbitrariness in the criteria for deciding how much overlap could be allowed in determining subspecies.[136]

Using the criteria of modern systematics (and Darwin), modern humans divide into many populations but no races (subspecies), although structuring can be observed depending on the traits used. It is a colloquial belief that the received traditional racial divisions must be very different from each other, and the conception is that everyone designated as belonging to a particular race is more like everyone in that "race" than those in any other. Molecular data show this to not to be true, and all of the problems related to subspecies designation also apply to the human racial schema. Other problems are 1) a greater difference within the races than between them when data beyond the defining traits are used (making people of different "races" more similar to each other), 2) the existence of clinal variation, spatial variation in traits such as skin color that change gradually, and 3) the finding that genealogical lineages as determined by the Y chromosome and mtDNA connect individuals in different breeding populations and across anatomical phenotypes.[137] This does not mean that clusters cannot be found in data. The issue is what do these mean evolutionarily. It is argued by some that, because there is difference and people can often or usually be identified correctly as "belonging" to a population or some region or to the traditional "races" (as in a forensic situation), this then means that humans divide into races. This is incorrect and circular. The level of differentiation required to make an identification is lower than the level of

differentiation required to declare the existence of subspecies (races). Being able to make an identification—especially into the "traditional divisions"—is sometimes held up as proof of the existence of race. Sardonically, it could be said that, given that each individual is unique and could be identified to him/herself, that logic would lead to saying that each individual is a race.

In some societies "race" is the *term* used for social-identity groups based on external phenotype (outward appearance) or known ancestry, or some combination of these, that fits into the social taxonomy based on custom or even law. It varies across societies, sometimes influenced by economic status. In this case, the received so-called racial taxa are the basis of social and ethnic groups or there is a conceptual link. These demographic groups are a part of official record keeping. Instead of there being "race" and ethnicity as separate groupings, it has been argued that in some societies there are racialized ethnicities as socially or politically functioning descriptions in social practice/social life.[138] It is also possible to speak of phenotypicized ethnicities or social groupings, the author's preferred term, which in some cases would be synonymous with racialized ethnicities, but not always, since in some societies the phenotype, not ancestry is the key identifier—at least outside of one's community. (One's phenotype may not "match" one's "racial" moniker, due to custom.) It is complex: for example, in the United States, Latinx is sometimes listed as a "race" and there is a notion of an "average" phenotype, but in fact Latinos/Latinas have many different ancestries and many phenotypes. Afro-North Americans do as well. Some Latinos with the "expected" stereotyped phenotype have HbS (sickle-cell) genes from unremembered African ancestors, and because they are Latino they are "non-Black" in labeling/ethnic terms.[139] In other circumstances, knowledge of tropical African ancestry in the United States gets one classified as "black" as a social identity. The label "Latinx" in a social world where identities are expressed as non-overlapping categories hides the African ancestry for those who don't know the population history, unless they are specifically "Afro-Latinx." So, one's [ethnically designated] known or remembered ancestors can be different from one's genes' ancestors—to paraphrase Weiss and Long. This idea can be applied to the Nile Valley and other situations. Nubians and other regional southern groups are the appropriate comparisons by bioethnic identity, not by genetic identity in a paradigm that connects to a Eurocentric notion of a "pure" "sub-Saharan" genome, which is an apparent subtext. The issue, if it is one, would be examining the early Egyptian genome for interconnections in the region, not a comparison to a particular Yoruba sample. "Yoruba" does not designate the set of all "sub-Saharan" Africans, let alone connote the gene pool of populations (past and present) who would have been in the ancestral pool of ancient Egyptians.

Group identity or assignment also may also be based on having any known ancestors from a particular group, depending on social or political rules—making possible the existence of contradictions in terms, for example "blacks" who can "pass" for "white" (even Nordics), thus demonstrating the meaning of the phrase the "social construction of race," to which can be added that "race" is only socially constructed when the term is incorrectly used from a zoological taxonomic perspective with the level of differentiation espoused by Darwin. This political demographic use of race is not what Darwin had in mind, but nevertheless it is used and applied by non-specialists because it has a role in everyday life—hence, in some biomedical research the term "race" is applied to social groupings that do not have singular ancestries. Another example is the use of "black" to designate any person of color, as illustrated by the Egyptian Professor Leila Ahmed's experience in England in the 1960s, when she was designated "black," at least in everyday parlance,[140] or the "refusal" of some in United States officialdom to allow Egyptians/Egyptian Americans to legally call themselves African Americans or "black" if they wanted—no matter their phenotype (some have done so anyway). The use of phenotype to make "racial" classifications for social life that function as social identities has led to full siblings (unknowingly) in some groups being classified into different races by researchers,[141] a good illustration of the notion of race as type. Phenotypic variance can be great in sibships, especially in populations and families with recent complex ancestral histories, something that would inform what is possible for researchers from such a group versus others. In some societies, being able to "place" someone based on phenotype is important due to the history of social and political relationships, including oppression. For the ancient world, it may not ever be knowable how phenotype, ancestry, cultural practice,

and language came together in the formation of emic or etic identities. In the case of ancient Egypt there is ample evidence of the biocultural assimilation of foreigners from regions in southwest Asia, Nubia, and Europe, on careful review.[142]

All human populations and individuals are related to one another, but to varying degrees. Any individual within a breeding population may have lineages/ancestors that come from other populations for which there is no historical memory of contact and may be variable in other ways. Groups/populations within a classification constructed on the uniformity of external traits may contain individuals who are divergent in ancestry and molecular traits. The idea of similarity being an indicator of affinity is not being discounted, but contextual information is needed. Individuals may belong to a nationality or an ethnic group with complex histories, with individuals having ancestors not from their current group, that also change to some degree the population's affinity. Various recent historical examples exist: the Inuit descendants of Matthew Henson and Robert Peary, the European descendants of Alexander Pushkin or Alexandre Dumas. Population level examples include the Garifuna, or "Black Caribs," indigenous Indians of the Caribbean who biologically and culturally assimilated tropical West Africans to a degree that has altered the visible phenotype of much of the population to the point of astonishment of some Western observers.[143] One can imagine some Western researchers saying "they can't be Arawak" because of this—which reveals aspects of the cognitive map of those who have "racialized" or "phenotypicized" social identities/ethnicities. For the living Garifuna, having only pre-Columbian ancestry—or the phenotype associated with it—is not the criteria for ethnic identity/group membership. Social rules permit or disallow biocultural assimilation and/or identity persistence. There are other examples, such as in northern Saharan and supra-Saharan Africa, where there are both Arabized Africans and Africanized Arabs. [144]

Gene flow—gene exchange between populations—introduces not only new variation increasing genetic similarity but also increased relatedness, i.e., more shared ancestors. Ancient evolutionary and social processes have led to populations such as the Teda being describable as having "Berber" blood in "Negro" bodies, and some other groups the reverse;[145] but the analysis at one level proceeds from a problematic premise, namely that there would be a fixed diachronic relationship between anatomical phenotype and other traits. This complexity could be viewed with some wonderment but is a problem to typologists and racialists or racists. These examples are reminders of processes that are not new and can be applied to the whole of human history. Social identity and factual genealogy are not necessarily tightly bound. Also, one could be a descendant by nationality (as currently construed) but not a descendant of the predominant population of that nationality (from whom the name is derived), and the reverse is possible. Social identities are shaped by social rules. Non-members may impose other identities rooted in other experiences or based on other criteria, including some from the political realm.

In general, current scholars would deny engaging in what would be called "race" or "racial" history, something that sounds anachronistic and even racist. However, on examination of various work one can show the persistence of racial thinking and approaches using the received racial schema or some sort of seemingly biodeterministic framework.[146] This is a problem in various genetic work.[147] Sometimes older datasets have been collected in terms of the received racial classification—but in that case the harm can be mitigated by signaling how the data are being newly conceptualized and thought about irrespective of the way they were collected; it is incumbent upon the researchers to express how their interpretations do not exhibit racial thinking.

Admixture

Admixture (gene exchange) does occur, and it can be conceptualized in different ways. The effect of admixture can be measured in terms of either gene frequency variation or, as suggested, *relatedness,* which is "measured by the extent to which populations share a similar distribution of common ancestors…."[148] With an increase in common ancestors comes a more similar genome, which is a separate issue from what culture is being practiced or language spoken. One model of admixture is unidirectional, with one group receiving migrants from another (e.g. A—>B) and assimilating all offspring into one identity or locale, in contrast to a new population founded by the intermixing of two distinction populations,[149] e.g., as hypothesized for some Europeans in older literature[150] or as took place in the formation of some island populations—or the formation of what used to be called "triracial

isolates" in some literature. It has been reported that at a relatively low admixture rate per generation with Europeans, the "African" genome in Afro-North Americans of middle-passage descent would largely be replaced in 1,000 years,[151] which can be extrapolated to other situations. This receives additional support from modeling with the gene frequency of the recipient population increasing greatly with the donor in a shorter period if migration is direct versus going through intermediary populations.[152] This one-way biocultural assimilation as noted does not only affect genetic similarity. Irrespective of initial genetic profiles, it adds "foreign" ancestors to the recipient population no matter how defined (local community, nome, etc.), thereby increasing the relatedness of the populations.

Temporally distant admixture may "leave" a lineage in a population that signals contact without changing anything cultural, or identity, after a generation. Admixture's place and context makes it a factor in the biological history of where it occurs, in theory subject to the social and climatic environments of a population/region. The ultimate or distant origin of a gene/haplogroup may not be the proximate source in a population. Genes can flow "stepwise" through various populations; therefore, the presence of a lineage in a population does not necessarily tell when it got there or if it came directly from its "place of origin—mutation" or through a series of intermediate populations—an important concept when considering genetic profiles. (Bioinformatics may help in determining "when," but this can still be problematic.) The issue is the place of emergence of an ethnic population with its specific identity and historical connections. It is to be noted that affinity is not the same as identity; the forces of microevolution contribute to variability, and it is possible to have multiple affinities/relationships. Admixture was often expressed in "racial" terms in the past, which may not be so past. Interestingly, modern Egyptians have been said to be what they "look like" in racialized models—an ancient admixture of "Caucasoids" and indigenous Africans.[153] (This was likely in reference to Egyptians who were deemed "typical" Egyptian in appearance, not Greek or Turco-Egyptians.)

As to other issues, ironically, if Dutton et al.[154] uncritically accept the conclusion of the mummy genomes analysis, then they also have to believe that living Egyptians in general are less intelligent than ancient Egyptians. They also have to face the reality that ancient Egyptian civilization arose in the south and was consistently reinvigorated and defended by southerners. This kind of racism is not new in studies of Egypt. One of the most famous students of Nile Valley osteology said of cultural change in Nubia that "the smallest infusion of Negro blood immediately manifests in a dulling of initiative and a 'drag' on the further development of the arts of civilization."[155] It could be argued that this legacy is embedded in many studies where Africa is concerned. It is clear that old paradigms persisting in the context of new data are a problem, even if not in a conscious or extreme form.

References

Adams, W. 1977. *Nubia: Corridor to Africa*. Princeton: Princeton University Press.

Agrawal, S. and F. Khan. 2005. "Reconstructing Recent Human Phylogenies with Forensic STR Loci: A Statistical Approach." *BMC Genetics* 6.47. doi:10.1186/1471-2156-6-47.

Ahmed, L. 2000. "A Border Passage: From Cairo to America—A Woman's Journey." *The Angle Orthodontist* 52: 19–52.

Ammar, A. M. 1944. *The People of Sharqiya: Their Racial History, Serology, Physical Characters, Demography and Conditions of Life*. 2 vols. Cairo: Institut français d'archaéologie orientale.

Andelkovic, B. 2002. "Southern Canaan as an Egyptian Protodynastic Colony." *Cahiers caribéens d'égyptologie* 34: 75–91.

Anselin, A. 2011. "Some Notes about an Early African Pool of Cultures from Which Emerged the Egyptian Civilization." In K. Exell (ed.), *Egypt in Its African Context*, 43–53 British Archaeological Reports International Series 2204. Oxford: Archaeopress,

Baines, J. 1985. "Color Terminology and Color Classification: Ancient Egyptian Egyptian Color Terminology and Polychromy." *American Anthropologist* 87: 282–297.

———. 1996. "Contextualizing Egyptian Representations of Society and Ethnicity." In J. S. Cooper and G. M. Schwartz (eds.), *The Study of the Ancient Near East in the Twenty-First Century*, 339–384. Winona Lake, IN: Eisenbrauns.

———. 2016. "On Egyptian Elite and Royal Attitudes to Other Cultures, Primarily in the Late Bronze Age." In G. Bartoloni, M. Biga, and A. Bramanti (eds.), *Not Only History*, 127–146.

Winona Lake, IN: Eisenbrauns.

Barrat, J. (dir., writ.). 2014. *Rise of the Black Pharaohs.* Premier date, 1 October 2014. [United States]: National Geographic.

Batrawi, A. M. 1935. *Report on the Human Remains*. Mission archéologique de Nubie. Cairo: Government Press.

———. 1945. "The Racial History of Egypt and Nubia: I." *Journal of the Royal Anthropological Institute* 75: 81-102.

———. 1946. "The Racial History of Egypt and Nubia: II." *Journal of the Royal Anthropological Institute* 76: 131–156.

Bennett, K. A. 1969. "The Typological versus Evolutionary Approach in Skeletal Biology Studies." *American Journal of Physical Anthropology* 30: 407–414.

Bernasconi, R. 2007. "Black Skin, White Skulls: The Nineteenth Century Debate over the Racial Identity of the Ancient Egyptians." *Parallax* 13: 6–20.

Bietak, M. 2003. "Two Ancient Near Eastern Temples with Bent Axis in the Eastern Nile Delta." *Egypt and the Levant* 13: 13–38.

———. 2006. "The Predecessors of the Hyksos." In S. Gitin, J. E. Wright, and J. P. Dessel (eds.), *Confronting the Past: Archaeological and Historical Essays on Ancient Israel in Honor of William G. Dever*, 285–293. Winona Lake, IN: Eisenbrauns.

———. 2010. "From Where Came the Hyksos and Where Did They Go?" In M. Marée (ed.), *The Second Intermediate Period (Thirteenth to Seventeenth Dynasties*), 139–190. Leuven: Peeters.

———. 2016. "The Egyptian Community in Avaris during the Hyksos Period." *Egypt and the Levant* 26: 263–274.

———. 2018. "The Many Ethnicities of Avaris." In J. Budka and J, Ausenmuller (eds.), *From Microcosm to Macrocosm: Individual Households and Cities in Ancient Egypt and Nubia*, 73–92. Leiden: Sidestone Press.

Blakey, M. 2020. "On the Biodeterministic Imagination." *Archaeological Dialogues* 27: 1–16.

Boas, F. 1940. *Race, Language and Culture.* New York: MacMillan.

Boutron, I. and R. Ravaud. 2018. "Misrepresentation and Distortion of Research in Biomedical Literature." *Proceedings of the National Academy of Science* 115: 2613–2619.

Bowcock, A., J. Kidd, J. Mountain, J. M. Hebert, L. Carotenuto, K. K. Kidd, and L. L. Cavalli-Sforza. 1991. "Drift, Admixture and Selection in Human Evolution: A Study with DNA Polymorphisms." *Proceedings of the National Academy of Science* 88: 839–843.

Boyce, A. J. (ed.) 1984. *Migration and Mobility: Biosocial Aspects of Human Movement.* Symposia of the Society for the Study of Human Biology 23. London—Philadelphia: Taylor and Francis.

Brace, C. L., D. P. Tracer, L. A. Yaroch, J. Robb, K. Brandt, and A. R. Nelson. 1993. "Clines and Clusters versus 'Race': A Test in Ancient Egypt and the Case of a Death on the Nile." *The Yearbook of Physical Anthropology* 36: 1–31.

Brand, P. J. 2020. "The Historical Record." In V. Davies and D. Laboury (eds.), *The Oxford Handbook of Egyptian Epigraphy and Paleography,* 59–70. New York: Oxford University Press.

Brandl, B. 1992. "Evidence for Egyptian Colonization in the Southern Coastal Plain and Lowlands of Canaan during the EB I Period." In E. C. M. van den Brink (ed.), *The Nile Delta in Transition: 4th–3rd Millennium B.C. Proceedings of the Seminar Held in Cairo, 21–24 October 1990, at the Netherlands Institute of Archaeology and Arabic Studies*, 441–477. Tel Aviv: E. C. M. van den Brink.

Briggs, L. C. 1957. "A Review of the Physical Anthropology of the Sahara and Its Prehistoric Implications." *Man* 19: 20–23.

Buzon, M., S. Smith, and A. Simonetti. 2016. "Entanglement and the Formation of the Ancient Nubian Napatan State." *American Anthropologist* 118: 284–300.

Cavalli-Sforza, L. L. 1991. "Genes, Peoples and Languages." *Scientific American* 265.5: 104–110.

de Chadarevian, S. 2010. "Genetic Evidence and Interpretation in History." *BioSocieties* 5: 301–305.

Coon, C. 1965. *The Living Races of Man*. New York: Knopf.

Crawford, M. 2006. "Forward." In L. Madrigal (ed.), *Human Biology of Afro-Caribbean Populations,* xi–xiv. Cambridge: Cambridge University Press.

Crawford, M. 2014. Personal communication on the Whit Athey haplotype predictor and Match Likelihood Index, 6 November 2014.

Cruciani, F., R. La Fratta, B. Trombetta, P. Santolamazza, D. Sellitto, E. B. Colomb, J.-M. Dugoujon, F. Crivellaro, T. Benincasa, R. Pascone, P. Moral, E. Watson, B. Melegh, G. Barbujani, S. Fuselli, G. Vona, B. Zagradisnik, G.

Assum, R. Brdicka, A. I. Kozlov, G. D. Efremov, A. Coppa, A. Novelletto, and R. Scozzari. 2007. "Tracing Past Human Male Movements in Northern/Eastern Africa and Western Eurasia: New Clues from Y-Chromosomal Haplogroups E-M78 and J-M12." *Molecular Biology and Evolution* 24: 1300–1311.

Diop, C. A. 1955. *Nations nègres et cultures*. Paris: Presence africaine.

Draper, R. 2008. "The Black Pharaohs." *National Geographic Magazine* 213.2: 35–59.

Du Bois, W. E. B. 1915. *The Negro*. London: Home Library.

Dutton, E., S. F. Bakhiet , K. E. Ziada, Y. A. S. Essa , H. A. Abdelmuti Ali, and S. M. Alqafari. 2019. "Regional Differences in Intelligence in Egypt: A Country where Upper is Lower." *Journal of Biosocial Science* 51: 273–281.

Egorova, Y. 2010. "DNA Evidence? The Impact of Genetic Research on Historical Debates." *BioSocieties* 5: 348–365.

Ehret, C. 1995. *Reconstructing Proto-Afroasiatic (Proto-Afrasian): Vowels, Tone, Consonants and Vocabulary*. Berkeley: University of California.

———. 2016. *The Civilizations of Africa: A History to 1800*. Charlottesville: University of Virginia.

———, S. O. Keita, and P. Newman. 2004. "The Origin of Afroasiatic." *Science* 306: 1680.

Erman, A. 1894. *Life in Ancient Egypt*. London: Macmillan.

Exell, K. 2011. *Egypt in Its African Context: Proceedings of the Conference Held at the Manchester Museum, University of Manchester, 2–4 October 2009.* BAR International Series 2204. Oxford: Archaeopress.

Eyre, C. J. 1992. "The Adoption Papyrus in Social Context." *Journal of Egyptian Archaeology* 78: 207–221.

Fihn, S. 2019. "Combatting Misrepresentation of Research Findings." *JAMA Open Network* < doi:10.1001/jamanetworkopen.2019.2533 >, accessed 23 January 2020.

Fischer, M. S., U. Hoβfeld, J. Krause, and S. Richter. [2019.] "Jena Declaration: The Concept of Race is the Result of Racism, Not Its Prerequisite." 112th Meeting of the German Zoological Society. Friederich-Schilar-Universität Jena, < *uni-jena.de/en/190910-jenaererklaerung-en* >.

Fricker, M. 2007. *Epistemic Injustice: Power and the Ethics of Knowing.* Oxford: University of Oxford Press.

van Gerven, D. P., D. S. Carlson, and G. Armelagos. 1973. "Racial History and Bio-cultural daptation of Nubian Archaeological Populations." *Journal of African History* 14: 555–564.

Giuffrida-Ruggeri, V. 1915. "Were the Pre-dynastic Egyptians Libyans or Ethiopians?" *Man* 15: 51–61.

———. 1916. "A Few Notes on the Neolithic Egyptians and Ethiopians." *Man* 16: 87–90.

Gourdine, J.-P., S. O. Keita, L. Gourdine, and A. Anselin. 2019/2020. "Ancient Egyptian Genomes from Northern Egypt: Further Discussion." *Ankh* 28/29: 155–161.

Gozzoli, R. B. 2000. "The Statue BM 37891 and the Erasure of Necho II's Names." *Journal of Egyptian Archaeology* 86: 67–80.

Grosfugel, R. 2004. "Race and Ethnicity or Racialized Ethnicities?" *Ethnicities* 4: 315–336.

Greenbaum, S. 1991. "What's in a Label? Identity Problems of Southern Indian Tribes." *Journal of Ethnic Studies* 19: 107–126.

Guarino, B. 2017. "DNA from Ancient Egyptian Mummies Reveals Their Ancestry." *Washington Post*, 30 May 2017. < washingtonpost.com/ news/ speaking-of-science/wp/2017/05/30/dna-from-ancient-egyptian-mummies-reveals-their-ancestry/ >.

Haber, M. Jones, A. L. Jones, B. A. Connell, Asan, E. Arciero, H. Yang, M. G Thomas, Y. Xue, C. Tyler-Smith. 2019. "A Rare Deep-Rooting D0 African Y-Chromosomal Haplogroup and Its Implications for the Expansion of Modern Humans out of Africa." *Genetics* 212: 1421–1428.

Harris, J. 1999. "The Mummy of Amenhotep III." In E. Teeter and J. A. Larson (eds.), *Gold of Praise: Studies of Ancient Egypt in Honor of Edward Wente*, 163–174. Studies in Ancient Oriental Civilization 58. Chicago: Oriental Institute.

Harris, J. E. and K. R. Weeks. 1973. *X-raying the Pharaohs.* New York: Charles Scribner's Sons.

Harrison, G. A. 1984. "Migration and Population affinities." In A. J. Boyce (ed.), *Migration and Mobility: Biosocial Aspects of Human Movement*, 57–68. Symposia of the Society for the Study of Human Biology 23. London—Philadelphia: Taylor and Francis.

Harrison, G. A. and A. J. Boyce (eds.). 1972a. *The Structure of Human Populations.* Oxford: Clarendon Press.

Harrison, G. A. and A. J. Boyce. 1972b. "Migration, Exchange, and the Genetic Structure of Populations." In G. A. Harrison and A. J. Boyce

(eds.), *The Structure of Human Populations*, 128–145. Oxford: Clarendon Press.

Hawass, Z., Y. Z. Gad, S. Ismail, R. Khairat, D. Fathalla, N. Hasan, A. Ahmed, H. Elleithy, M. Ball, F. Gaballah, S. Wasef, M. Fateen, H. Amer, P. Gostner, A. Selim, A. Zink, and C. M. Pusch. 2010. "Ancestry and Pathology in King Tutankhamun's Family." *Journal of the American Medical Society* 303: 638–647.

Hawass, Z., S. Ismail, A. Selim, S. Saleem, D. Fathalla, S. Wasef, A. Gad, R. Saad, S. Fares, H. Amer, P. Gostner, Y. Z. Gad, C. Putsch, and A. R. Zink. 2012. "Revisiting the Harem Conspiracy and Death of Ramesses III: Anthropological, Forensic, Radiological, and Genetic Study." *British Medical Journal* 345: e8268 doi: < https://doi.org/10.1136/bmj.e8268 >.

Henneberg, M., M. Kobusiewicz, R. Schild, and F. Wendorf. 1989. "The Early Neolithic, Qarunian Burial from the Northern Fayum Desert (Egypt)." In L. Krzyżaniak and M. Kobusiecwicz (eds.), *Late Prehistory of the Nile Basin and the Sahara,*181–196. Poznan: Poznan Archaeological Museum.

Hiorns, R., G. A. Harrison, A. J. Boyce, and C. F. Kuchemann. 1969. "A Mathematical Analysis of the Effects of Movement on the Relatedness of Populations." *Annals of Human Genetics* 32: 237–250.

Hiernaux, J. 1974. *The People of Africa.* New York: Charles Scribner's Sons.

Howells, W. W. 1973. *Cranial Variation in Man*. Papers of the Peabody Museum. Cambridge: Harvard University.

Johnson, R. F. and T. M. Gosliner. 2012."Traditional Taxonomic Groupings Mask Evolutionary History: A Molecular Phylogeny and New Classification of the Chromodorid Nudibranchs." *PLoS ONE* 7.4: e33479. doi: < 10.1371/journal.pone.0033479 >.

Junker, H. 1921 "The First Appearance of the Negroes inHistory." *Journal of Egyptian Archaeology* 7: 121–132.

Kayser, M., S. Brauer, G. Weiss, W. Schiefenhövel, and P. Underhill. 2001. "Independent Gistories of Human Y Chromosomes from Melanesia and Australia." *American Journal of Genetics* 68: 173–190.

Kamil, A.-A. A.-Q. 1970. *Islam and the Race Question*. Paris: UNESCO.

Keita, S. O. Y. 1993. "Studies and Comments on Ancient Egyptian Biological Relationships." *History in Africa* 20: 129–154.

———. 2005. "History in the Onterpretation of the Pattern p49 a,f *Taq*I RFLP Y Chromosome Variation in Egypt: A Consideration of Multiple Lines of Evidence." *American Journal of Human Biology* 17: 559–567.

———. 2006. "Early Farmers from el-Badari: Aboriginals or 'European' Agro-Nostratic Immigrants to the Nile Valley? Craniometric Affinities Considered with Other Evidence." In K. Kroeper, M. Chłodnicki, and M. Kobusiewicz (eds.), *Archaeology of Early Northeastern Africa* 9, 761–765 Poznań: Poznań Archaeological Museum.

———. 2020. "Reflections on Conceptualizing Africa in Biological Studies with a Historical Component." In M. Ibrahim and C. Rotimi (eds.), *Genetics of African Populations in Health and Disease*, 1–29. Cambridge: Cambridge University Press.

——— and A. J. Boyce. 2008. "Temporal Variation in Phenetic Affinity in Early Egyptian Male Cranial Series." *Human Biology* 80: 141–159.

——— and R. Kittles. 1997. "The Persistence of Racial Thinking and the Myth of Racial Divergence." *American Anthropologist* 99: 534–544.

———, ———, C. D. M. Royal, G. E. Bonney, P. Furbert-Harris, G. M. Dunston, and C. N. Rotimi. 2004. "Conceptualizing Human Variation." *Nature Genetics* 36.11: s17–s20.

Kinder, N., M. D. Weaver, C. Wayant, and M. Vassar. 2018. "Presence of 'Spin' in the Abstracts and Titles of Anaesthesiology Randomized Controlled Trials." *British Journal of Anesthesia* 122: E13–14. <doi: 10/1016/j.bja.2018.10.23>, accessed 23 January 2018.

Kraus, B. S. and C. B. White. 1956. "Microevolution in a Human Population: A Study of Social Endogamy and Blood Type Distributions among the Western Apache." *American Anthropologist* 58: 1017–1043.

Kuper, R., and S. Kropelin. 2006. "Climate-Controlled Occupation of the Sahara: Motor of Africa's Evolution." *Science* 313: 803–807.

Langer, C. 2017. "Forced Migration in New Kingdom Egypt: Remarks on the Applicability of Forced Migration Studies Theory in Egyptology." In C. Langer (ed.), *Global Egyptology: Negotiations in the Production of Knowledges of*

Ancient Egypt in Global Contexts, 39–52. London: Golden House Publications.

Levy, T., E. van den Brink, Y. Goren, and D. Alon. 1995. "New Light on King Narmer and the Protodynastic Egyptian Presence in Canaan." *The Biblical Archaeologist* 58: 26–35.

Lilyquist, C. 2003. *The Tomb of Three Foreign Wives of Thutmosis III.* New York: Metropolitan Museum of Art.

Leach, S., H. Eckardt, C. Chenery, G. Müldner, and M. Lewis. 2010. "A Lady of York: Migration, Ethnicity and Identity in Roman Britain." *Antiquity* 84: 131–145.

Long, J. C. 1991. "The Genetic Structure of Admixed Populations." *Genetics* 127: 417–428.

———, J. Lie, and M. E. Healy. 2009. "Human DNA Sequences: More Variation Less Race." *American Journal of Physical Anthropology* 139: 23–34.

MacGaffey, W. 1966. "Concepts of Race in the Historiography of Northeast Africa." *Journal of African History* 7: 1–17.

Martin, L. and E. Valaitis. 2012. Methods of determining relative genetic likelihoods of an individual matching a population. U.S. Patent 8,285,486 B2, filed 23 April 2008 and issued 9 October 2012.

Matić, U. 2017. "The Best Booty of His Majesty: Evidence for Foreign Child Labour in New Kingdom Egypt." In C. Langer (ed.), *Global Egyptology: Negotiations in the Production of Knowledges of Ancient Egypt in Global Contexts*, 53–64. London: Golden House Publications.

———. 2018. "Decolonizing Historiography and Archaeology of Ancient Egypt and Nubia Part 1: Scientific Racism." *Journal of Egyptian History* 11: 19–44.

el-Maqrizi, T.-E.-D. [n.d.] *A Short History of the Copts and of Their Church.* Translated by S. C. Malan. London: Nutt and Strand (1873). Reprinted: Kessinger's Legacy Reprints (2010).

Mayr, E. and P. D. Ashlock. 1991. *Principles of Systematic Zoology*. New York: McGraw Hill.

McCullagh, C. B. 2000. "Bias in Historical Description, Interpretation, and Explanation." *History and Theory* 39: 39–66.

Mekota, A.-M., and M. Vermehren. 2005. "Determination of Optimal Rehydration, Fixation and Staining Methods for Histological and Immunohistochemical Analysis of Mummified Soft Tissues." *Biotechnic and Histochemistry* 80: 7–13.

Meloni, M., T. Moll, A. Issaka, and C. W. Kuzawa. 2022. "A Biosocial Return to Race? A Cautionary View for the Postgenomic Era." *American Journal of Human Biology* 34.7: 1–24.

Mokhtar, G. 1981. "Introduction." In G. Mokhtar (ed.), *The UNESCO General History of Africa,* vol. II, 1–27. London: Heineman.

Moreno Garcia, J. C. 2018. "Ethnicity in Ancient Egypt: An Introduction to Key Issues." *Journal of Egyptian History* 11: 1–17.

Motulsky, A. G. 1979. "Review of *The Genetics of the* Jews (eds.) Mourant et al." *Science* 203: 1102–1103.

Mourant, A., A. C. Kopeć, and K. Domaniewska-Sobczak. 1978. *The Genetics of the Jews.* New York: Oxford University Press.

Mukherjee, R., C. R. Rao, and J. C. Trevor. 1955. *The Ancient Inhabitants of Jebel Moya*. Cambridge: Cambridge University Press.

Morton, S. G. 1844. *Crania AEgyptiaca*. Philadelphia: John Pennington.

Newman, P. 1980. *The Classification of Chadic with Afroasiatic.* Leiden: Universitaire Pers Leiden.

Nogrady, B. 2017. "Who Were the Ancient Egyptians? Mummy DNA Reveals Surprising Clues." ABC Science News, 30 May 2017. < abc.net.au/news/science/2017-05-31/who-were-the-ancient-egyptians/8572076 >.

Pagani, L., S. Schiffels, D. Gurdasani, P. Danecek, A. Scally, Y. Chen, Y. Xue, M. Haber, R. Ekong, T. Oljira, E. Mekonnen, E. Luiselli, N. Bradman, E. Bekele, P. Zalloua, R. Durbin, T. Kivisild, and C. Tyler-Smith. 2015. "Tracing the Route of Modern Humans out of Africa by Using 225 Human Genome Sequences from Ethiopians and Egyptians." *American Journal Human Genetics* 96: 986–991.

Page, T. 2017. "DNA Discovery Reveals Genetic History of Ancient Egyptians." CNN, 23 June 2017. < cnn.com/2017/06/22/health/ancient-egypt-mummy-dna-genome-heritage >.

Pereira, L. F. Alshamali, R. Andreassen, R. Ballard, W. Chantratita, N. S. Cho, C. Coudray, J.-M. Dugoujon, M. Espinoza, F. Gonzaĺez-Andrade, S. Hadi, U.-D. Immel, N. Jeran, D. Havas, C. Marian, a. Gonzalez-Martin, G. Mertens, W. Parson, C. Perone, L. Prieto, H. Takeshita, H. R. Villalobos, Z. Zeng, L. Zhivotovsky, R. Camacho, and N. A. Fonseca. 2011. "PopAffiliator: Online Calculator for Individual Affiliation to a Major Population Group Based on 17 Autosomal Short Tandem Repeat Genotype profile." *International*

Journal of Legal Medicine 125.5: 629–636.

Peschel, O. 1988. *The Races of Man.* New York: D. Appleton and Company.

Petrie, W. M. F. 1939. *The Making of Egypt.* London: The Sheldon Press.

Prowse, T., and N. Lovell. 1996. "Concordance of Cranial and dental Morphological Traits and evidence for Endogamy in Ancient Egypt." *American Journal of Physical Anthropology* 101: 237–246.

Redford, D. B. 1986. "Egypt in Western Asia in the Old Kingdom." *Journal of the American Research Center in Egypt* 23: 125–143.

Reich, D. 2018. *Who We Are and How We Got Here: Ancient DNA and the New Science of the Human Past.* New York: Random House.

Rogers, Z. R., D. R. Powars, T. R. Kinney, W. D. Williams, and W. A. Schroeder. 1989. "Nonblack patients with Sickle Cell Disease Have African β^s Gene Cluster Haplotypes." *Journal of the American Medical Association* 261: 2991–2994.

Rosa, A., A. Brehm, T. Kivisild, E. Metspalu, and R. Villems. 2004. "mtDNA Profile of West Africa Guineans: Towards a Better Understanding of the Senegambia Region." *Annals of Human Genetics* 68: 340–352.

Sanders, E. 1966. "The Hamitic Hypothesis: Its Origin and Functions in Time Perspective." *Journal of African History* 10: 521–532.

Saretta, P. 2016. *Asiatics in Middle Kingdom Egypt.* London: Bloomsbury Academic.

Schneider, T. 2010. "Foreigners in Egypt: Archaeological Evidence and Cultural Context." In W. Wendrich (ed.), *Egyptian Archaeology*, 143–163. Oxford: Blackwell.

Schuenemann, V.J., A. Peltzer, B. Welte, P. van Pelt, M> Molak, C.-C. Wang, A. Furtwangler, C. Urban, E. Reiter, K. Nieselt, B. TeBmann, M. Francken, K.Harvati, W. Haak, S. Schiffels, and J. Krause. 2017. "Ancient Egyptian Mummy Genomes Suggest an Increase of Sub-Saharan African in Post-Roman Periods." *Nature Communications* 8: 15694. < doi: 10.1038/ncomms 15694 >, accessed 15 December 2018.

Seligman, C. 1930. *The Races of Africa*. Oxford: Clarendon Press.

Sergi, G. 1901. *The Mediterranean Race*. London: W. Scott.

Smith, G. E. 1909. "Anatomical Report (A)." *Egyptian Survey Department, Archeological Survey of Nubia, Bulletin* 3: 21–27.

———. 1923. *Ancient Egyptians and the Origin of Civilization.* New York: Harper and Brothers.

Smith, S. T. 2007. "Ethnicity and Culture." In T. Wilkinson (ed.), *The Egyptian World,* 218–241. London—New York: Routledge.

———. 2018. "Gift of the Nile? Climate Change, the Origins of Egyptian Civilization and Its Interactions within Northeast Africa." In T. A. Blács, A. Bollók, and T. Vidar (eds.), *Across the Mediterranean—Along the Nile*, vol. I, 325–345. Budapest: Institute of Archaeology, Research Centre for the Humanites.

———. 2020. "Racism, Egyptological Stereotypes and the Intersection of Local and International in Kushite Material Culture." Paper presented at the Kush Afterlives Conference, 25–27 July 2020, University of California, Santa Barbara.

Sommer, M. 2010. "DNA and Cultures of Remembrance: Anthropological Genetics, Biohistories and Biosocialities." *BioSocieties* 5: 366–390.

Snowden, Jr., F. M. 1970. *Blacks in Antiquity: Ethiopians in the Greco-Roman Experience*. Cambridge: Harvard University Press.

Spencer, N., A. Stevens, and M. Binder (eds.). 2017. *Nubia in the New Kingdom.* Leuven: Peeters.

Stantis, C., A. Kharobi, N. Maaranen, G. M. Nowell, M. Bietak, S. Prell, and H. Schutkowski. 2020. "Who Were the Hyksos? Challenging Traditional Narratives Using Strontium Isotope ($^{87}Sr/^{86}Sr$) Analysis of Human Remains from Ancient Egypt." *PLoS ONE* 15.7:e0235414. < doi.org/10.1371/journal.pone.0235414 >, accessed 26 July 2020.

Strouhal, E. 1971. "Evidence of the Early Penetration of Negroes into Prehistoric Egypt." *Journal of African History* 12: 1–9.

Takács, G. 1999. "Some Problems of Egyptian's Position within Afro-Asiatic and among African Languages." In G. Takács, *Etymological Dictionary of Egyptian*, vol. 1: *A Phonological Introduction*, 35–48. Leiden: Brill.

Thomson, A. and D. Randall-MacIver. 1905. *The Ancient Races of the Thebaid: Being an Anthropometrical Study of the Inhabitants of Upper Egypt from the Earliest Prehistoric Times to the Mohammedan Conquest, Based upon the Examination of over 1,500 Crania*. Oxford: Clarendon.

Trigger, B. 1978. "Nubian, Negro, Black, Nilotic?" In S. Hochfield and E. Refstahl (eds.), *Africa in Antiquity: The Arts of Ancient Nubia and Sudan*,

vol. 1: *The Essays*, 27–35. Brooklyn: Brooklyn Museum.

Trombetta, B., F. Cruciani, D. Sellitto, and R. Scozzari. 2011. "A New Topology of the Human Y Chromosome Haplogroup E1b1 (E-P2) Revealed through the Use of Newly Characterized Binary Polymorphisms." *PLoS One* 6.1: e16073. < doi.10.1371/journal.pone.001063 >.

Wade. L. 2017. "Scientists thought Ancient Egyptian Mummies Didn't Have Any DNA Left. They Were Wrong." *Science* 356.6341: 894.

Wengrow, D., M. Dee, S. Foster, A, Stevenson, and C. B. Ramsey. 2014. "Cultural Convergence in the Neolithic of the Nile Valley: A Prehistoric Perspective on Egypt's Place in Africa." *Antiquity* 88: 95–111.

Weiss, K. M. and J. C. Long. 2009. "Non-Darwinian Estimation: My Ancestors, My Genes' Ancestors." *Genome Research* 19: 703–710.

Wilkinson, T. A. H. 1999. *Early Dynastic Egypt*. London: Routledge.

Yavchitz, A., I. Boutron, A. Bafeta, I. Marroun, P. Charles, J. Mantz, and P. Ravaud. 2012. "Misrepresentation of Randomized Controlled Trials in Press Releases and News Coverage: A Cohort Study." *PLoS Medicine* 9.9: e1001308 < doi:10.1371/journal.pmed.1001308 >.

Yu, N., F.-C. Chen, S. Ota, L. B. Jorde, P. Pamilo, L. Patthy, M. Ramsay, T. Jenkins, S.-K. Shyue, and L. Wen-Hsiung. 2002. "Larger Genetic Differences within Africans than Between Africans and Eurasians." *Genetics* 161: 269–274.

Zakrzewski, S. 2003. "Variation in Ancient Egyptian Stature and Body Proportions." *Journal of Physical Anthropology* 121: 219–229.

Notes

1 Hiernaux 1974. See Peschel 1888 for a description of "Negroes" with a range of traits.

2 Reported and referenced in Keita 1993.

3 Weiss and Long 2009; Blakey 2020.

4 Keita and Kittles 1997.

5 Snowden 1970.

6 Bennett 1969.

7 Mayr and Ashlock 1991.

8 Weiss and Long 2009; Long et al. 2009.

9 Fischer et al. [2019].

10 Keita and Kittles1997; Keita et al. 2004; Weiss and Long 2009; Blakey 2020; Meloni et al. 2022.

11 Greenberg 1963; Keita and Kittles 1997, after Greenberg 1963.

12 Newman 1980; John Bengston, personal communication; Chris Ehret, personal communication.

13 Bernasconi 2007.

14 Also see Sanders 1969 for other comments.

15 Morton 1844.

16 Fricker 2007.

17 Bernasconi 2007, 16.

18 Erman 1896, 29.

19 Trigger 1978.

20 Wengrow et al. 2014.

21 Mokhtar 1981; Keita 1993.

22 DuBois 1915; Diop 1955; Hiernaux 1974.

23 Seligman 1930.

24 Reviewed in MacGaffey 1966; Keita 1993.

25 Seligman 1930.

26 Sergi 1901.

27 See discussion in Giuffrida-Ruggeri 1915; 1916; Keita 1993.

28 Hiernaux 1974.

29 Junker 1921.

30 Morton 1844.

31 See Nott and Gliddon 1854, fig. 148, 226.

32 Sanders 1966.

33 Junker 1921.

34 Smith 1923.

35 See Smith, 1909; van Gerven et al. 1973.

36 Batrawi 1935.

37 See conclusions in Batrawi 1945; 1946.

38 See Cruciani 2007; Trombetta et al. 2011; Keita et al. 2004; Keita, 2005.

39 See tables and discussion in Keita 2005.

40 Thomson and MacIver 1905.

41 Brace et al. 1993.

42 Boutron and Ravaud 2018.

43 Mukherjee et al. 1955; or Henneberg et al. 1989; other studies as reviewed in Keita 1993.

44 Howells 1973.

45 See, e.g., Diop 1955; DuBois 1915; and others reviewed in Keita 1993.

46 Keita and Boyce 2008.

47 Adams 1977.

48 Noted in Stuart 2007.

49 See distance matrix and plot in Mukherjee et al. 1955.

50 Draper 2008; Barrat 2014.

51 Mukherjee et al. 1955; Keita 1993; Mekota and Vermehen 2005; Keita 2006.

52 Mekota and Vermehren 2005.

53 Baines 1985.

54 Brand 2020.

55 Gozzoli 2000.

56 Petrie 1939,105.

57 Wengrow et al. 2014.

58 Mekota and Vermehen 2005 on the skin histology. Cephalometry: Harris and Weeks 1973, 165.

59 Harris and Weeks 1973, 123.

60 See, e.g., Prowse and Lovell, 1996; Buzon et al., 2016; "Admixture" in the APPENDIX.

61 G. E. Smith 1923.

62 Seligman 1930; Sanders 1966; Peschel 1988. (Peschel speaks of Negroes with "noble Aryan" features or straight hair etc.)

63 See, e.g., Baines 1996, 2016; Lilyquist 2003; Redford 1986; Saretta 2016; Schneider 2010; Moreno Garcia 2018.

64 The evidence is textual and biological as presented here.

65 Langer 2017; Matić, 2017.

66 See essays in Spencer et al. 2017.

67 Wengrow et al. 2014.

68 Saretta 2016; Moreno Garcia 2018.

69 Van Gerven et al. 1973.

70 Draper 2008.

71 Smith 2019. Personal observation and discussions with S. Smith.

72 Matić 2018.

73 E.g., Pereira, et al. 2011.

74 Schuenemann et al. 2017.

75 See, e.g., Reich 2018.

76 Dutton et al. (2019) suggest that Upper Egyptians of today have lower IQs due to sub-Saharan influence and cite the mummy genomes piece in support.

77 See McCullagh 2000. The concerns of historiography have yet to fully influence "genetic" historians.

78 Sommer 2010; Egorova 2010; Blakey (2020) expresses other concerns about biodeterminism.

79 Keita 1993; Wengrow et al. 2014.

80 Gourdine et al. 2020.

81 J. Baines, personal communication.

82 Kraus and White 1957.

83 See evidence in Mukherjee et al. 1955; Keita 1990, 1993.

84 See, e.g., Baines 1996; Saretta 2016; Schneider 2010; Bietak 2006, 2010.

85 Cavalli-Sforza 1991.

86 Yu et al. 2002.

87 Long et al 2009. Different models of gene flow may be informative of various historical circumstances.

88 For the range of evidence, see Redford 1986; Baines 1996; Bietak 2003; 2006; 2010; 2018; Lilyquist 2003; Schneider 2010; Saretta 2016; Langer 2017.

89 Bietak 2003, 2010.

90 Wilkinson 1999; Andelkovic 2002; Levy et al. 1995; Brandl 1992.

91 Redford 1986.

92 Baines 1996.

93 Eyre 1992.

94 Moreno Garcia 2018.

95 Moreno Garcia 2018, 5.

96 See Cavalli-Sforza 1991; Harrison 1984. Harrison considers some models of gene flow through a sequence of populations. See also Harrison and Boyce 1972.

97 Reviewed in Gourdine et. al. 2020; F. Jackson, personal communication.

98 Cruciani et al. 2007; Trombetta et al. 2011.

99 Mekota and Vermehren 2005.

[100] Strouhal 1971; Howells 1973; Henneberg 1989; Keita 1993; Zakrzewski 2003.

[101] Hawass et al. 2012.

[102] Gourdine et al. 2020; data in Hawass et al. 2010; 2012.

[103] Devised by Pereira et al. (2011).

[104] Agrawal and Khan 2005.

[105] Motulsky, 1979, in review of Mourant et al. 1978.

[106] Wilkinson 1999.

[107] Trowse and Lovell 1996.

[108] Kamil 1970; Keita 2020.

[109] This question is rarely asked. Rather the anonymous "slave" as category is objectified.

[110] See Cruciani et al. 2007 and Trombetta 2011 for place of origin.

[111] Leach et al. 2010; the Fayum skull is discussed in Keita 1993.

[112] De Chaderevian 2010; Egorova 2010; Sommer 2010. See Figure 3, Kuper and Krupelin 2006, 806 fig. 3, for habitation cycles in the Nile Valley.

[113] Greenberg 1963; Ehret et al. 2004.

[114] Takacs 1999; Anselin, 2011. See also Ehret et al. 2004.

[115] Egorova 2010. 115a. Hiernaux (1974) addresses the idea of the significance of temporally distant gene flow in discussion of Hamitic.

[116] See Haber et al. 2019. The implications of this for autosomal and mitochondrial DNA are interesting and have not been fully elucidated.

[117] See Weiss and Long 2009 for a slightly different expression of this view, one that points out the residual typological thinking in some genomic work.

[118] Bietak 2006, 2010. See the APPENDIX.

[119] Keita 2005.

[120] Rosa et al. 2004.

[121] Andelkovic 2002; Wilkinson 1999; Levy et al. 1995; Brandl 1992.

[122] Bietak 2016:265.

[123] Stantis et al. 2020.

[124] Ammar 1944. Ammar did various publications on the settlement of southwest Asians in Egypt.

[125] Translated by S. C. Malan.

[126] E.g., Page 2017; Wade 2017; Nogrady 2017.

[127] Trigger 1978.

[128] See, e.g., Keita, 1993; Anselin 2011 in Exell 2011; Wengrow et al. 2014; Smith 2018.

[129] Matić 2018.

[130] Boutron and Ravaud 2018; Fihn 2019.

[131] Yavchitz et. al. 2012.

[132] Kinder et al. 2018.

[133] Johnson and Gosliner, 2012.

[134] Weiss and Long 2009; Long et al. 2009.

[135] Keita and Boyce 2001.

[136] Keita and Boyce 2001.

[137] Described in Keita and Boyce 2001; Keita et al. 2004.

[138] Grosfugel 2004.

[139] Rogers et al. 1989.

[140] Ahmed, 2000. Martin Bernal (personal communication) noted this practice for many non-European groups. The current author observed "black" being applied to Indo-Pakistanis in the media and film in Britain; this has changed over time.

[141] Greenbaum 1991. Some Native American groups intersect with so-called tri-racial isolates.

[142] See Redford 1986; Baines 1996, 2016; Lilyquist 2003; Bietak 2003; 2006; 2010; 2016; 2018; Saretta 2016; Spencer 2017; Moreno Garcia 2018.

[143] Crawford 2006.

[144] Keita 2020. There are different ways that these identities are conceived locally.

[145] Briggs 1957.

[146] Keita and Kittles 1997; Keita et al. 2003; Blakey 2003; 2020.

[147] Weiss and Long 2009.

[148] Harrison and Boyce 1972, and after Hiorns et al. 1969.

[149] Long 1991.

[150] Bowcock et al. 1991. And older DNA study cited to illustrate conclusion rooted in a racial construct.

[151] See Cavalli-Sforza 1991.

[152] Harrison 1984.

[153] Coon 1965.

[154] Dutton 2019. The view expressed in this paper shows that racism in science still exists.

[155] Smith 1909.