Episode 7

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**SPEAKERS**

Johanna Zetterstrom-Sharp, JC Niala, Tom Fearon

**JC Niala** 00:16

Hello, and welcome to the seventh episode of Afro history scapes Podcast, where we give you a different perspective on African history. We tell the story of African histories through objects at the Horniman Museum and gardens in South London. These objects bring to life fascinating stories from the past. Together with objects and histories, we open a different window into African worlds.

**Tom Fearon** 00:45

We show how these objects continue to be used on the continent, and in the diaspora in various ways. The narratives we share are based on research carried out by the whole humans, curators, and community researchers. Each month, we focus on a different theme. But we think another way to explore the history of Africa is through the idiom of movement. Africa is a dynamic continent that has always been on the move. If you're interested in African history, material culture, and museum collections, then this is the podcast for you.

**JC Niala** 01:19

Where your hosts JC Niala

**Tom Fearon** 01:22

And Tom Fearon. And these objects show us how the movement of people, objects and ideas from the African continent has shaped its rich history, and has made an impact on the rest of the world.

**JC Niala** 01:34

This week, we begin on our final theme, which is about technology. Africa is a continent that has always been an early developer, or adopter of technology, and technological processes.

**Tom Fearon** 01:46

From the engineering feats made possible by lost wax casting in the kingdom of Benin, to mobile money developed in Kenya over a decade and a half ago.

**JC Niala** 01:55

And this week, we'll discuss something that all of our listeners have interacted with in their life, and will likely have opinions about even if they don't always consider how it is they have come to drink it, milk. And to discuss the colonial history of milk. We're delighted to be joined by Johanna Zetterstrom-Sharp, one of the curators at the Horniman Museum and Gardens. Welcome your Hannah.

**Johanna Zetterstrom-Sharp** 02:20

Hello, great to be here.

**Tom Fearon** 02:22

Which objects in the collections are related to milk Johanna?

**Johanna Zetterstrom-Sharp** 02:24

Well, today we're going to talk about three objects from Kenya in the Horniman museum collections. These are described in the horniman catalog as an arrow, number 1972.106, a gourd 1972.82 and a fly whisk 1972.128, you're likely to find these everyday items in any museum that has collections from Africa. Except these objects are not what they seem. Not only have they been catalogued incorrectly, they are also used in combination as part of an incredible technology developed by pastoralist communities in Kenya and elsewhere in eastern Northeastern Africa to process milk, making it safe to drink. Today I want to explore how this mobile technology contrasts with European industrial milk practices which have dominated the global expansion of dairy deeply interwoven with the colonial history of milk.

**JC Niala** 03:20

Can you tell us a bit more about the three objects you've chosen?

**Johanna Zetterstrom-Sharp** 03:24

Yes, I'd love to. The gourd is much more than a drinking or storage vessel. It's used to store and ferment milk producing what is known by Kalenjin and Maa speaking communities in Kenya as Mursik, valued for its taste an incredible nutritional properties. Mursik is similar to other forms of soured dairy products, such as yogurt, or sour cream, but the addition of charcoal makes it unique. I'll tell you more about that later. The gourd is beautifully decorated with leather straps colored glass beads and cowrie shells. The arrow was described in the Horniman catalog in 1972, as being used by Samburu communities for hunting animals and in acts of violence against other people. This association of particular communities of people in Africa with violence and the misconception that because a tool could be used as a weapon and must have served that purpose, is common in European museum records. For Maa speakers, such as Samburu, or Massai peoples carrying spears and arrows was often misunderstood by Europeans is indicative of these communities as being inherently warlike. And when I see or read this in the archives, I often think about the inability of Europeans to disassociate our own propensity for war, weaponry and violence from the way others are imagined. Returning to our arrow. This is in fact a bleeding arrow used for the careful and relatively painless extraction of cow's blood to fortify milk, transforming it into a sustainable, nutritious and iron rich meal that can be both made and consumed on the move. The Fly whisk made from the hairs of a cow's tail and a wooden cane is in fact a gourd cleaner. You to carefully apply charcoal to the inside of a gourd, it's fine hairs mean the excess charcoal can be brushed away, leaving a thin fine layer.

**JC Niala** 05:09

Yes, charcoal has been used medicinally for centuries, we always had activated and other forms of medicinal charcoal in our medicine cabinet when I was growing up. We used it for treating diarrhea, and it also formed the base of a herbal medicine used for treating tonsillitis.

**Johanna Zetterstrom-Sharp** 05:25

Yeah, charcoal has incredible properties. These include an ability to absorb smells and tastes and to neutralize dangerous bacteria whilst allowing healthy bacteria to thrive. By using chocolate to clean the inside of a gourd any bacteria left over from the previous batch of fermented milk is removed, and its addition to the next batch also has the effect of killing off dangerous bacteria such as E. coli that thrive in milk. It also speeds up the production of probiotics or lactic acids. Lactic acids help break down lactose in the gut easing stomach upsets that can be caused when human body's attempt to digest this substance that was never really intended for them. It's also said to improve the taste neutralizing bitter flavors.

**Tom Fearon** 06:09

I've seen a lot recently about activated charcoal.

**Johanna Zetterstrom-Sharp** 06:12

The incredible properties of charcoal have obviously caught on. When researching I even discovered a recent trend in drinking charcoal lattes. But when making Mursik, not any old charcoal will do. The charcoal is made from burning sticks taken from specific trees and shrubs that have their own medicinal properties. Known for example, to cure headaches ease coughing or improved digestion. These include African African senna, Lippia kituiensis, and Prunus Africana, or African Cherry.

**Tom Fearon** 06:39

So why is it so important to process milk in this way?

**Johanna Zetterstrom-Sharp** 06:43

That's a really good question. Processing milk is vital because whilst milk is nutritious is also capable of being very dangerous.

**Tom Fearon** 06:51

I've never really thought of milk as dangerous. Can you say more about this?

**Johanna Zetterstrom-Sharp** 06:55

Yeah, sure. As an example, I'm going to transport us back in time and across the UK for the moment. The UK is one of the world's largest consumers of cow's milk, but this hasn't happened by accident. Northern Europe has a long and complicated history with the drinking of milk. But by the 19th century, there was a huge rise in the public demand for milk, particularly in crowded urban centers. This demand was in response to the increased availability of milk as well as the promotion of milks nutritional and health benefits by medics and nutritionists of the day. It was also connected to a rising belief in the benefits of cow's milk for young children, including as a substitution for breast milk for young babies. This proved disastrous, resulting in a significant increase in infant mortality that was eventually discovered to be as a result of E. coli bacteria in the gut causing severe diarrhea. Deaths were particularly high during summer months and in crowded urban areas with poor sanitation. Milk doesn't travel or keep well, particularly in hot weather when dangerous bacteria thrive.

**Tom Fearon** 07:56

And how is this managed in the UK today?

**Johanna Zetterstrom-Sharp** 07:59

While the crisis at the turn of the 20th century, something shared across Europe resulted in the development of mechanized pasteurization. Now this involves heating milk to a really high temperature to kill bacteria, and then rapidly cooling it and bottling it but all this has to happen in a completely sterile environment involving expensive specialized equipment.

**JC Niala** 08:20

This all sounds very different to the tools needed to produce Mursik.

**Johanna Zetterstrom-Sharp** 08:23

Yeah. Although both these technologies process raw milk to make it safe to drink, they create very different products and require very different levels of industrialization. Because sanitized pasteurization is so expensive, it lends itself to large scale production, involving either networks of smallholder dairies, such as in Kenya, or smaller numbers of large scale dairies, such as in the UK. In both cases, it's those companies who process and distribute milk who benefit the most financially and who control the demand for raw milk. Pasteurization also changes the nutritional components of milk, for example, producing healthy bacteria that assists with breaking down lactose and vitamin D.

**JC Niala** 09:06

I have to say my grandmother never trusted that white milk.

**Johanna Zetterstrom-Sharp** 09:09

Well, there is a lot to mistrust. Although what we drink in those big milk cartons is advertised as pure white milk from a natural source. It is in fact a heavily manufactured product that travels great distances and undergoes huge transformation from udder to glass.

**Tom Fearon** 09:26

But milk is also consumed in other forms, isn't it? To enable it to travel even further. For example, dried milk and evaporated milk.

**Johanna Zetterstrom-Sharp** 09:34

Yeah, that's right. Thanks, Tom. The dried milk market is huge, particularly in Nigeria, which is one of the world's biggest markets with dried milk. At the Horniman we actually have a number of objects made from recycled dried milk tins purchased in Lagos in the 1990s. This includes oil lamps, funnels, and soap moulds for making soap. Actually, I'm going to talk about one of those molds. 1990.544vi. What I find fascinating is that all these moulds and funnels and oil lamps are made from a dried milk brand called coast, produced specifically for a Nigerian market by a Dutch company called FrieslandCampina. Established in 1871, during the European milk boom. they have this great tagline, "nourishing by nature", which is pretty contradictory given that they specialize in the industrial processing and transformation of natural milk.

**JC Niala** 10:27

I have to say that slogan, nourishing by nature, reminds me of the 1970s Nestle boycott, when dried infant milk was heavily endorsed as a substitute for breast milk in regions where it can be difficult to even access clean water.

**Johanna Zetterstrom-Sharp** 10:41

Yeah, there's a long relationship between colonial health policy and the policing of women's bodies specifically in relation to encouraging mothers to substitute their own breast milk for cow's milk. In the first half of the 20th century, as women led movements in Britain were campaigning for access to cow's milk for their own young children. Colonial health policy in the Caribbean and in parts of eastern Southern Africa, was instructing women to stop breastfeeding and to substitute their milk for dairy. Women are really prominent in the public conversation around milk in Britain right from the 1700s. And they come to the fore at the turn of the 20th century in particular around infant health. I feel there's so much more to uncover here in terms of the role white British women played in the regulation of women's rights to breastfeed their babies through colonial policy.

**Tom Fearon** 11:28

It sounds like there's a lot to explore there. I'm drawn to the rural imagery on the Coast tin, there are two large black and white cows grazing in front of a windmill.

**Johanna Zetterstrom-Sharp** 11:36

Yeah, the windmill is significant because the company is Dutch. The Netherlands has since the 19th century been one of Europe's biggest dairy markets, underlined by the substantial economic growth at the time as a result of colonial Dutch trade network through for example, the Dutch East India Company. The trickle down of wealth as a result of this often violent manipulation of global trade meant increased investment in the dairy industry at home. These iconic black and white cows are a dutch and german dairy breed called Hollstein Friesians. breeders oversaw the development of Freisians and producers of large quantities of milk and beef, but importantly, also due to their diet of grass which already grew in abundance in Northern European climates.

**Tom Fearon** 12:20

It's interesting that this very Dutch image is used to market milk in Nigeria. Why might that be?

**Johanna Zetterstrom-Sharp** 12:26

Well, interestingly, it's not only the image of the Holstein Friesian that has traveled to Nigeria, at the Horniman when we have a collection of objects and photographs collected by a British family, the Brain family who lived in Ibadan in Nigeria in the 1960s. They were there because Roger Brain, an agricultural scientist was involved in the introduction of friesians to Nigeria through a breeding program aimed at increasing dairy yields. based at the School of Agriculture, University of Ibadan. The 1950s and 60s so boatloads of Friesian breeds shipped from breeders in the UK to ports across Africa as a result of the legacy of the British obsession with milks nutritional benefits. This mass importation of cows was designed to increase the volumes of dairy produced in Africa, and the belief that African cattle breeds produced a lower quality milk to European breeds. Importation of new cattle species was matched by the rolling out of aggressive pasteurization programs across the continent, including in Kenya, that were imagined by colonial policymakers to produce a purer, whiter, cleaner milk product to the locally processed milk, such as Mursik, the fermented milk discussed at the beginning of our conversation. Researchers have explored similar narratives in relation to Burma, now Myanmar, this work has shown how ideas relating to the way different indigenous and imported cattle species was spoken about by colonial era nutritionists and agricultural scientists maps onto a racialized language used to describe people. I think the image on the dried milk can, fat black and white cows grazing in a clearly European landscape reflects the continuation of this association between European cattle breeds and a pure whiter more nutritious kind of milk into contemporary advertising.

**JC Niala** 14:10

You know, I'm curious if British cattle breeders were trying to introduce friesians to places like Ibadan in Nigeria, what were they eating? It's not common to see that kind of European landscape there

**Johanna Zetterstrom-Sharp** 14:22

Well, crossbreeding programs with indigenous cattle attempted to create new breeds that would produce larger volumes of milk, but be more tolerant to heat and drought. But they still require huge amounts of cattle feed and live a very different sedentary lifestyle to the more mobile breeds that are common within pastoral communities. The success of cross breeds and the hungry diets have relied on the transformation of huge tracts of land to introduce new crops that can be used as reliable cattle fields. This includes a reliance on expensive imported machinery, and sometimes the aerial spraying of pesticides. Inconsistent levels of annual rainfall near the equator means a reliance on large scale irrigation in drier months pumping water from river ways, and so reducing the soil nutrients and water supply for other farming communities. The levels of investment required to sustains large dairies means that the industry is monopolized by large corporations and often reliant upon investment from European and North American organizations. I just like to take us briefly back to where we began this conversation with the small scale mobile technology used to process milk based on charcoal. An unfortunate consequence of this kind of industrial agriculture is that many of the medicinal plant species that are also used to create the charcoal, thrive traditional pastoral landscapes, but really struggle to germinate in over cultivated soil. These vital plant species are as a result declining in number. Gosh, everything that you're talking about is so interconnected. Because I remember a program in Kenya, involving improving milk yield in indigenous cattle. The yield did get somewhat bigger, but then the resulting cattle became much less resistant to the tsetse fly and theus sleeping sickness. It just goes to show the trouble with transplanting technologies to places that already have systems that are working perfectly well. Yeah, exactly. The history of milk and Empire is one that consistently applies a northern European relationship with milk to context where it doesn't necessarily fit. This includes a culture of everyday milk drinking, the idea of milk has perfect nutrition. It even includes the assumptions made about how much milk people want and need the breeds suitable for nourishing that need and the type of landscape required to sustain it. The expansion of the dairy industry along these lines continues to dominate global agendas set by organizations like the UN, such as through the UN Sustainable Development Goals. These goals include an emphasis on the benefits of milk for economic growth, nutrition, gender equality, and combating climate change. Milk is one of the most produced commodities worldwide, amounting to 14% of global agricultural trade. As we've discussed, this affects landscapes. Within 2019 alone, over 7% of land globally had been transformed to grow crops to sustain animals bred for milk.

**Tom Fearon** 17:14

Wow, thanks, Johanna, this has certainly made me think differently about what seems like a simple glass of milk.

**JC Niala** 17:19

And for me, it's answered some of the questions I didn't know I had about processed milk. I grew up on raw milk, and we always processed it ourselves at home. So given all of the amazing information that you've shared with us about traditional technologies that make milk safe to drink for people who are on the move, what would you like our listeners to be left with, about how they should think about milk and the way it's processed and marketed around the world?

**Johanna Zetterstrom-Sharp** 17:47

Well for me, I think it's a question of technology and science, and who gets to decide what is useful and good for us, and what knowledge counts . The production of Mursik uses a technology that has been developed to meet the nutritional needs of a community on the move in a warm climate, who have their own long and established dairy culture based on principles of nutrition, hygiene, health and taste. And yet the global narrative and direction of milk is one that continues to be dominated by a northern European relationship with an history of dairy, including the nutritional needs and technological solutions that were developed in response. This disregard for science and technology developed in response to people's understanding of their own environment, its resources, and how to use them to live well not only continues to embed inequality, but it also destroys landscapes by trying to fit them into a mold that was not designed for them.

**Tom Fearon** 18:39

That's a really powerful message to leave us with the Johanna. That technology works best when it's developed with and is part of the environment that it will be used in.

**JC Niala** 18:52

Thank you for listening to this week's episode of Afro historyscapes with me, JC Niala,

**Tom Fearon** 19:00

Tom Fearon

**Johanna Zetterstrom-Sharp** 19:01

and Johanna Zetterstrom-Sharp.

**Tom Fearon** 19:04

Join us next week as we discuss with Community Action Researcher Chinelo Njaka as we talk about the crafts captured in Nancy Stanfield collection, namely spinning cotton, wool use, and some of the textiles.

**JC Niala** 19:17

The Nancy Stanfield collections has turned out to be immensely popular, the collection of photographs taken by Nancy Stanfield who was a British teacher in Nigeria, around the time Nigeria got independence in the 1960s.

**Tom Fearon** 19:31

And many community action researchers have worked with them in different ways. And Chinelo's work on makers and their technological processes is a way that fits nicely with our current theme of technology.

**JC Niala** 19:41

This is Afro historyscapes always something new. Always has been. Always on the move.