THE PHILOSOPHY CLUB

*Collaborative inquiry and dialogic argument with young people*

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# GETTING TO KNOW OUR ANCESTORS

*Facilitator's runsheet for a 100-minute workshop on the limits of paleoanthropological reconstruction and experiential archaeology*



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## Resources needed for this workshop:

- This runsheet, and a speaking ball
- Accompanying slideshow with video clips embedded
- Backup copies of four video clips:
    - Hominin reconstruction – inquiry clip 1
    - Hominin reconstruction – inquiry clip 2
    - Hominin reconstruction – inquiry clip 3
    - Experiential archaeology: Sagnlandet (Land of Legends), Denmark
- Activity cards – the following quantities are for one small group of approx 10 students:
    - Three complete sets of five cards about Roman pottery
    - One pair of header cards: 'Unconfident' and 'Confident'

.....

[0:00]

**COVER SLIDE**

Welcome. Our workshop today is in two parts. We're going to begin with paleoanthropology, which is the study of ancient hominids, including human ancestors and related species dating back at least 40,000 years, and up to 4 million years.

**SLIDE: Part 1: Paleoanthropology**
**SLIDE: > Play video: hominin reconstrution – inquiry clip 1**[1] (2 mins)

*Transcript – clip 1*

**Paleoartist, John Gurche:** This is a reconstruction of Homo Naledi. It's based on fossils that were found the Fall of 2013, deep inside of a cave in South Africa. It's a very interesting species. It's not very much like anything we've found before. so I doubt if there's going to be much argument that this represents a new species.

Basically what I do is study the evidence that exists in the fossil record and I use that evidence to predict what a face might look like. The key to all that is comparative anatomy, so I have to do a lot of facial dissection of great apes, African apes and orang-utans and humans.

**Biological anthropologist, Ryan M. Campbell:** Using again, observations that we make from living apes and then interpolating those observations into the fossils.

**Paleoartist, John Gurche:** From the very beginning this was such a fascinating ancestor to work on, because it's such a weird combination of primitive and more human-like traits.

The final form of a reconstruction of a face is often a surprise to me. It's the cumulative result of all these individual anatomical decisions, but it has this big ta-da moment at the end of a reconstruction which is almost like the end of a mystery story when an identity is revealed. And that's an exciting moment for me to have that often surprising moment of seeing the face as an entirety for the first time.

**Paleoanthropology student, Seth Chagi:** Having these models, having this visualisation of these creatures, I understand how important it can be to see that. The feelings and the thoughts that that inspires.

**Sculptor, Gabriel Vinas:** Those images have a way of stirring our imagination. When you tell someone This is Lucy, or this is the great great grandmother of humanity, or this is Homo Erectus, we come from there, right? If you have a picture of your great, thousand-greats grandmother, that kind of unites us.

**Paleoanthropology student, Seth Chagi:** And I can imagine looking into the eyes of the Taung child. This is a very exciting and new way to experience something that unites all of us.

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[1] These three video clips on reconstructing our ancestors include footage excerpted from the following sources: on YouTube:
- Exclusive: Building the Face of a Newly Found Ancestor (video). National Geographic. 10 Sept 2015.
- Hominin Reconstruction! Truly an amazing thing!' World of Paleoanthropology (video). Interviewees: Ryan M. Campbell and Gabriel Vinas. Interview by Seth Chagi. 1 Dec 2021.
- This Paleo-Artist Recreates Our Early Ancestors' (video). Smithsonian Channel. 28 March 2018.
- Reconstructing the Face of a Prehistoric Human - Homo naledi | Gerasimov's Technique (video). Scientists Against Myths. 24 May 2023.
- Combining art and science, BYU student reconstructs skulls for Life Sciences evolution display (video). BYU Life Sciences. 19 Mar 2021.
- Unveiling the New World-class Exhibit at the Creation Museum: Staring [sic] Lucy and Other Apes (video). Ken Ham. 13 May 2020.

Additional still images are from www.pithecus.org, Smithsonian, New Scientist, Field Museum (Chicago), University of Michigan Museum of Natural History, Cleveland Museum of Natural History, Australian National University, and other internet sources.

[0:02]

**SLIDE: [Three faces reconstructed]** by Ryan Campbell and Gabriel Vinas of pithecus.org

**Discussion** (13 mins)**:**

In the video, the paleoartist, Gabriel Vinas, said: "These images have a way of stirring our imagination." And the interviewer said that these images are important in igniting feelings and thoughts. What feelings, thoughts, or imaginings did you get when you to saw these reconstructed faces of our prehistoric ancestors? *(Pair talk)*

Elsewhere in the film which I sourced this clip from, the paleoartist John Gurche said he always aims to make the face so accurate that the hominid's own mother would recognise them! And in the clip you heard, he also mentioned the surprising moment at the end of the process when he finally views the entire face – and he says that in this moment, "an identity is revealed". Do you agree that the sculptures reveal *identities*?

Can a reconstructed face ever truly capture the person?

What is the true essence of a person?

Is it worth going to the effort and cost of accurately reconstructing the faces and bodies of our ancestors? Does it even *matter* what our ancestors looked like?

By looking at a reconstruction, do we better *know* our ancestors? What can we know of them?

What does it mean to know someone?

[0:15]

**SLIDE: I have chosen to represent…**

**Narrative:**

The anthropological artist Elisabeth Daynès explains, "I have chosen to represent [my subjects with] attitudes that express reflection, pain, compassion and deepest human feelings." She works to give her subjects *personality*. She explains, "My work is both an artistic and scientific challenge. … Scientific because I … have to be rigorous …using [the most up-to-date] scientific data. Artistic because reaching an emotional impact and *transmitting life* requires an important creative dimension unlike a conventional reconstruction that would be realized in a forensic laboratory"[2] (emphasis mine).

Let's have a think about the creative element of conveying emotions, personality and a lifelike quality.

**Discussion:**

(6 mins)

In your opinion, is this creative element important to the project of reconstructing our ancestors? Why/why not?

How do these reconstruction efforts affect our collective understanding of the past? Do they help us better understand, or do they merely *romanticise* the lives of our ancestors?

[2] Adapted from Golembiewski, K. (2016, June 20) Bringing Neanderthals to Life: Sculptures of Elisabeth Daynès. Field Museum. https://www.fieldmuseum.org/blog/bringing-neanderthals-life-sculptures-elisabeth-daynes

[0:22]

**SLIDE: > Play video: hominin reconstrution – inquiry clip 2** (1 min)

*Transcript – clip 2*

**BYU Life Sciences student, Allison Michas:** You can have so many facial expressions. Which one do you choose? The skull doesn't have a facial expression. You just gotta make something up.

**Biological anthropologist, Ryan Campbell:** Intuitively – is pretty much all we've got. It's like a hunch. It's a little bit of science but mostly it's just an assumption.

**Sculptor, Gabriel Vinas:** Usually when these practitioners are interviewed, they'll talk about this hunch, and then they'll handwave a little bit and that'll justify their artistic choice.

**Biological anthropologist, Ryan Campbell:** What people did in the past, it was either intuition or it was a hodge-podge of a little bit of intuition and a little science. Which was like, I'm going to measure two or three apes, not disclose how those measurements were taken, and then come to a conclusion and present that. And that's totally fine if you're just trying to produce an artistic interpretation. It's kind of a personal thing as to whether or not you think it matters that we should be producing scientifically accurate approximations of Plio-Pleistocene hominids.

[0:23]

**SLIDE: "You can have so many facial expressions…**

**Narrative**

At the start of that video, we heard a student say that the skull doesn't have a facial expression, so you've got to make something up.

Then we heard the scientist say that it comes down to personal opinion whether reconstructions ought to be highly scientific, or whether they should be more of an artist's interpretation (largely based on the artist's intuition).

**Discussion:**

What's your opinion? Does it matter whether the reconstructions are highly scientific? Why/why not? *(Pair talk)*

[0:28]

**Introduction**

In this next video, you'll hear discussion about 'Lucy', and in case you're not already familiar, 'Lucy' refers to the partial skeleton of an early australopithecine hominin species, discovered about 50 years ago, and dating back to about 3.2 million years ago. Lucy is often regarded as 'the mother of humankind'.

We'll pick up this video where the last one left off:

[0:29]

**SLIDE: > Play video: hominin reconstrution – inquiry clip 3** (3 mins)

*Transcript – clip 3*

**Biological anthropologist, Ryan Campbell:** It's kind of a personal thing as to whether or not you think it matters that we should be producing scientifically accurate approximations of Plio-Pleistocene hominids. For me and Gabriel [Vinas], it absolutely matters, and it matters for all of the reasons that are important in science, and producing knowledge — new knowledge — that is as objective as it possibly can be… I think we owe it to the public to present things as transparently as possible.

**Sculptor, Gabriel Vinas:** We strive to make it so that it's transparent that these are models, not just in the physical sense but in the scientific sense – that they're always subject to revision.

**Paleoartist, John Gurche:** You start with a skull, and certain measurements on that skull tell you some things about the soft tissue of the face. Ears a boondoggle, really, for people like me who reconstruct heads, because there's not much information a skull can tell you about the form of the ears. It's not true with noses. Naledi had a spine right at the base of the nasal opening that projects out of the nasal cavity. And that tells you that there is at least somewhat of a projecting nose. And that's a human characteristic.

And skin colour is a problem I obviously have to deal with. When I'm thinking about the skin colour that should be appropriate for a specific prehistoric hominid, I look to the populations that are living there today. In this case, I'm dealing with a form that lived in South Africa, so the San people were a good model for me to base the idea of skin colour on.

The actual pattern of the hair – we simply don't have that kind of information in the fossil record, so I'm making a guess there and I'm using commonalities in the hair pattern and faces that you see in great apes and humans.

**Biological anthropologist, Ryan Campbell:** Objective, empirical ways of approximating the soft tissues of Plio-Pleistocene hominids – that's what we are interested in doing. And it has to be falsifiable. You know, it has to be tested, it has to be questioned.

And the reason we're working on that is – I guess it was triggered by what I saw in the Creation Museum. I saw a reconstruction of Lucy in the Creation Museum. Then they presented an argument against forensic facial approximation, saying 'Oh look, we don't really know. Here are this series of faces and it could be anything."

So then it got me thinking, how has no-one really addressed this? There has to be a strong pushback against this kind of misinformation. So that led to us asking the questions – you know, starting at the very beginning – what *do* we know?

How reasonable is it to depict Lucy with very low concentrations of melanin in her skin even though she was from Africa?

We're trying to tell the story of the past, and we're trying to do that as accurately as possible.

[0:32]

**SLIDE: We're trying to tell the story of the past…**

**Narrative:**

Collaborators Ryan Campbell (biological anthropologist) and Gabriel Vinas (sculptor) are "trying to tell the story of the past, and trying to do that as accurately as possible." Sometimes

they purposefully leave elements *out* of their models – things like hair, and ears, which can't be known with scientific accuracy.

**Discussion:**

(14 mins)

In your view, is it better to make a hairless, earless model because the fossil record doesn't tell us about hair texture, length and style, and ear shape; or is it better to *include* these features, even if it means taking a guess, or making things up? In other words, is there a place for *speculation* in these reconstruction efforts?

Someone who claims there *is* a place for speculation is the archaeologist Metin Eren. In an interview, he has said: "non-scientific approaches are [still] valuable… They give us a different *sort* of information"[3] (emphasis mine). Another archaeologist, Jodi Reeves Flores, has commented that non-scientific approaches "have always been used by archaeologists seeking to move beyond description to understanding."

What is the difference between description and understanding?

Are scientific and non-scientific processes equally useful in the quest for understanding, or is one kind of approach better?

Ryan Campbell says 'There has to be a strong pushback to …misinformation." Was it irresponsible of the Creation Museum to suggest that Lucy could have looked like any of those faces in the display (even the light-skinned human-looking one)?

.....

[0:46] **Break**

(3 mins)

.....

[0:49]

**<u>Part 2: Archaeology</u>**

**Card-sorting activity[4]**

**<u>SLIDE: Your team of archaeologists…</u>**

Your team of archeologists has discovered pottery kilns and ceramic artifacts in Roman Gaul (where present-day France is located). Meanwhile, your colleagues across Europe have discovered fragments of similar ceramic artifacts in dig sites across Europe.

How confident are you about drawing the following conclusions?

*Create spectrum with headers as follows:*

**Unconfident**……..……..…**Confident**

[3] Metin Eren (interview subject) quoted in Flores, J. R. (2012), Experimental Archaeology: an ethnography of its perceived value and impact in archaeological research. PhD thesis, University of Exeter. Note that he is also quoted making the very different point that "The archaeological literature is just rife with assumptions about material culture that have no empirical basis. The assumptions may seem logical, but unless you actually empirically test those assumptions in the real world, with physical data, those assumptions are just assertions."

[4] This activity is inspired by Michael Emra's post 'What are the most hilariously wrong conclusions that future archaeologists will draw from the remains of our current civilizations?' Quora. https://www.quora.com/What-are-the-most-hilariously-wrong-conclusions-that-future-archaeologists-will-draw-from-the-remains-of-our-current-civilizations

**Small group deliberation**
(7 mins)

*Distribute **all of the following statements** (on separate cards) **to each of three small groups** (approx 3 students per group):*

> People used to make pottery in Roman Gaul.
>
> There was a substantial trade network in place, enabling Gallic pottery to be distributed across the Roman Empire.
>
> The pottery was in demand, and therefore expensive.
>
> Owning pottery was a mark of high social status.
>
> Owning pottery made people happy.

[0:57]

**Report back & discuss**

(8 mins)

[1:05]

**SLIDE: Sagnlandet Lejre** (Don't play the video yet!)

**Introduction**

Now we're going to watch at a short video that depicts an open-air archeological museum in Denmark in which 10,000 years of Danish history are brought to life. You'll see houses and settings from the Iron Age, Stone Age, Viking Age and 19th century, together with traditional craft workshops and domesticated animals. Let's take a look.

[1:06]

**> PLAY video: Experiential archaeology: Sagnlandet Lejre (Land of Legends), Denmark**[5]

(4 mins)

> *Transcript*
>
> **Narrator:** The past makes us curious. We wonder about life then. What was it like? Were people like us? Were they curious too, and did they wonder about the world around them?
>
> Humans experiment. In Land of Legends in Lejre, we examine and try to understand the people of the past ad the conditions in which they lived.
>
> The people of the past were always changing the world about them by taking up new opportunities and making technological progress. And we are constantly changing the way we understand their world.

[5] This video includes footage from the following sources on YouTube:

- Challenges of the Past - Experimental Archaeology in Lejre (FULL version) (video). TheDanishFlinthead, 29 June 2014.
- Sagnlandet Lejre / Land of Legends (video). SagnlandetLejre, 11 November 2016.

We are continually rediscovering the past in our own ways, for we can never arrive at the absolute truth about the past.

For most of the 100,000 years in which we humans have been producing tools, the most important raw material was flint - the key to understand many aspects of the way people lived in the past.

…

**Woman:** "This time we're trying to make things, and taking it all the way through to producing small samples of artefact that might have been those that were available in prehistory."

**Narrator:** Humankind in the past and the present are connected through our common curiosity and creativity. By investigating the past, we become a little wiser about ourselves and the world about us.

[1:10]

**Narrative:**

**SLIDE: Experimental archaeology**

**Experimental archaeology** involves generating and testing archaeological hypotheses to understand how ancient cultures performed various tasks or feats.

An experiment meets scientific standards when it is:
- goal-oriented
- measurable
- repeatable
- professionally planned
- executed with expert manual skill

One of the main activities of experimental archaeology is replicating historical structures or artifacts using only the technologies and materials that were available at the time.

Experimental archaeology can tell us (for example) what materials were required to build an Iron Age roundhouse, how many people were needed, and how long it took to build.

But what experimental archaeology *can't* tell us is what it was like to live in the Iron Age.

**SLIDE: Experiential archaeology**

**Experiential archaeology** (sometimes called 'historical re-enactment', or 'living history') is the attempt to understand past human existence by re-enacting their experience through activities like being in the wild, spending days without shelter, feeling the adrenaline of hunting, anticipating a meal while butchering an animal, feeling the warmth by the fire, and so on.

What we're talking here is what philosophers call having a *phenomenological experience* – a subjective, conscious experience from a first-person point of view.

**RETURN TO SLIDE: Experimental archaeology**

We saw that conducting scientific experiments about the past (***experimental*** archaeology) couldn't really tell you what it's like to live in the Iron Age.

**RETURN TO SLIDE: Experiential archaeology**

But can ***experiential*** archaeology do this?

[1:12]

**Discussion**

(13 mins)

Can ***experiential*** archaeology tell you what it's like to live in the Iron Age? *(Pair talk)*

> Proponents say that experiential archeology is "a way of understanding things that, otherwise, we have no window on to at all."[6]
>
> But critics say that experiential archaeology is merely theatre; it's like playing dress-up. It can't tell you what it was *really* like to live back then – it only tell you what it's like to live as a modern person living *like* an Iron Age person. Do you agree?
>
> > Some archaeologists have said that in the past, people's understanding of the world would have been shaped by "the rhythm and flow of daily life… collecting water from the spring, chatting with a neighbour… tending flocks, planting and harvesting fields, see[ing] distant hills and remembering the myths and stories about them."[7] This last point is interesting – because while we might re-enact collecting water, tending flocks and harvesting fields, we probably don't know all the traditional stories rooted in the landscape. Does this mean that the "distant hills" hold a very different meaning for us than for our ancestors?

[1:25] **Creative response time** – *if time permits (otherwise the remaining workshop time can be used to complete previous discussions).*

*Creative response time is an opportunity for students to produce any kind of creative response to the discussions they've had today. It could be a written reflection, story, dialogue, comic, poem, drawing, mini-zine, persuasive argument, letter, or whatever other format they like.*

***Suggested Creative Response stimulus:***

**SLIDE: We interpret everything...**

> We interpret everything in our world through the lens of our **identities** and **beliefs**.
>
> Every aspect of our daily routines – from the food we eat, to the way we dress, to the way we act in different social contexts – is imbued with **symbolic meaning**.
>
> But things like 'identities', 'beliefs' and 'symbolic meanings' don't leave clear traces in the archaeological record!
>
> How might archeologists of the distant future interpret the remnants of our 21st century society?

[1:40] **End of workshop**

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[6] Flores, J. R. (2012), Experimental Archaeology: an ethnography of its perceived value and impact in archaeological research. PhD thesis, University of Exeter. Citing Linda Hurcombe.

[7] Bender, B., Edmonds, M., Hamilton, S. and Tilley, C. n.d.: The rituals of routine practice (Unpublished paper).

……..……..……..……..……..

**Background information**

Material remains tell us a lot about how the archaeological site was formed. They also tell us a fair bit about how artifacts were produced and traded. And they tell us a bit about the social and political structures of the era. But they don't tell us much at all about spiritual or religious matters, or people's inner lives, or ideologies.[8] In fact, until quite recently it was common practice for archaeologists to focus on technology, resources, and land-use, rather than focusing on people's emotional, subjective experience.

Archaeologists have tended to look for functionality rather than any deeper meaning. If an archaeologist couldn't explain the function of an artefact, then they'd assume it had ritual meaning. As some critics have said: "there used to be a little black box labelled 'ritual'. In it the archaeologist put anything that did not have a 'sensible' explanation."[9] But the critics argue that the distinction between the 'religious' and the 'secular', between the 'symbolic' and the 'functional' says more about us than about the prehistoric inhabitants. We compartmentalise the world. But these categorisations are a chimera.[10]

[8] For example: It's not hard to go from finding kilns in Roman Gaul to saying they're making pottery there (site formation). Finding that same pottery type all across Europe tells you there must be some substantial trade network in place (economy). There must be some demand for this particular ware to make it all the way across the empire - and therefore it must be expensive. Could it be a marker of high status? (Social Structure) What does it even mean to be a Roman of 'Status'? (Ideology). (Adapted from Michael Emra, 'What are the most hilariously wrong conclusions that future archaeologists will draw from the remains of our current civilizations?' Quora. https://www.quora.com/What-are-the-most-hilariously-wrong-conclusions-that-future-archaeologists-will-draw-from-the-remains-of-our-current-civilizations

[9] Bender, B., Edmonds, M., Hamilton, S. and Tilley, C. n.d.: The rituals of routine practice (Unpublished paper).

[10] Bender, B., Edmonds, M., Hamilton, S. and Tilley, C. n.d.: The rituals of routine practice (Unpublished paper).