The Neglect of the Aztec's Highly Advanced Technologies in European Ethnographic Museums

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Abstract

The Aztec are frequently defined by their ruthless battles, blood sacrifices, magical shamans and ancient culture. This narrative has been maintained in museums of ethnography, where emphasis is put on religion and ritual, at the expense of technological innovation. This paper examines the Aztec uses of highly advanced technology (i.e., civil engineering, architecture, agriculture, metallurgy, information technology) and whether these aspects are represented in the collections of the British Museum (London), the Pitt Rivers Museum (Oxford) and the Volkenkunde Museum (Leiden). Furthermore, this paper offers a rhetorical analysis on how these collections are being displayed in the museums' permanent exhibitions and what narrative the museums are persuading their visitors of. It concludes that the collections within the museums in question are not indicative of innovative advancements, resulting in the primitivizing of the Aztec Empire and condemning them further back in the alleged evolutionary timeline.

Key words:

Museums, ethnography, collections, Aztec, technology, primitivism, evolution

Proud of his wonderful achievements, civilized man looks down upon the humbler members of mankind. He has conquered the forces of nature and compelled them to serve him. He has transformed inhospitable forests into fertile fields. The mountain fastnesses are yielding their treasures to his demands. The fierce animals which are obstructing his progress are being exterminated, while others which are useful to him are made to increase a thousand-fold. The waves of the ocean carry him from land to land, and towering mountain-ranges set him no bounds. His genius has moulded inert matter into powerful machines which await a touch of his hand to serve his manifold demands.

With pity he looks down upon those members of the human race who have not succeeded in subduing nature; who labour to eke a meagre existence out of the products of the wilderness; who hear with trembling the roar of the wild animals, and see the products of their toils destroyed by them; who remain restricted by ocean, river, or mountains; who strive to obtain the necessities of life with the help of few and simple instruments.

Such is the contrast that presents itself to the observer. What wonder is civilized man considers himself a being of higher order as compared to primitive man, if he claims that the white race represents a type higher than all others!

Before accepting this conclusion, which places the stamp of eternal inferiority upon whole races of man, we may well pause, and subject the basis of our opinions regarding the aptitude of different peoples and races to a searching analysis.

(Franz Boas, *The Mind of Primitive Man*, 1911)

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Chapter 1

Introduction

"Maya, Aztecs, Amazon peoples and Incas: ancient cultures with a legendary history" – marks the opening statement of the Central & South America Hall at the Volkenkunde Museum in Leiden. For centuries, museums of ethnography have had a profound fascination for the pre-Columbian empires of Meso- and South America; mythical tales of great warriors, magical shamans, blood sacrifices and primordial culture prevail into the 21st century, alluring curiosity with enchantment and mystery. Nonetheless, how complete is our general understanding of these civilisations? After the arrival of Hernan Cortes in 1519, the rapid decline of the empires shook the continent; forcing a new governing body, thousands of deaths, religious conversion, imposition of foreign language, and, ultimately, near total erasure of Indigenous culture and inherited knowledge. What we know of these empires greatly stems from historical documentation recorded by European chroniclers, whose priorities were arguably not the creation of a candid narrative, but, rather, the justification of colonial aggression.

In actuality, the Maya (~BCE 1800-900 CE), the Aztec (~1250-1520 CE), Amazon peoples (~BCE 14000 – present) and the Inca (~1200-1572 CE) not only occupy different periods in time and space, but also have entirely different, isolated, histories. What can be observed is a re-telling of history that is misleading and creates deceptive narratives. As a product of colonial and racial thinking, empires like the Aztec were reduced to notions of primitivism or barbarism, and banished to the back of the evolutionary timeline, lumped together with their ancient ancestors, or placed out of time entirely. Fixating on perceived religious savagery, most narratives of the Aztec are void of systematic and intelligent innovation, creating the illusion of static and archaic technological achievements.

This paper will consider the role of ethnographic museums in the perpetuation of such narratives. Through an investigation of Aztec artefacts in museum archival collections and permanent exhibitions, I aim to divulge whether European ethnographic museums have an incomplete collection, in the sense that they lack artefacts indicative of a highly advanced society, and how this incompleteness translates into the displays and ultimate (re)presentations of the Aztec Empire. Furthermore, this paper will discuss whether museums with ethnographic collections maintain an account of primitivism in relation to the Aztec, therefore endorsing beliefs about savagery. By examining Aztec technology in particular, the analysis aims to reveal whether museum collections are representative of development or condemn the Aztec to primitivism.

Status Quaestionis

Throughout the decades, scholars have elucidated how Indigenous cultures have been construed as (pre)historic, primitive, ancient, or extinct, especially in the museum context. The end of the 20th century marked a period in which academics and curators were becoming increasingly more aware about the narratives represented within ethnographic museums about the 'Other'. In 1986, James Clifford and George Marcus edited a volume of essays aimed at analysing the methods of ethnographic research; the consequences of such *in situ* fieldwork by the white anthropologist being a vast array of interpretations translated into representations on evolutionary scales.[1] This book, *Writing Cultures: The Poetics and Politics of Ethnography*, encompasses articles from a host of scholars with the task of introducing a "literary consciousness to ethnographic practice".[2]

Borrowing from Clifford and Marcus' title, by 1991, Ivan Karp and Steven Lavine edited the book *Exhibiting Cultures: The Poetics and Politics of Museum Display*, in which not only the field of ethnography was scrutinised but also the exhibition strategies of the ethnographic museum. Karp and Levine argue that the struggle within the ethnographic museum is not only about what is to be represented but also who will have control over the representation.[3] As such, "when cultural "others" are implicated, exhibitions tell us who we are and, perhaps more significant, who we are not".[4]

Complementing these discussions, in 1999, Pieter ter Keurs argued that "colonialism has to a large extent dominated the development of ethnographic museums and the growth of the collections in particular".[5] Due to this, "when looking at the collections in the main ethnographic museums in Europe, we are obliged to keep the socio-cultural background of colonial exploitation in mind".[6] His paper, "Things of the Past? Museums and Ethnographic Objects", details the various ways in which collecting occurred during colonial times. Consequently, ter Keurs offers insights into the "new situation" that ethnographic museums find themselves in; due to increasing cultural hybridity as a result of globalisation, ethnographic museums become responsible to address these changes and grow their collections.[7] Most exhibition styles lack reflexivity about the colonial histories of ethnographic collections,

[1] Clifford, James, and George E. Marcus. *Writing Culture: The Poetics and Politics of Ethnography*. Berkeley, California: University of California Press, 1986.
[2] Ibid., 263.
[3] Karp, Ivan, and Steven D. Lavine. *Exhibiting Cultures: The Poetics and Politics of Museum Display* .Washington, DC: Smithsonian Inst. Press, 1991.
[4] Ibid., 15.
[5] ter Keurs, Pieter. "Things of the Past ? Museums and Ethnographic Objects." *Journal des Africanistes* 69, no. 1 (1999): 67–80.
[6] Ibid., 68.
[7] ter Keurs, Pieter. "Things of the Past?", 76.

causing the ethnographic museum to become a place that portrays "ideas about the "other" in the earlier, cruder forms left over from the time in which the ideas came into being", as stated by Karp and Levine.[8] This phenomenon was further investigated by scholars such as Susan Pearce[9], Flora Kaplan[10], and Jan Nederveen Pieterse[11], who all argue that the classifications utilised by ethnographic museums are remnant of colonial thinking.

However, this colonial thinking had to have presented itself in a certain way, hence, at the turn of the last century, scholars began discussing the interconnectedness of time and memory, and, consequently, how representations of time within the ethnographic museum were contributing to the continuation of beliefs about 'primitive' peoples. In his influential book *The Birth of the Museum* (1995), Tony Bennett discusses the historical development of the ethnographic museum, arguing that "the past, as it is materially embodied in museums and heritage sites, are inescapably a product of the present which organises it".[12] In a complementary book, *Past Beyond Memory: Evolution, Museums, Colonialism* (2004), published almost a decade later, Bennett examines the relationship between evolutionary theory and museums. Due to an increased interest in human evolution during the Victorian era, early anthropologists were thrilled at the possibility that "the past might be reconstructed on the basis of eye-witness accounts of its continuing existence in the present".[13] This notion was further elaborated by Johannes Fabian in his classic work *Time & the Other: How Anthropology Makes its Object*; he challenges "the assumption that anthropologists live in the "here and now", that their subjects live in the "there and then", and that the "other" lives in a time not contemporary with our own".[14] In his view, non-European cultures were not necessarily placed in the past, but rather, they were put outside of time altogether.

Such assumptions can be observed in the writings of 19th and 20th century scholars such as Daniel Wilson (1816-1892), Sir John Lubbock (1834-1913), Edward Burnett Tylor (1832-1917), George Worthington Smith (1835-1917), William Boyd Dawkins (1837-1929) and William J. Sollas (1849-1936), who all utilised the 'comparative method' in their anthropological studies on Indigenous people around the world.[15] Chris Manias defines this

[8] Karp and Lavine, *Exhibiting Cultures*, 379.
[9] Pearce, Susan M. *Museums, Objects and Collections a Cultural Study*. Leicester u.a.: Leicester University Press, 1992.
[10] Kaplan, Flora S. *Museums and the Making of "Ourselves": The Role of Objects in National Identity*. London: Leicester University Press, 1994.
[11] Pieterse, Jan Nederveen. "Multiculturalism and Museums." *Theory, Culture & Society* 14, no. 4 (1997): 123–46.
[12] Bennett, Tony. *The Birth of the Museum*. London, NY: Routledge, 1995.
[13] Bennett, Tony. *Pasts Beyond Memory: Evolution, Museums, Colonialism*. London: Routledge, 2004.
[14] Fabian, Johannes. *Time & the Other: How Anthropology Makes Its Object*. New York: Columbia University Press, 2014.
[15] Manias, Chris. "The Problematic Construction of 'Palaeolithic Man': The Old Stone Age and the Difficulties of the Comparative Method, 1859–1914." *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences* 51 (2015): 32–43.

method as "a notion which assumed that all human groups across time and space could be slotted onto the same scale of development, which moved through a series of stages from the 'lowest savagery' to modern, industrial societies".[16] This brought forth "the idea that modern 'savages' were analogous to prehistoric Europeans, and that the two sets of peoples could explain one another".[17] He notes that "this form of reasoning bridged understandings of past and present 'primitive' populations, defining them within the same framework, and relegated modern 'savages' to the past as superseded phases of development", ultimately resulting in comparisons between, for example, ancient Britons and native Americans.[18] Consequently, anthropological studies in the following decades became saturated with this logic, causing a significant confirmation bias in anthropologists studying Indigenous communities; they were trying to find evidence to support Darwin's theory of evolution.[19] This phenomenon in early anthropology has received significant scholarly attention in other works (see footnote).[20]

Furthermore, as the comparative method "implied a progression up a fairly linear ladder" of development, the literature on the comparative method most frequently analyses studies where the subjects were peoples from Oceania, Africa and the Arctic North, as these communities were most condemned to evolutionary thinking and occupied the lower ranks of the alleged evolutionary ladder.[21] As such, the Americas employ a slightly different position within the history of the utilisation of the comparative method; the Indigenous communities were regularly compared to their 'Europeanised' or 'civilised' counterparts. After their conquest in 1521, the Spanish aimed to forge a "new mestizo elite" and "make the indigenous populations invisible, either by extermination or by their assimilation to "civilization" and the "whitening" of races".[22] This was different in other parts of the world, like Africa, where settlement on the continent itself was less significant in comparison to Latin America. By 1898, all Latin American countries had gained recognition as independent nations, but suffered from

[16] Manias, "The Problematic Construction of 'Palaeolithic Man', 32.
[17] Ibid., 35
[18] Ibid., 32.
[19] Bennett, *Past Beyond Memory*, 22 and 62.
[20] Gamble, Clive, and Theodora Moutsiou. "The Time Revolution of 1859 and the Stratification of The Primeval Mind." *Notes and Records of the Royal Society* 65, no. 1 (2011): 43–63.
Pettitt, Paul B., and Mark J. White. "Cave Men: Stone Tools, Victorian Science, and the 'Primitive Mind' of Deep Time." *Notes and Records of the Royal Society* 65, no. 1 (2010): 25–42.
Barany, Michael J. "Savage Numbers and the Evolution of Civilization in Victorian Prehistory." *The British Journal for the History of Science* 47, no. 2 (2013): 239–55.
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Kuklick, Henrika. "'Humanity in the Chrysalis Stage': Indigenous Australians in the Anthropological Imagination, 1899–1926." *The British Journal for the History of Science* 39, no. 4 (2006): 535–68.
Burrow, John Wyon. *Evolution and Society: A Study in Victorian Social Theory*. Cambridge: Cambridge University Press, 2010.
[21] Manias, "The Problematic Construction of 'Palaeolithic Man', 35.
[22] Kok, Glória. "A Fabricação Da Alteridade Nos Museus Da América Latina: Representações Ameríndias E Circulação dos Objetos Etnográficos Do Século XIX ao XXI." *Anais do Museu Paulista: História e Cultura Material* 26 (2018): 1–30.

an extreme crisis of identity; the new mestizo powers, being most dominant, became the new governing body and representative of the Latin American identity, rendering the remaining Indigenous communities practically extinct.

Eventually, new layers would be added to the notion of 'primitivism' as the mestizo elite, indoctrinated by their European predecessors, imposed notions of savagery on those Indigenous communities that never assimilated. In "The fabrication of otherness in the museums of Latin America", Gloria Kok reflects on the ways in which colonial thinking about evolution has impacted museum displays of pre-Columbian America in Latin America. She argues that 19th century museums that were established within Latin America "followed the classification standards of European museums" which "played an important role in the development of ethnographic research, physical anthropology and the natural sciences".[23] Additionally, Aníbal Quijano further discusses the implications of colonial power in Latin America, stating that the idea of 'race' had no known history before in America, and it has now produced historically new identities, alienating the Indigenous.[24] Veronica Davidov suggests that the creation of a duality between civilisation and nature has caused Latin American natives to be continuously subjected to the latter, where "the 'exotic' is often synonymous with the 'wild' (in the enduring imaginary perception of being untouched by civilisation)".[25] This has also been explored by scholars such as Roque de Barros Laraia[26], Luis Gerardo Morales[27] and Lilia Moritz Schwarcz.[28]

Evidently, ample scholarly attention has been given to the topic of colonial history in the ethnographic museum. Important observations have been made regarding euro-centric biases in museum displays, causing theories to emerge about the primitivizing of Indigenous peoples by placing them in a more distant past or characterising them as timeless. Mesoamerica is infrequently the topic of these conversations; when it is, it is either in an anthropological context, void of discussions about ethnographic museums, or it is a conversation about museums in Latin America specifically. As such, this paper intends to take Aztec collections out of the anthropological context and into the framework of the European ethnographic museum.

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[23] Kok, "A Fabricação Da Alteridade Nos Museus Da América Latina", 16.
[24] Quijano, Aníbal. "Coloniality of Power, Eurocentrism, and Latin America." *International Sociology* 1, no. 3 (June 2021): 181–224.
[25] Davidov, Veronica. "From Colonial Primitivism to Ecoprimitivism: Constructing the Indigenous 'Savage' in South America." *Arcadia* 46, no. 2 (2012): 467–87. https://doi.org/10.1515/arcadia-2011-0030.
[26] Laraia, Roque de Barros. "From Biological to Social Science: the Trajectory of Anthropology in the 20th Century." *Habitus , Goiâna* 3, no. 2 (2005): 321–45.
[27] Moreno, Luis Gerardo Morales. *Origins of Mexican Museology: Sources for the Historical Study of the National Museum, 1780-1940*. Mexico: Iberoamerican University, 1994.
[28] Schwarcz, Lilia Moritz. *The Spectacle of the Races: Scientists, Institutions, and the Race Question in Brazil, 1870-1930*. New York: Hill and Wang, 1999.

Methodology

This paper aims to uncover whether the Aztec were subjected to the primitivizing efforts seen throughout the history of anthropological research and how that manifests itself in the ethnographic museum display. Additionally, this paper will analyse whether, and how, European ethnographic museum collections neglect Aztec technological achievements by (re)presenting them as being less advanced than their European contemporaries. The interest in European institutions stems from the fact that they are often scrutinised through their Africa collections; Latin American collections are most frequently considered in Latin American museums. As the Aztec were technologically advanced, they become a valuable case study in observing primitivizing efforts in Europe.

Two areas are observed: archived collections and permanent exhibitions, with focus on the British Museum (London), the Pitt Rivers Museum (Oxford) and the Volkenkunde Museum (Leiden). These three museums are amongst the oldest museums in Europe with ethnographic collections. Additionally, they all have considerable collections and display history from the 19th and early 20th century which form the basis of this paper. Furthermore, these three institutions all historically function as different types of museums with varying display strategies. The British Museum is a national museum that aims to be universal; the Pitt Rivers Museum acts as a depository of archaeological and anthropological artefacts that are exhibited by type not by culture; the Volkenkunde Museum represents world cultures in a non-contextual, ethnographic manner.

The following chapter details the technology utilized by the Aztec which will be used as standard of comparison for the main argumentative chapters of this paper. Chapter 3 discusses the museum collections by rigorously recording the objects housed by the museums. With the aim of uncovering whether the collections are representative of Aztec society as a whole, data was collected from the museums' online catalogues, and used to create observations about the types of objects, their quantities, and their materials. This approach is aiming to deduce whether the collection is biased towards objects indicative of primitive technology. Chapter 4 considers which objects were chosen to be put on display, and *how*, through a rhetorical analysis of the permanent exhibitions. In this analysis, the notions of ethos, pathos and logos are examined to determine the narrative the museums are persuading their visitors of. Chapter 5 provides a discussion on the observations made in chapters 3 and 4, ultimately leading to the overall conclusion.

Words at stake

In order to evoke a critical discussion, there are certain terms that need to be defined first. This paper will follow these definitions throughout. The definitions below are by no means the only interpretation; the meaning and characteristics of concepts like 'culture', for example, are difficult to find a consensus on and therefore varying definitions arise. However, to avoid misinterpretations and make clear what I mean when using certain words, I have provided definitions based on existing scholarly uses of these terms which I felt encapsulate the core of the concepts well.

Primitive

One of the most frequently, and loosely, used terms in anthropology is the word 'primitive'. It is an example of a word that carries with it an immense heaviness depending on the context within which it is utilized. The word 'primitive' is, in and of itself, not a problematic word. Primitive, in its core definition, simply refers to an origin or a primary stage which assumes a basis for further development. There must be a degree of advancement for a primitive society to occur, therefore, the word is indicative of certain innovation. As such, the 'primitive people of Latin America' ultimately means the 'first people of Latin America', there is nothing inherently wrong with such a statement. What is factually incorrect is using the word 'primitive' to refer to a people that are by no means at a primary stage.

Over time, the word 'primitive' started being used as the opposite of 'civilised'. This connotative definition emerged through years of creating the myth that non-European people were living remnants of a past that the Europeans had already long evolved out of. Yet, can 'primitive' accurately be used as the opposite of 'civilised'? Only if you perceive 'civilised' as synonymous to 'sophisticated' and 'ordered', and 'primitive' as synonymous to 'unsophisticated' and 'chaotic'. This is where confusion occurs in the historical use of the word 'primitive'. The word came to equal "crude", "barbaric" or "rudimentary" in the early, or *primitive*, stages of anthropological studies; a civilisation's perceived primitivism came from judgement of 'savagery'.[29] This logic saturates the collections of ethnographic museums which were established in the 19th century. When using the word primitive in this paper, it is most frequently referring to its connotative definition.

[29] Boas, Franz. *The Mind of the Primitive Man*. New York: The Macmillan Company, 1911, p. 98.

Culture

An early definition, coined by Edward Burnett Tylor (1871), states that "culture, or civilization, taken in its wide ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society".[30] This omnibus, or 'laundry list', definition provides insight into the manners in which cultures were collected in the 19th century for ethnographic museums. Focusing on material culture, there was a loss of importance given to the intangible aspects of culture, like knowledge; objects were taken out of context and displayed alongside other objects that had little or nothing to do with each other. Additionally, there often seemed to be a heavy emphasis on the creation of tradition; multiple items of the same nature were collected to depict how there was an observable pattern of style or function. This came at the expense of innovation and individual creativity as most items were collected simply to demonstrate tradition. The result of this was a notion that certain civilisations were static, that they did not progress and change with time, and that they were so heavily focused on repetition and tradition, that there was no room for technological advancement.

Technology

Breaking down the word technology into its two Greek components, *techne* meaning skill and art, and *logos* meaning thought or principle, it can be inferred that technology is something that requires creative and innovative thinking, that does not naturally occur, but is human-made. As such, many elements of culture are the outcome of technological thinking (i.e., weaving for textile, smelting for decorative arts, cooking for cuisine). However, there are particular technological advancements that can put a civilization at a higher position in a social hierarchy. La Shun Carroll states that technology is "something inherently intelligent enough to either function, be used to function, or be interpreted as having a function that intelligent beings – human or otherwise – can appreciate, something devised, designed (by primary intention), or discovered (by secondary intention) […] a significant beneficiary of rationally derived knowledge […]".[31] According to this definition, technology is related to intelligence, meaning that highly advanced technology is indicative of a highly intelligent people.

[30] Faulkner, Sandra L. "Layers of Meaning: An Analysis of Definitions of Culture." Essay. In *Redefining Culture Perspectives Across the Disciplines*, edited by John R. Baldwin, 27–52. Mahwah, New Jersey: Lawrence Erlbaum Associates, 2006.

[31] Carroll, La Shun L. "A Comprehensive Definition of Technology from an Ethological Perspective." *Social Science* 6, no. 126 (October 23, 2017): 1–20.

When using this definition, it becomes important to define what is meant by highly advanced technology and basic technology. The latter includes the bare minimum of what sets human beings apart from other animal species (i.e., fire, tools, shelter). Advanced technology can include a variety of things with different functions that aid in making life easier and require a certain degree of understanding and critical thinking to achieve (i.e., domesticating crops, weaving and sewing, pottery and other ceramics). *Highly* advanced technology takes a step further in its innovation and complexity; it is due to this that some civilisations were able to dominate and rapidly advance their societies (i.e., civil engineering, large scale agriculture, water management, architecture). The following chapter will highlight the *highly* advanced technology types used by the Aztec.

Fig. 1: Mural of Tenochtitlan by Diego Rivera (1945), Palacio Nacional, Mexico City. The focal point is of the temple precinct. This plaza housed 78 structures including public spaces such as the Templo Mayor" [32], which had a double staircase leading to the two temples dedicated to Tlaloc (north) and Huitzilopochtli (south). Seen in the stretch before the temple precinct is the Chapultepec aqueduct.

[32] de Rojas, José Luis. "Tenochtitlan." Essay. In *The Oxford Handbook of the Aztecs*, edited by Deborah L. Nichols and Enrique Rodríguez-Alegría, 580–606. Oxford: Oxford University Press, 2017.

Chapter 2

Aztec technology

The Aztec society flourished between the 13th century and the arrival of Hernán Cortés in 1519. The initially wandering tribe of the Mexica people, originating from the mythical Aztlan, were the last of the Nahua people (Nahuatl speaking) to reach Mesoamerica, entering the Mexican basin around 1250.[33] They entered a period in which neighbouring *altepetls*, or city states, warred with one another due to the collapse of the city Tula, the capital of the Toltec state, in 1179.[34] Pushed into a region with barren land due to political competition, the Mexica settled on an island in the middle of the swampy Lake Texcoco.[35] Undeterred by the lake's unfavourable conditions, the Mexica began constructing their capital city, Tenochtitlan, in 1325; it would eventually become the largest city in Mesoamerica [Fig. 1].[36] Thus was the emergence of the Aztec civilisation.

Increasing instability caused by the death of the neighbouring Tepanec king, Tezozomoc, resulted in a succession crisis that involved multiple altepetls. This led to the emergence of the Triple Alliance between Tenochtitlan, Texcoco and Tlacopan; they came out victorious against the Tepanec state in 1428 and the Tepanec land was divided three-way.[37] Henceforth, the Aztec civilisation became a rapidly expanding Aztec empire [Fig. 2]. A key factor for such accelerated growth was the incredible development of civil engineering, metallurgy, architecture, agriculture and information technology.

Civil engineering and architecture

From the Olmec period until the fall of the Aztec Empire, Mesoamerican cities followed standard principles of urban planning. In a comprehensive account of Aztec urbanism, Michael Smith detailed the main features of the cities built in this time. He mentions how the majority of cities contained fundamental civic locations, such as "temple-pyramids, smaller shrines, ballcourts, and royal palaces".[38] These structures formed the epicentre and were placed around formal rectangular plazas.[39] Available data on the size of Tenochtitlan suggest that the city occupied roughly 13-15 km^2 in space and housed around 300,000 inhabitants.[40] According to

[33] de Rojas, "Tenochtitlan", 580.
[34] Smith, Michael E. "The Aztec Empire." Essay. In *Fiscal Regimes and the Political Economy of Premodern States*, edited by Andrew Monson and Walter Scheidel, 71–114, 2015.
[35] de Rojas, "Tenochtitlan", 580.
[36] Ibid.
[37] Ibid., 581
[38] Smith, "Aztec Urbanism", 543.
[39] Ibid., 544.
[40] de Rojas, "Tenochtitlan", 581.

José de Rojas, this scale was achieved by "reclaiming land from the lakes, building artificial islands, and connecting them with channels and bridges".[41] There were "streets alongside canals, streets that served as canals, and packed earth streets" which were well connected with bridges that could readily be removed and reinstated.[42] Through the canals and lakes, communication was possible by water travel within Tenochtitlan, but also with the neighbouring cities around Lake Texcoco, whose waters were divided by a dam known as the dike of Nezahualcoyotl [see bottom Fig. 2].[43]

De Rojas states that the dams and bridges were so well installed that Spanish chroniclers mentioned that "eight riders on horseback could circulate simultaneously on these avenues, which were transected at intervals to permit the flow of water and allow the movement of canoes".[44] Lastly, beside the road leading to Tlacopan, was the Chapultepec aqueduct. Due to the undrinkable conditions of the salty water in the lake, and unreliable rainfall, this aqueduct was one of the main sources of fresh water for the city.[45] Remarkably, the aqueduct consisted of two separate and parallel pipes; while one was undergoing maintenance, the other could continue to supply the necessary water [see Fig. 1].

Additionally, the Aztec were accomplished builders who used a variety of tools of hard stone and obsidian blades.[46] Due to the unstable, moist soil, which was prone to sinking, the builders of Tenochtitlan evolved to use *tezontle*, a strong but lightweight volcanic stone that was easy to cut but held secure. Additionally, excavations have uncovered that the foundation of Tenochtitlan was created by driving large and stable wooden poles into the lake bed and earth.[47]

Exploring Aztec science and technology, Francisco Guerra suggests that the Aztec were also acquainted with the properties of tar; they used *chapopotli* which was a mixture created with the same bonding and waterproofing purposes as asphalt.[48] The use of cement and mortar as binding material is noteworthy as "Mesoamerica was the only area in the New World where lime mortar was used".[49] Furthermore, it appears as though the Aztec mason used many of the same techniques as the ancestral inhabitants of Mesoamerica, the Olmecs; these include "the plumb (temetztepilolli), water level (atezcatl), ruler (tlahuahuanaloni), compasses (tlayolloanaloni), square (tlanacazanimi), trowel (tenextlasoloni), wedge (tlatlilli), and the

[41] de Rojas, "Tenochtitlan", 588.
[42] Ibid.
[43] Ibid., 591.
[44] Ibid.
[45] Ibid.
[46] Aguilar-Moreno, Manuel. "Aztec Architecture" 2 (2007).
[47] Ibid, 5.
[48] Guerra, Francisco. "Aztec Science and Technology." *History of Science* 8, no. 1 (1969): 32–52.
[49] Ibid., 42.

lever (quamniztli)".[50] Aztec architecture incorporated a sense of order and symmetry, as critically described by Manuel Aguilar-Moreno. The city was divided into four large quarters, representing the four cardinal directions. Most pyramid-temples utilised the same general pattern; guided by cosmology, they "always faced west and were cardinally located on the eastern side of the town centre/plaza border […] the double staircase also faced west, where the sun descended into the underworld".[51] The great sense of organisation reflected the power of the empire and aided in mobilising people and materials to expand their territory.

Fig. 2: First map of Tenochtitlan seen in Europe, published in Nuremburg in 1524 along with copies of Hernan Cortes' letters to Emperor Charles V. It has been suggested that this map was based on Indigenous maps of the city, thus representing local views. South is located at the top of the map.

Agriculture

In order to feed the fast-growing population of Tenochtitlan in an area where the soil was not fruitful, the Aztec developed the *chinampa* [Fig. 3]; a floating field that provided exceptionally high yields per unit of land.[52] In an extensive study on this agricultural technique, Edward Calnek describes that a chinampa was made by "alternating layers of mud and thick mats of

[50] Guerra, "Aztec science and technology", 43.
[51] Aguilar-Moreno, "Aztec Architecture", 7.
[52] Calnek, Edward E. "Settlement Pattern and Chinampa Agriculture at Tenochtitlan." *American Antiquity* 37, no. 1 (January 1972): 104–15.

decaying vegetation (Cespedes) over shallow lake bottoms, or in marshy zones".[53] The lake bed was rich in organic matter and nutrients which allowed the produce to flourish on the floating plot. Further studies by Robles et al. discovered that, to reduce field edge erosion, willow branches were sowed around the plot.[54] As a whole, the chinampa stood roughly 50 cm above the surface of the lake. Due to its structure, the chinampas were irrigated subsurface, however, the Aztec created additional barriers for flood control and the salinization of water.[55] Around Tenochtitlan there were roughly 35 square kilometres of chinampas responsible for creating a reliable food supply.

Fig. 3: Unidentified artist, date and location. Aztec men building a *chinampa* by interlacing reeds mixed with mud. The soil receives moisture from the lake that flows below.

Metallurgy

Though the Aztec had no access to iron and little access to bronze, their metallurgical practices were incredibly advanced. The metals they used instead were "copper (tepuztli), gold (teocuiltatl) or divine [sun] excrement and, in a much lesser degree, silver (ixtacteocuiltatl) or white divine [moon] excrement".[56] Guerra articulates that the most common type of Aztec

[53] Calnek, "Settlement Pattern and Chinampa Agriculture at Tenochtitlan", 105.
[54] Robles, Braulio, Jorge Flores, Jose Luis Martinez, and Patricia Herrera. "The Chinampa: an Ancient Mexican Sub-Irrigation System" *Irrigation and Drainage*, 2019, 115–22. https://doi.org/10.1002/ird.2310.
[55] Ibid.
[56] Guerra, "Aztec science and technology", 45.

mining was "the work on copper oxide, carbonate and even the difficult sulphide ores".[57] Through an investigation on several codices, such as the Mendoza, Sahagun and Tlotzin, Guerra explains the Aztec smelting processes. In the Nahuatl version of Sahagun's codices (Book 9, chapter 16), the Aztec technique with gold is detailed; the complex technical problems the Aztec were able to solve have caused scholars like Easby (1957) to conclude that, in comparison to Europe, the Aztec produced gold of the highest quality.[58] Furthermore, though not exactly a metal, but rather naturally occurring volcanic glass, obsidian was widely used in the Aztec Empire. Many tools and weapons were crafted using elements of obsidian due to its strong and sharp properties.[59]

Information technology

In a critical analysis, breaking down the Aztec writing system, Hanns Prem explains how Aztec writing "was a combination of two independently working but related and cooperating subsystems"; 'narrative pictography' and 'hieroglyphic writing'.[60] The former was a system in which information was recorded not by the verbal form of the word but rather by interpreting and representing the message visually.[61] In several cases, a graphic was used to represent several meanings, in such cases the context was most important.[62] Hieroglyphic writing, on the other hand, transmitted information in its linguistic form. This subsystem was more directly tied to speech than the narrative pictographic messages.

A lot of what we know about the Aztec has been derived from what they documented. These documentations include names, technological techniques, important events and trade relations with neighbouring altepetls. Though the writing system itself, relying on visual representations, is still rather basic in relation to the alphabetised writing systems we know today, it was advanced enough to tell stories, perform mathematical computations and record important information which was crucial for the political advancement of the empire. The Aztec engraved these messages in stone but also recorded them in codices. The Spanish conquistadores "were so taken aback by the existence of these "painted books" or "books of symbols" that priests and administrative officials allowed their production to continue into

[57] Guerra, "Aztec science and technology", 45.
[58] Ibid., 46.
[59] Parry, William J. "Production and Exchange of Obsidian Tools in Late Aztec City-States." *Ancient Mesoamerica* 12, no. 1 (2001): 101–11.
[60] Prem, Hanns J. "Aztec Writing." Essay. In *Supplement to the Handbook of Middle American Indians* 5, edited by Victoria Reifler Bricker, 5:53–69. Austin, Texas: University of Texas Press, 1991.
[61] Ibid., 54.
[62] Ibid., 55.

colonial times".[63] Most existing codices were created after the Spanish conquest and commissioned by the Spanish to learn more about Aztec culture, religion, but most importantly, economy, in order to "successfully levy taxes".[64]

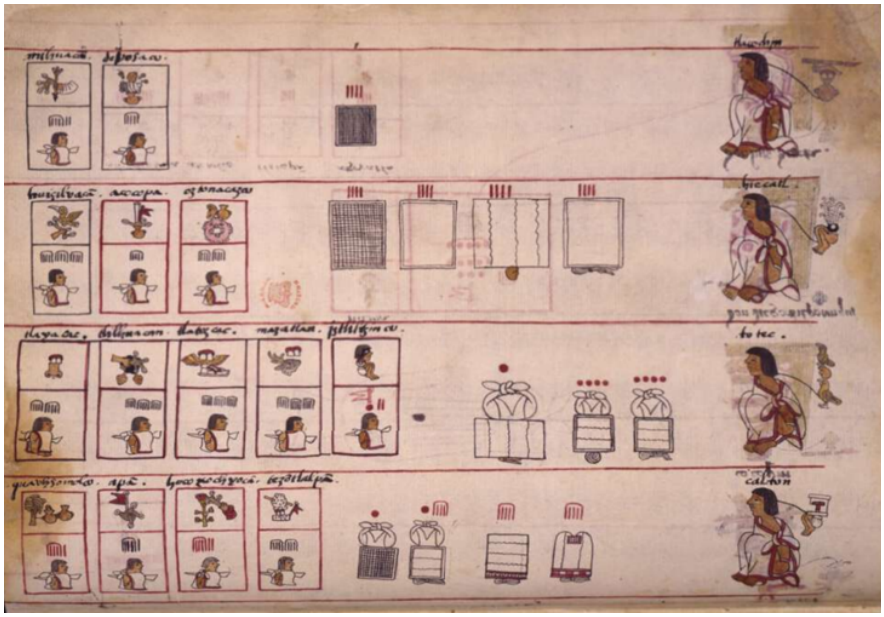

Fig 4: The Codex Tepetlaoztoc, also known as the Codex Kingsborough, illustrating the history of the people of Tepetloaztoc, 16th century, The British Museum, Am2006,Drg.13964.

Art & Culture

It is often said that art is the signature of civilisations. The creation of patterns and figures dates back to the earliest humans and has been present all through history and prehistory. Most of what we know about the Aztec comes from the art that still remains. Archaeologists excavate an abundance of figurines, painted pottery shards and stone sculptures which form a large basis for our current understanding of Aztec culture. Though art is most certainly a form of technology, in so far as it requires skill and intellect, within the scope of this paper, it does not comply with *highly* advanced technology. This is due to the fact that objects such as figurines and painted patterns represent ideologies, aesthetics or beliefs, which are linked to abstract thought, and not per se scientific advancements.

[63] Batalla Rosado, Juan José. "The Historical Sources: Codices and Chronicles." Essay. In *The Oxford Handbook of the Aztecs*, edited by Deborah L. Nichols and Enrique Rodríguez-Alegría, 91–114. Oxford: Oxford University Press, 2017.
[64] Ibid., 93.

Chapter 3

Museum collections

The previously discussed technological developments are indicative of a highly advanced society in the manner in which technology was priorly defined. However, these developments seem to be neglected in museum displays, who often focus heavily on narratives of conquest and religion. Nevertheless, before accusing museum curators of harbouring certain biases, it becomes relevant to investigate the collections themselves. In the 19th century, it seemed common for anthropologists to seek information to support notions of human evolution. As such, it would be expected that the objects collected by such individuals are indicative of 'primitive' or 'Stone Age' technology (i.e., stone and clay artefacts).

Furthermore, for a long time, the model of quick replacement was perpetuated, which suggests that these supposed 'Stone Age' and 'inefficient' Indigenous technologies were eagerly replaced by more sophisticated European technologies.[65] This model creates a notion of static Indigenous technology, where there is no room to discuss innovative developments; pre-Columbian technological advancement became irrelevant in comparison to the technological change thereafter.[66] Additionally, and arguably most importantly, the greatest limitation in the model of quick replacement is the fact that the *process* of replacement is not addressed; the change seems to be sudden and all-encompassing, ignoring the sequence of events that led to the replacement.[67] Consequently, museum collections became saturated with such ideas, and these collections prevail into the 21st century, resulting in collections where there is often little evidence to support narratives representative of pre-Columbian *highly* advanced technology.

This lack of evidence is further maintained by the fact that museums are greatly dependent on what archaeologists managed to excavate; stone and clay artefacts are often most abundant and therefore collections are likely to have a significant number of such objects. Moreover, the collector also plays an important role in the type of collection the museums have. It is very possible that collectors were drawn to artefacts pertaining to a certain aesthetic or artistic value, additionally contributing to a collection that might not contain objects indicative of *highly* advanced technology. From this perspective, the assumption that the collections were

[65] Rodríguez-Alegria, "Narratives of Conquest", 33.
[66] Ibid., 36.
[67] Ibid.

influenced by evolutionary thinking is lost. However, it is still possible that the collections strengthened evolutionary biases in later research on the objects.

There are several approaches that can be taken to analyse how the aspect of 'technology' is present within museum collections; how many objects are available that are indicative of *highly* advanced technology? Is there an imbalance in the types of objects collected? Are there 'curiosities' that are not representative of Aztec society? This chapter will consider the technology types presented in chapter 5 and determine how the collections of the British Museum, the Pitt Rivers Museum and the Volkenkunde Museum fall into these taxonomies. Should the collections contain mainly objects indicative of Stone Age technology (hand axes, spears, objects made of bone, clay or stone (tools or instruments) etc.), it could be argued that the collections 'primitivize' the Aztec. In such cases, it is worth delving into the provenance of the artefact to uncover its collector and whether they may have been biased towards evolutionary thinking.

The tables 1 to 3 reveal the rough total number of Aztec objects, distinguished by 'technology type', in each museum; 'rough' because the manner in which the museums have classified their objects merges Aztec (1200-1521 CE) objects with artefacts from different civilisations, like the Olmec (BCE 1600-400) or Toltec (900-1179 CE), making it difficult to filter through the hundreds of items and retrieve precise results. The amount in each technological category was derived by observing the materials and uses of the objects in line with the information presented in the previous chapter. The last category, "art & culture", incorporates all objects that make up artistic elements of Aztec society (i.e., figures, ornaments, cups/bowls/dishes, instruments), and are the *outcome* of technological development.

Table 1: Number of objects in each technology type in The British Museum, London

Type of technology	Amount (#)	Percentage (%)
Civil engineering and architecture	17	3,0
Agriculture	0	0
Metallurgy	11	1,9
Information technology	99	17,7
Art & culture	431	77,2
Total	558	

Table 2: Number of objects in each technology type in The Pitt Rivers Museum, Oxford

Type of technology	Amount (#)	Percentage (%)
Civil engineering and architecture	1	0,9
Agriculture	0	0
Metallurgy	3	2,7
Information technology	4	3,7
Art & culture	101	92,7
Total	109	

Table 3: Number of objects in each technology type in The Volkenkunde Museum

Type of technology	Amount (#)	Percentage (%)
Civil engineering and architecture	5	2,0
Agriculture	0	0
Metallurgy	1	0,4
Information technology	43	17,2
Art & culture	201	80,4
Total	250	

Civil engineering and architecture

The Aztec were skilful civil engineers; the Templo Mayor stood tall with a base of 100x80 metres and a height of 60 metres, and was covered in stucco or mortar for waterproofing. Certain objects can be emblematic of larger technological developments in civil engineering. The British Museum has nine samples of mortar or stucco, the Pitt Rivers Museum has one, and the Volkenkunde Museum has none. Temples were a crucial and central point of all Aztec communities. Situated at the town plazas, and towering over the rest of the land, the temples were an unavoidable vision in the skyline. Models or figures of temples were frequently made with their relevant deities detailed at the top of the temple pyramid. Two of the three museums are in possession of such models: The British Museum has three and the Volkenkunde Museum has five. They offer insight into the temple structures through their miniaturised replications.

Nevertheless, the difficulty of collecting architecture can be overcome by the relatively modern invention of the photograph. The photograph was a major development for archaeological and anthropological research in the late 19th and early 20th centuries. All three museums have a vast number of photographs depicting large temples and structures. The British museum has a total of 41 images of Aztec architecture, containing two well-preserved

photographs from 1890 inscribed "Aztec ruins" [Fig. 5]; The Pitt Rivers houses 39 photographs of Aztec structures taken in the 1950s; and the Volkenkunde Museum owns 121 images, some enclosing incredible detail on civil structures like canals and drains [Fig. 6]. Though these photographs are not Aztec in and of themselves, they should not be ignored as museum objects indicative of Aztec civil engineering and architecture in the larger discussion at play.

Fig. 5: Photographic print of "Aztec ruins" (1890), associated with McCarthy, Am,Maud,B64.60 at the British Museum, London.

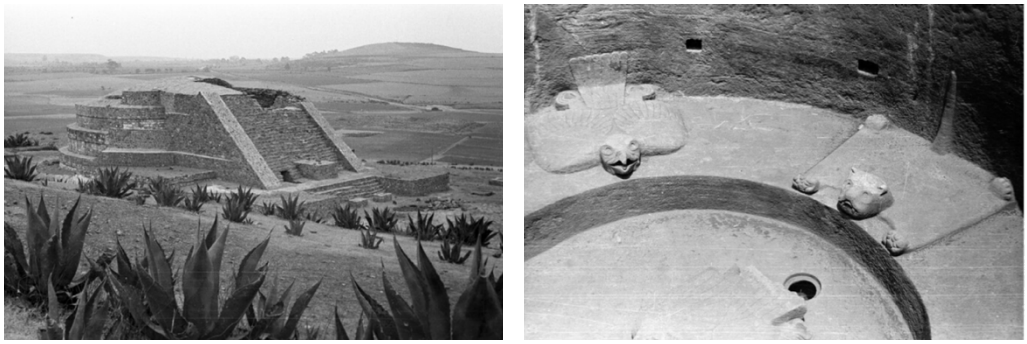

Fig. 6: Photographic print of "Calixtlahuaca ruins" (left) and "Malinalco ruins" (right) by Bodil Christensen, 1935 and 1937 respectively, at the Volkenkunde Museum, Leiden

Agriculture

None of the three museums in question have artefacts that could be used to represent Aztec agricultural practices. There are no tools, specimens, or photographs that exemplify Aztec agriculture. Yet, the knowledge of large-scale crop production was fundamental to the expansion of the Aztec Empire. The previously discussed *chinampa* and the development of hill-side terracing were technological advancements that revolutionised the agriculture industry in Mesoamerica; they are currently being studied extensively due to 21st century concerns about unsustainable food production.

There are three speculations that could be made about the lack of objects: (a) the Aztec agricultural practices were seen as primitive due to lack of, for example, beasts of burden, (b)

the Aztec were recognised as advanced and therefore posed threat to Europeans justifying occupation and conquest, (c) there was no interest in collecting agricultural objects. Some scholars have posed arguments in support of (a); the agricultural technology of the Aztec was determined to be inferior to that of Europe, using 'Neolithic' and 'Stone Age' tools, thus, the Aztec 'eagerly' adopted the European farming techniques.[68] This narrative, backing the model of quick replacement, caused a steep decline in the production of Aztec agricultural tools and overtime they were lost to history.

Other scholars have discussed the possibility of (b) being true; Steven Crum explains how it was mandatory for all Aztec citizens to attend an educational institution, where they were taught important practical skills, like agriculture, which "became a threat to Spanish hegemony", and so the schools were closed and replaced with Spanish Catholic institutions.[69] With effort, the conquistadors convinced their home country of the barbarism of the Aztec and the need for intervention, which required a degree of past-mastering and primitivizing of the Aztec not necessarily in line with reality. Considering Aztec agricultural practices were in some ways superior to European practices, collecting objects indicative of such development could contradict colonial justification.

Still, option (c) is equally likely. Collectors were often looking for objects of value; either in their function or in their beauty. Agricultural objects, tools in specific, might not have been as appealing for collectors seeking curiosities and artistic creations. Therefore, they were not admired and held no place in a museum or private collection.

Metallurgy

As the European ages are distinguished by knowledge concerning metals, it becomes increasingly relevant to investigate metallurgical practices when discussing the notion of evolution and development. The Aztec had substantial knowledge about the production of gold, silver and copper objects; copper being one of the most commonly used materials, alongside obsidian. Nevertheless, such materials are not represented within the museum collections in question. Table 4 presents how many objects there are in the collections made out of copper, gold, silver, obsidian, stone and clay, and what percentage of the whole collection they make up. The latter (stone and clay) serve as a medium of comparison; if objects of gold, silver,

[68] Rodríguez-Alegria, "Narratives of Conquest", 34.
[69] Crum, Steven, "Colleges Before Columbus: Mayans, Aztecs and Incas offered advanced education long before the arrival of Europeans" Volume 3, No. 2 - Fall 1991.

copper and obsidian were not widely collected, which materials are, then, the most numerous in quantity?

The lack of metallurgical artefacts, and the abundance of clay and stone artefacts, suggest an incompleteness in the collections of the three museums studied. Perhaps it is incidental that 69,2% of the British Museums Aztec collections, a significant 90% of the objects at the Volkenkunde, and 67,9% at the Pitt Rivers Museum, are made of clay, and the second most frequently collected material in all three museums is stone. However, such imbalances can lead to the emergence of misleading narratives in line with 19th century evolutionary thought. These large collections would not be so outlying, should objects of copper, gold and silver also have been collected in larger quantities, but this is not the case.

Table 4: Frequency of materials in the Aztec objects of the British, Pitt Rivers and Volkenkunde museums

	Copper (#)	**Copper (%)**
The British Museum	6	1,1
The Volkenkunde Museum	2	0,8
The Pitt Rivers Museum	0	0
	Gold (#)	**Gold (%)**
The British Museum	3	0,5
The Volkenkunde Museum	0	0
The Pitt Rivers Museum	0	0
	Silver (#)	**Silver (%)**
The British Museum	1	0,2
The Volkenkunde Museum	0	0
The Pitt Rivers Museum	0	0
	Obsidian (#)	**Obsidian (%)**
The British Museum	19	3,4
The Volkenkunde Museum	1	0,4
The Pitt Rivers Museum	2	1,8
	Stone (#)	**Stone (%)**
The British Museum	134	24,0
The Volkenkunde Museum	13	5,2
The Pitt Rivers Museum	16	14,7
	Clay (#)	**Clay (%)**
The British Museum	386	69,2
The Volkenkunde Museum	225	90
The Pitt Rivers Museum	74	67,9

The lack of gold and silver artefacts can be explained by the fact that stone and clay artefacts are simply the most widely excavated artefacts. This is in part due to their durability, but equally due to the fact that during the Spanish conquest, Cortes had ordered his men to melt down "cruder gold objects into bullion worth over 250,000 pesos and kept intact the finer pieces with artistic value", as suggested by Timothy Walton.[70] Through this process, many gold (and silver) artefacts were destroyed for their profit. Only a handful of the gold and silver items sent back to Spain by Cortes were not melted down, thus making them rare and valuable.[71] It is therefore not entirely the fault of the museum and collectors that such artefacts are not available. It is the manner in which Aztec artefacts were handled in history that has led to the current incompleteness in Aztec metallurgical collections. Still, the contemporary consequence of this is that the museums have no objects to display showing the quality of metallurgy the Aztec achieved, and the narrative becomes incomplete.

Of the objects made out of copper, gold, silver and obsidian, most of them are decorative. This is logical as museums are largely displays for art. Notably, the metal artefacts not melted down by Cortes were those pertaining artistic value. This makes it difficult for museums to present technological innovation, as the objects available are often only indicative of aesthetic values. The British and Volkenkunde Museum are both in possession of copper bells used for clothing. Additionally, the other four 'copper' objects at the British Museum are the mosaics, which are only in part copper; the gold and silver pieces at the museum are ornaments. Of the obsidian artefacts, each museum has a collection of lip- and ear-ornaments which make up the majority of the obsidian collection. The Pitt Rivers Museum has obsidian arrow-heads, as does the British Museum, which also has a collection of obsidian 'magical mirrors' used by Aztec shamans. Evidently, the scope of the collections is limited to stone and clay, making it appear as though the few metallurgical objects are an anomaly.

Table 5: Five most frequently collected Aztec objects at The British Museum

Object Type	Amount (#)	Percentage (%)
Figurine/figure	148	26,5
Spindle-whorl	72	12,9
(Printing) stamp	69	12,3
Vessel	44	7,8
Bowl	28	5,0

[70] Walton, Timothy R. *The Spanish Treasure Fleets*. Sarasota, Florida: Pineapple Press Inc., 1994.
[71] Ibid., 18.

Table 6: Five most frequently collected Aztec objects at The Pitt Rivers Museum

Object Type	Amount (#)	Percentage (%)
Ceramic sherd	49	45,4
Ceramic head	16	14,8
Spindle-whorl	3	2,8
Dish	3	2,8
Vessel	3	2,8

Table 7: Five most frequently collected Aztec objects at The Volkenkunde Museum

Object Type	Amount (#)	Percentage (%)
Dish fragment	49	19,6
Printing stamp	42	16,8
Ceramic figure	39	15,6
Spindle-whorl	33	13,2
Ceramic figure fragment	16	6,4

Information technology

An important development in all of human history was the creation of a writing system; documentation allowed for the spread of knowledge between people but also between generations. As such, written records are crucial for understanding complexities and nuances in culture and tradition. Printing stamps were collected in remarkable quantities compared to other tools. The British Museum houses 69 stamps and the Volkenkunde Museum contains 42, making up 12,4% and 16,8% of their collections, respectively [Tables 5 and 7].

The Aztec used printing stamps to efficiently produce pictorial writing on various surfaces. A widely accepted description of the printing stamps, or 'sellos', suggests that they were used to transfer ink onto skin and cloth. However, the use of the printing stamps is largely contested as there is not much primary data available. Field (1967) explicitly states that "no compelling evidence exists for identifying any use of these stamping devices".[72] In his own words: "I reject the commonly accepted explanation of facial and body decoration, together with cloth and pot stamping. I suppose that some authority once stated that sellos were used for such purposes and that ever since, without giving the matter another thought, almost

[72] Heimpel, Wolfgang. "Observations and the Use of Pre-Hispanic Mexican Stamps." *Texas Notes on Pre-Columbian Art, Writing and Culture* 60, no. 1 (January 1994): 1–5.

everyone has repeated it".[73] He later proposed that these stamps were used by shamans who printed the images on paper used by the Aztec for distribution to the public.

Still, there is new evidence that suggests the stamps were in fact used to decorate the body. According to Heimpel (1994), the clay printing stamps, in particular, were used to imprint tattoos or patterns on skin.[74] Particular designs were used in specific situations. Women would stamp certain patterns on their cheeks for beauty, as detailed in the an unpublished Sahagún codex written in Nahuatl stored in the Historical Academy of Madrid.[75] The larger stamps, however, could not have been used for such reasons as they do not fit the size of a cheek. The Spanish edition of the Florentine manuscript of Sahagún (Book 2, Chapter 34), describes how imprisoned men were "stained clear blue" and then "they striped them with tiles" before sacrificing them to Huitzilopochtli.[76] Nevertheless, there is no certainty in any of these interpretations as the codex is difficult to decipher. The Codex Borgia, similarly mentions the staining of sacrificial victims, but does not mention the stamping process. Still, it can be argued that the 19th century collectors of these stamps believed the widely accepted usages that Field (1967) so explicitly protested; the staining of skin.

The Aztec stamps owned by the British Museum were collected almost exclusively by Henry Christy (1810-1865). Having donated 6,976 objects to the museum in total, Christy is one of the British Museum's most important collectors. He was a member of the Linnean Society, which was dedicated to the study of natural history, evolution and taxonomy.[77] He travelled in Mexico with Edward Burnett Tylor who was one of the main scholars utilising the aforementioned comparative method in his studies of Indigenous people. Tylor maintained that all societies passed through three basic stages of development: from savagery through barbarism to civilisation.[78] In such a definition of evolution, societies with basic technology (e.g., Amazonian tribes) belonged to the savage stage, technologically more advanced civilisations who were still practicing 'immoral' rituals (e.g., the Aztec) were perceived as barbaric, and the Europeans were the epitome of development.

Amongst the stamps, Christy also donated a ritual and battle axe, a sacrificial mosaic knife and a ceramic spoon to the museum. These items seem to be indicative of Tylor's suspicions regarding the evolutionary stages of the human being, and it seems too coincidental

[73] Heimpel, "Observations and the Use of Pre-Hispanic Mexican Stamps.", 2.
[74] Ibid.
[75] Ibid., 3.
[76] Ibid., 4.
[77] "Henry Christy." Collections Online | British Museum. Accessed November 17, 2022. https://www.britishmuseum.org/collection/term/BIOG122138.
[78] Manias, "The Problematic Construction of 'Palaeolithic Man', 35.

that such items were collected by these particular historical figures. As the stamps were, and to an extent still are, believed to be used during sacrificial ceremonies, the collecting of these items could be linked to European chroniclers' obsessive fascination, and equal disgust, towards the practice of human sacrifice. Additionally, at the Volkenkunde Museum, the stamps have been classified within the taxonomy "religion and ritual", further suggesting that these stamps were used in such settings and therefore, the collecting of them might have been associated with the same interest in collecting sacrificial knives or other ceremonial objects.

Furthermore, the spread of Aztec hieroglyphs is inherently linked to the understanding of the Aztec calendar. The Aztec measured time with a sophisticated sun stone following an accurate yearly representation of 365 days known as *Xiuhpōhualli*, as well as a 260-day ritual calendar called *Tonalpohualli*, together forming a 52-year period occasionally referred to as a 'calendar round'. The Aztec calendar draws heavily from the infamous Mayan calendar and is impressive in its accuracy of astronomical knowledge. The sun stone clearly indicates a degree of understanding of the cosmos, mathematics and earthly cycles. The Volkenkunde Museum is in possession of a sun stone replica (as the original is rightfully residing in the National Museum of Anthropology in Mexico City). The object forms an integral part of Aztec culture as everyday life, quite literally, revolved around the dial. Replicas are an innovative way to hurdle over the difficulties of obtaining 'the real thing', and, frankly, the same knowledge can be derived from replicas in a museum display. Similarly, the Pitt Rivers has a cast of a relief model of a calendar stone and a ceramic model of the sun stone.

The British Museum contains two calendars, neither are the sun stone, and both are made of human bone. It is curious that the only indication of calendrical knowledge in the British Museum's collection is represented by the uses of human remains. There is no record of research for either object and the collectors remain unknown. It seems as though these items were collected as a curiosity; they do not reflect Aztec calendrical knowledge as a whole and therefore cannot indicate the Aztecs' exceptional knowledge of time. Rather, such items are inherently associated with the human sacrifices so notoriously written about in 19th and early 20th century literature; they perpetuate a scholarly bias towards the discussion of human sacrifice rather than other, arguably more representative, aspects of Aztec society

Lastly, and most importantly, codices are crucial to understanding Aztec writing and culture in general. The British Museum has 22 codices, of which most are early 19th century facsimiles replicating early 16th century originals. These include, amongst others, the Codex Borgia, Codex Aubin, Codex Cospi and several Humboldt fragments. Similarly, the Pitt Rivers also has a reproduction of the Codex Aubin. Furthermore, the British Museum houses several

codices painted soon after the fall of Tenochtitlan in 1521, including an original Codex Aubin also referred to as the Xuihpohualli of Tenochtitlan Codex, which details the 440-year history of the Mexica people beginning with their origins and ending with the arrival of Hernan Cortes and his army. Artefacts such as the codices are of the most insightful due to the chronological telling of events, the pictorial representation of everyday life, the detailing of techniques used for metallurgy, agriculture and engineering, and, naturally, the recording of information. They must be some of the most valuable remaining items of the Aztec for historians.

Art & culture

It is within this category that the majority of the museums' collections comply. This category involves all artefacts that are central to the creation of culture but not necessarily representative of *highly* advanced technology. Considering the previous distinctions of technology, basic technology (i.e., fire, tools, shelter), advanced technology (i.e., domesticating crops, weaving and sewing, pottery), and *highly* advanced technology (i.e., civil engineering, large scale agriculture, architecture), the objects within 'art & culture' encompass artefacts belonging to advanced technology, or lower. These include items like figurines, spindle-whorls, ornaments, instruments, ceramics, smoking equipment, whistles, masks, and so on. The most collected artefact in each museum is the figure or figurine, made of both stone and clay. For many figures, only fragments or sherds remain. Additionally, most figures depict religious deities or ritual scenes. The large collections of figures show an inclination towards collecting artefacts of artistic value. The fascination towards non-European art in the 19th and 20th centuries carried with it an aura of exoticism. Perhaps the figures were collected simply because they were beautiful, or maybe they were collected because they were considered a curiosity.

During the Renaissance, mastering naturalistic art was seen as a form of advanced technology and skill; hyper realistic paintings were considered the epitome of high culture and civilisation. It was during this time that the Spanish landed in Mesoamerica. The art forms of the Aztec, being rather abstract and often depicting deities imagined as mythical figures, were far from realistic. Additionally, many figures of deities were used in ceremonial rituals, where they were 'fed' with blood. This could have created a fascination towards these strange, 'exotic' figures, and consequently they became emblematic of the practices that condemned the Aztec to barbarism and void of advanced technology. Having a collection with many of these religious figurines results in an emphasis on stories about religion, which comes at the expense of other potential narratives.

Additionally, the movement of Primitivism in modern art rose in the 19th and 20th centuries, by artists like Picasso and Gauguin. There appeared to be a romanticisation, or idealisation, of ancient cultures which often involved the art forms of non-European regions. The very name of this movement judged those non-European cultures as primitive, even though the style was ironically aiming to elucidate the excellence of abstract non-European art. The consequence of this movement meant that artistic artefacts of the Aztec were seen as primitive and ancient, instead of simply existing in their own right. Perhaps, Primitivism in modern art became a motivation to collect and display more artistic objects from non-European regions, causing the collections to develop an imbalance in the number of figurines compared to other artefacts.

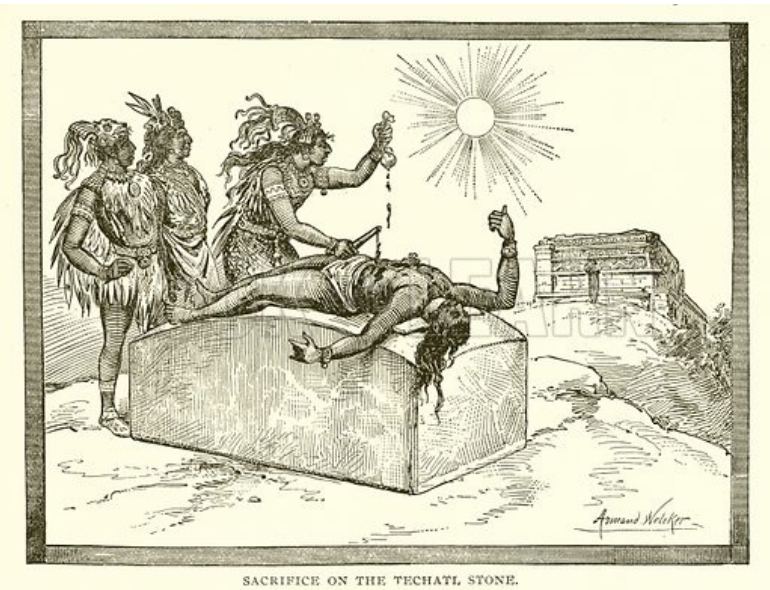

Fig. 7: Sacrifice on the Techatl Stone, engraving from The Story of Man by JW Buel, 1889, Historical Publishing Co.

Another artefact that has similar connotations of exoticism and barbarism, and is housed in each museum, is the sacrificial knife. In the case of the Volkenkunde Museum, it is the only non-ceramic tool. The British Museum owns the infamous mosaic sacrificial knife. The Pitt Rivers is in possession of the blade of a knife that has been classified as sacrificial; the object name mentions the word *techatl* in brackets. The *techatl* stone [Fig. 7] was a stone upon which prisoners of war were sacrificed to the gods. Though the knife owned by the Pitt Rivers Museum has no handle or indication that it was indeed used for sacrificial rites, the museum has ultimately labelled it as such. The consistent collecting of artefacts like the sacrificial knife indicates a deep fascination with the ritual practice, but also suggests a profound disapproval with the religious rites the Aztec partook in. The notorious justification maintained by Spanish settlers of their civilising missions stemmed from the perceived barbarism of the sacrifices and

the collecting of knives could have been used as evidence that the conquistadors' presence in Mesoamerica was necessary. The copious collecting of religious artefacts could be associated with the imposition of Christianity on Aztec people and the abolishment of Indigenous religious practices. If the Spanish wanted to convert the Aztec to Catholicism, they first had to understand, but also invalidate the Aztec belief system.

Additionally, each museum has a considerable collection of spindle-whorls relative to other objects that they house. They are some of the few objects that are not inherently religious. The spindle-whorls are curious in their quantities, but the answer is rather straightforward, a single whorl does not provide enough observations for a generalised conclusion. Therefore, many whorls are needed in a collection to form accurate inferences. The interest in these objects stems from the interest in Mesoamerican cloth production.[79] The whorls vary in sizes, the smaller ones were used to spin cotton and the larger ones to spin maguey, a thicker fibre.[80] They have been used to investigate an array of topics ranging from craft production to gender identity.[81] The collecting of spindle-whorls is common in many museums, "this is likely because they are frequently decorated, generally found as whole pieces, and appear exotic to modern observers because they do not have an obvious function", according to Angela Huster.[82]

Nevertheless, such large collections have resulted in the creation of imagined Aztec tradition. Cotton was not widely accessible in Mesoamerica; its production came from Northern regions who paid taxes to the Aztec kings. Regular citizens would not have been wearing cotton, still, 40 of the 69 whorls at the British Museum are cotton whorls collected by Joseph Pyke who was the British Consul-General in Mexico in the 1930s. The reason for the large quantity of cotton whorls is unknown, but it is curious that Pyke worked for the same consul and was friends with Constantine George Rickards (1876-1950), who was involved in laundering fake Aztec artefacts and selling them to museums.[83] Similar imbalances in the cotton and maguey whorls can be observed at the Pitt Rivers and Volkenkunde museums. As the spindle-whorls were made of clay or stone, and 'exotic' to European travelers, these tools could have been suggestive of the type of 'primitive' technology white anthropologists and ethnographers were searching for. Even if their quantities are only due to the fact that they are

[79] Huster, Angela C. "Assessing Systematic Bias in Museum Collections: a Case Study of Spindle Whorls." *Advances in Archaeological Practice* 1, no. 2 (2013): 77–90.
[80] Parsons, Mary Hrones. "The Distribution of Late Postclassic Spindle Whorls in the Valley of Mexico." *American Antiquity* 40, no. 2 (1975): 207–15.
[81] Huster, "Assessing Systematic Bias", 79.
[82] Ibid.
[83] Sellen, Adam T. "The Consul of Deception: the Greatest Archeological Faker of the 20th Century ." Essay. In *These Ruins You See*, edited by Mariana Castillo Deball, 225–35. Mexico City: Sternberg Press, 2008.

excavated more frequently, the fact that the collections are heavily comprised of these particular artefacts produces a collection that is not holistically representative.

This notion can equally be observed in the collecting of specific 'curiosities' that do not depict Aztec society in general. In the British Museum these include objects made out of animal or human remains such as bone, which can be seen in needles, the mentioned calendars, spatulas and musical instruments. Items made out of human remains were definitely used in Aztec civilisation, however, bone was not the *only* material out of which certain objects were made. When collections, like that of the British Museum, only have a specific object type made out of bone, rather than other materials, it paints a picture that this was the primary material used for such objects.

According to the data presented, it is clear there is a plethora of objects that fall into the classification of "art & culture". There is little evidence to support that the Aztec were skilful in metallurgy, or used any form of highly advanced technologies. In the realm of architecture, there were no tools collected, however some museums have temple models and samples of binding mortar which can be suggestive of broader architectural practices. Additionally, a significant portion of the objects, in all mentioned museums, are inherently associated with religion and ritual practices, with special emphasis on the aspect of human sacrifice. The calendar of bone, for example, alludes at a bias towards collecting objects indicative of illusioned barbarism, rather than objects that would be more characteristic of Aztec culture and knowledge.

Overall, it can be concluded that the specific museums in question are not in possession of an Aztec collection that could represent *highly* advanced technology. There would need to be greater symmetry in the number of items in each 'object type', rather than a substantial collection of objects made of stone and clay, or the tendency to prioritise religious artefacts. Considering the Aztec were skilful in every technology type presented in chapter 5, museum collections would be more representative if the objects can elucidate this intelligence.

Chapter 4

The Rhetoric

Knowing what the museums house in their collections, it becomes an interesting point of reference to examine what objects have been put on display, and, more importantly, *how* they have been put on display. The following chapter will provide a rhetorical analysis of the permanent Aztec exhibitions at the British Museum, the Pitt Rivers Museum and the Volkenkunde Museum, respectively. A rhetorical analysis investigates the appeal to ethos, pathos and logos.

Ethos is linked to authority; it is a persuasive technique that appeals to an audience through credentials. This takes form in the reliability of the speaker, in this case the museum, and the perceived validity in their statements. Pathos is a technique that convinces an audience of the narrative through emotions. As such, pathos techniques often appeal to the visitors' senses, ethics and feelings. Lastly, logos encompasses aspects of logic by way of evidence and facts; it manipulates the 'truth' that is being told through the process of one point leading to the next. It regards the flow of the story and the effect that the order, or curation, of facts has on the other, thus, it is used to form the conclusions the audience is encouraged to draw. Ultimately, a rhetorical analysis is not about arguing what is true or not, it is about analysing how convincing the narrative is.

The British Museum

The British museum was the first public national museum in the world, having been established in 1753. It has a permanent collection of around eight million objects, making it one of the largest worldwide. The British Museum has established significant authoritative credentials and expertise on the topics it displays. Due to its renown and centuries long exhibition history, the British Museum has a critically acclaimed status which appeals to the visitors' *ethos*; museumgoers are unlikely to question this authority. Nevertheless, due to its colonial origins, the British Museum is also the frequent subject in matters of restitution. As such, the ethos of the museum is slightly tainted by its reputation of neglecting important repatriation requests. Through this light, the museumgoer might become more sceptical of the narratives presented by the museum. Within the museum, the halls are divided by regions and follow a fairly chronological narrative. In the Mexico room, the visitor is led through the history of cultures

in Mesoamerica, starting with the Olmec and ending with the Aztec, should the museum goer read the room like a book, from left to right [Fig. 8].

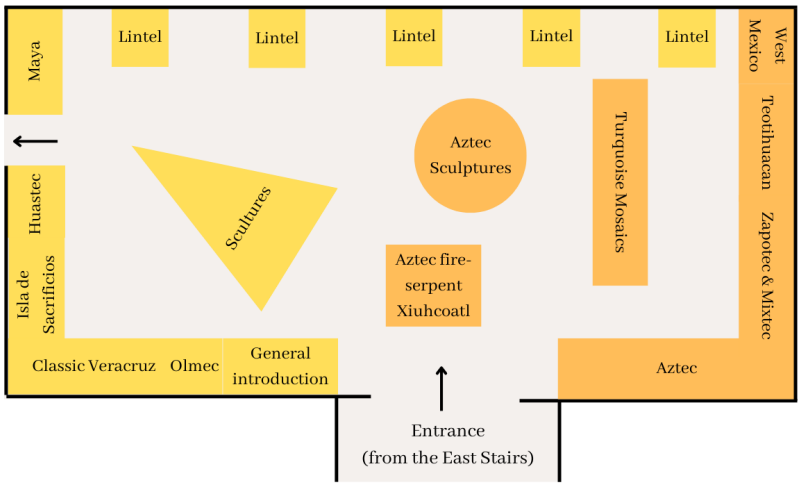

Fig. 8: Map of the Mexico Hall (room 27) in the British Museum, London

The general information reads that the room "is organised geographically to reflect the distinctive regional cultures that flourished in Mexico from around 2000 BC up to the time of European contact in the sixteenth century". In doing so, the hall is successful in presenting an accurate overview of the diversity of Mesoamerican history, but also the interconnectedness of the cultures that dominated through the centuries. Additionally, the accompanying texts are remarkably focused on the technology types that were extant throughout the region, frequently mentioning the development of metallurgical practices, architectural feats, information technology and calendrical knowledge; for example, "during the first millennia AD, Maya city states […] rose to prominence and developed writing, astronomy, and a sophisticated calendar". Furthermore, there is frequent mention of trade routes, dating back to the era of the Olmec that elucidate how different civilisations influenced one another through both time and space.

The first object the visitor sees when entering the room is a stone figure of the Aztec fire-serpent Xiuhcoatl raised on a tall pedestal, looking down upon those who enter [App. 4]. According to the object text, Xiuhcoatl "embodies the potent discharge of energy that takes place when lighting as a jagged, serpentine bolt of fire plunges earthward from the heavens". He is backed by four other deity sculptures belonging to the Huaxtec culture, who sit precariously on a triangular pyramid. Upon entering, the museum goer is met with Mesoamerican religious symbolism; imposing Gods occupy the centre of the room, around

which all other objects are placed inside glass cabinets fixed into the wall. As such, the visitor is encouraged to understand Mesoamerican religion to be the essence of the societies that emerged, which in many ways is very true, but in others ways it can be rather reductive; there were other, equally important, aspects of everyday life that are often not considered when characterizing the Aztec. Placing a striking figure like Xiuhcoatl in the centre-front, towering over the other objects, can be argued to evoke a shock factor. The diction used contributes to this; the phrase "serpentine bolt of fire plunges earthward" has destructive undertones, potentially eliciting unease in the museumgoer. Appealing to the visitors' sense of *pathos* in this way, carves a path for the rest of the narrative to tailor itself around ideas of brutality, that is, from a western perspective.

Breaking the otherwise fairly chronological flow is the isolated section entitled "Isla de Sacrificios (AD 900-1521)" [see Fig. 8], which is presented after the "Olmec (1200-400 BC)", but before the "Maya (250 BC- AD 1000)". The arrival of Spanish navigator Grijalva to the island in 1518 marked the first impressions the Spanish had of the region. Grijalva noted: "We found two stone buildings of good workmanship, each with a flight of steps leading up to a kind of altar, and on those altars were evil-looking idols, which were their gods. Here we found five Indians who had been sacrificed to them on that very night. Their chests had been struck open and their arms and thighs cut off, and the walls of these buildings were covered in blood. All this amazed us greatly, and we called this island the Isla de Sacrificios, as it is now named on the charts".[84] This particular 'discovery' promoted the occupation of Mesoamerica, as it was considered proof of the Aztec's savagery. The exhibition details how "over the years a wealth of extraordinary burials has been unearthed on the island". The inclusion of this section at the very beginning of the exhibition, rather than the period in which it would chronologically fit in, suggests that the curation encourages the visitor to keep this in mind when viewing the rest of the display; it is presented as necessary contextual knowledge for understanding the rest of the room.

This is further amplified by the artefacts that follow. Before reaching the Aztec display, the museumgoer walks past a wall on which five Mayan lintels are mounted. The first depicts "a bloodletting ritual performed" where "the ruler of Yaxchilan, Itzaamnaj B'ahlam holds a flaming torch over his wife, who is pulling an obsidian studded rope through her tongue" [App. 5]. Secondly, there is a lintel showing "Lady K'ab'al Xook […] in the hallucinatory stage of a blood-letting ritual" [App. 6] The third is a lintel "with glyphs and a scene representing Lady

[84] Diaz del Castillo, Bernal. *The Conquest of New Spain (1520)*. Hammondsworth, England: Penguin Classics, 1963.

Wak Tuun, during a bloodletting rite. She is carrying a basket with the paraphernalia used for auto-sacrifice: stingray spine, a rope and bloodied paper" [App. 7]. Following this, the fourth lintel depicts "Bird Jaguar IV and a captive at his feet" [App. 8], and the fifth documents "Bird Jaguar IV and one of his wives, Lady Balam-Ix, taking part in a bloodletting ritual […] He is preparing for auto-sacrifice while his wife passes a rope through her tongue to draw blood" [App. 9]. The sequence detailed by these five lintels supports the narrative presented in the section about the Isla de Sacrificios, augmenting the characterization of Mesoamerican culture to be driven by blood and sacrifice. Notably, the British Museum is in possession of several other Mayan lintels where scenes of ceremony and dance are depicted, or where there are only glyphs present to tell a story, rather than visual representations. The choice of displaying only the lintels of sacrifice could present the museum's own bias towards viewing Mesoamerican culture through this particular lens.

In doing so, the exhibition is again appealing to the audience's sense of *pathos* through shock, fear, disgust etc. In the section on the Isla de Sacificios, the museum takes a stance on the 'impressiveness' of the size of the burials, and mentions Grijalva who was undoubtedly shocked by what he encountered. In combination with the lintels, the museum's choice to emphasise the blood sacrifices, over other cultural elements, gives much importance to these rituals, ultimately making the visitor believe that these sacrifices happened in great abundance. Furthermore, the museum never mentions *why* these rituals took place. All of this brings about an element of unrelatability and causes the audience to distance their association, creating the 'Other', and bolstering distinction between the 'primitive' and 'civilised'. By focusing on aspects in which the Mesoamerican cultures *differ* greatly from Europe, the exhibition suggests that there were few ways in which the Mesoamericans were *similar* to the Europeans. This religious aspect, which is inconceivable to most modern viewers, deters the viewer from perceiving any similarities between 'us' and 'them'.

The lintels mark the introduction to later Mesoamerican civilisations, like the Zapotec, Mixtec and, conclusively, the Aztec. The wall text describing the Aztec is, again, heavily focused on religious practices, in this instance referring to the Templo Mayor as "two cult shrines". Much like the word 'primitive', the word 'cult', which by definition means worship, has connotations that emerged overtime and contains a different meaning in the 21st century. This new meaning is more associated with extremism and intense devotion. In choosing the word, 'cult shrine' to describe the temple, rather than the more neutral 'place of worship', implies that the museumgoer, with their contemporary perspective of the world, should view the Aztec as a cult. This is an instance in which the truth is being manipulated through *logos*;

in combination with the flow of the curation prior to the Aztec display, there is a clear indication of the conclusion the audience is encouraged to draw.

Furthermore, the only mention of Aztec calendrical knowledge is their "sophisticated ritual calendar", represented by the calendar of human remains the museum is in possession of [App. 10]. This artefact is placed beside a spatula, also made out of bone [App. 11]. In placing these two objects beside one another, the display creates an impression that using bone was common and observed in multiple instances. It could be argued that this represents the fabrication of tradition; by showing multiple objects made of bone, the museumgoer is encouraged to believe this was regular. Additionally, in doing so, the focus shifts from the understanding of Aztec calendrical knowledge to the understanding that bone was a frequently used material by the Aztec.

Table 9 details all the artefacts belonging to the Aztec that are on display in the British Museum. The majority of the items are figurines, which conforms to the most frequently occurring object type in their grander collection. The more 'unique' objects on display include the large collection of turquoise mosaics, which were given their own section in the exhibition, a magical mirror, and several bodily ornaments, such as obsidian lip piercings. The inclusion of these latter objects again draws on an aspect of 'unrelatability' and mysticism, generalizing the entire Aztec Empire as the small percentage of Shamans they employed. The heavy focus on magic and spirituality also constructs a narrative that innovation and knowledge were associated with unscientific practices, when, in reality, the Aztec were familiar with practices like mathematics and astronomy.

The narrative presented by the British Museum is one of a mythical and theological society. Though there is mention of the technology types that developed in pre-Columbian Mesoamerica, the artefacts do not allude to this. Considering the British Museum houses some of the world's most renowned Aztec codices, samples of cement and mortar and objects of gold and silver, the exhibition could have discussed technological advancements more in depth, rather than focusing only on religious aspects. This is a pattern that can be seen in the other museums as well, which are detailed in the following sections.

Table 8: The Aztec objects on display in the Mexico exhibition at the British Museum

Object Type	*Date*	*Museum Number*
Amulet	1300-1521	Am,St.403
Amulet	1300-1521	Am.,St.352
Atlatl	1400-1521	Am.5226
Back ornament; mosaic; human remains	1400-1521	Am,St.401
Box	15th C (late)	Am1982,Q.860
Bust; figure	1325-1521	Am1825,1210.11
Calendar; human remains	1300-1521	Am1914,0514.6
Cauahxicalli	1500	Am,+.6185
Dish	1300-1521	Am1946,16.25
25 Figures/figurines	N/A	N/A
Incense burner	1325-1521	Am1825,1210.3
Temple model	1325-1521	Am1856,0422.62
Goblet	unknown	Am1946,16.19
Rattle	unknown	Am1825,1210.45
Head-dress; mosaic	1400-1521	Am,+.6382
Lip ornament	unknown	Am,St.510.a
Mirror	1325-1521	Am1825,1210.16
Magical mirror	14th C-16th C	1966.1001.1
Mask; mosaic	1400-1521	Am1987,Q.3
Mask; mosaic	1400-1521	Am,St.400
Mask	1300-1521	Am1856,0422.66
Mask	1300-1521	Am1902,1114.1
Pectoral; mosaic	1400-1521	Am1894,-.634
Pendant (stone)	1300-1521	Am1825,1210.17
Pendant (shell)	1300-1521	Am1946,19.21
Pendant (crystal)	1300-1521	Am1946,16.209
Sacrificial knife; mosaic	1400-1521	Am,St.399
Sculpture	1300-1521	Am,St.372
Shield; mosaic	1400-1521	Am,St.397.a
Slit-drum	1300-1521	Am1949,22.218
Spatula; bone	1300-1521	Am1946,16.214
Stamp	1300-1521	A,1946,16.167
Stamp	1300-1521	Am1946,16.165
Stamp	1300-1521	Am1946,16.168
Tripod bowl	unknown	Am1940,02.31
Vessel	unknown	Am,St.372.b

The Volkenkunde Museum

As one of the oldest ethnographic museums in Europe, having been established in 1837, the Volkenkunde Museum has an interesting history of collections and display. The Museum organises its exhibitions per continent; Central and South American artefacts reside in the same room [Fig. 9]. Upon entering, to the left there is a large display of Mayan artefacts, comprising of religious objects, items alluding to the ballgame played throughout Mesoamerica, and clothing. To the right, Aztec objects are displayed. The curation of the exhibition is roughly 12 years old.

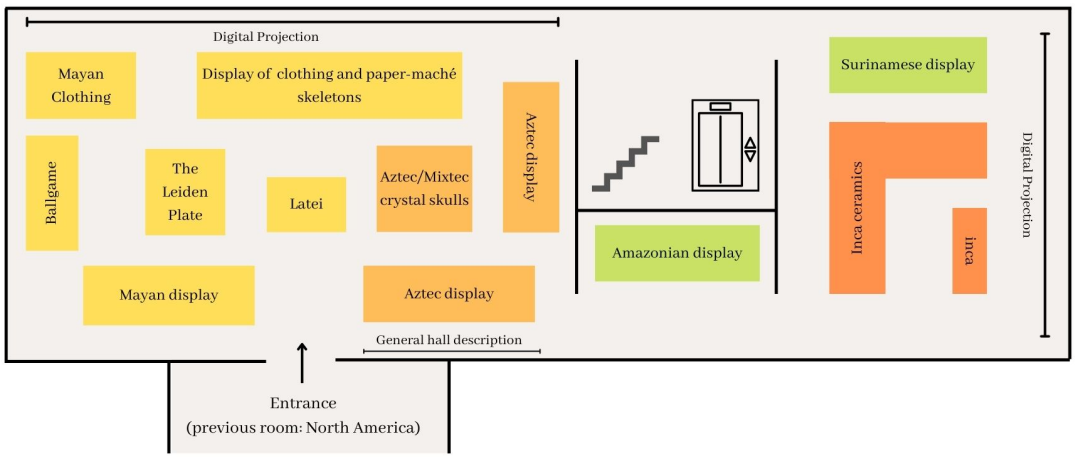

Fig. 9: Map of the Central and South America Hall in the Volkenkunde Museum in Leiden

Each display case is accompanied by a small touch-screen with images of the objects exhibited; when pressing on the image, more information about the object is revealed. This information includes the name of the object, where it is from, the date, the material(s) and a brief description. The short descriptions are the words of the curator, alone and anonymous. Hidden on the wall to the right of the entrance is the general hall description which begins with the statement "Maya, Aztecs, Amazon peoples and Incas: ancient cultures with a legendary history. They developed a wide variety of arts, cultures and sciences in Central and South America", then continues to chronicle the oppression Indigenous peoples faced upon the arrival of the Spanish and Portuguese. Interestingly, there is no mention of the Dutch settlers who equivalently occupied an area in Brazil, all of Suriname and the islands that make up the Dutch Antilles.

Though the Volkenkunde Museum has been around for two centuries, it is less known than the British Museum. Therefore, the museum utilises additional techniques to establish its

ethos. The general description mentions the collaboration of "European, Latino and Indian scholars" in researching the heritage of Central and South America. The reference to native Latin American scholars suggests that the information presented in the room aims to be void of Eurocentric biases, which in turn validates the information in the room. Additionally, the accompanying texts within the exhibition use native Nahuatl words: for example, "the society of the Aztecs was divided into different classes: the high nobility (tecuhtin), the ordinary nobility (pipiltin), and the people (macehualtin)". The incorporation of Nahuatl words suggests more precision in the accuracy of the information, it also represents that some words may not have a direct translation into English and the original Nahuatl is more appropriate. By generating doubt towards the capacity of the English language to translate precisely, the museum goer is encouraged to reflect on whether cultural translation in a European heritage institution is ever really accurate.

Nevertheless, within the context of a museum display, rather than a scholarly article, it could be argued that the Nahuatl words do not contribute to the audience's holistic understanding of Aztec culture. Dennis Tedlock has pointed out that "the use of 'native words' scattered in the text has been used as a token of the writer's authority, to mystify and impress, to demonstrate the ethnographer's unique access to the Real Meaning of such items".[85] This authority over the discourse, characterising the museum as an unquestionable expert, sets the tone for the rest of the exhibition, perhaps inhibiting the reflective process the native words could alternatively encourage. Instead, the museum could take on a reflective translation strategy themselves, where the exhibition presents the history of the collection, rather than the history of the people represented, which could "serve as evidence about western society, not evidence about the exotic".[86]

Additionally, the descriptions in the exhibition frequently refer to scholarly research that has been conducted: for example, "research carried out recently (2011/2012) by the museum" or "current research has revealed". Once again appealing to ethos, the descriptions create an element of expertise which makes the information presented less susceptible to contestation; establishing the authority of the institution and the curator in charge of the exhibition generates trust in the narrative of the display.

The first artefact the visitors encounter upon entering the Central and South-America Hall in the Volkenkunde Museum is the Mayan Latei [App. 12]; this large stone engraving

[85] Sturge, Kate. "The Other on Display: Translation in the Ethnographic Museum." Essay. In *Translating Others* 2, 2:431–40. Manchester: St Jerome Publishing, 2006.
[86] Ibid., 438.

depicts "king Bird-Jaguar performing a blood sacrifice in front of his vassal […] blood is drawn by means of a penis perforation". Immediately the tone is set, in placing this object in the centre-front, the museum goer is emboldened to view the following artefacts with a prejudice involving brutality, sacrifice, and 'primitive' immorality. Appealing to *pathos* in similar ways as the British Museum, creates the assumption that the culture and social structures revolved around such sacrifices, as the other objects in the room are quite literally placed around this centre-piece.

Should the visitor read the room from left to right, the designated path takes them through Mayan history, with a transitional section describing the Mesoamerican ballgame, eventually arriving at the Aztec display. In the display case, there are several items exhibitive of sacrifice or other practices frowned upon in (contemporary) Western society. Naturally, the sacrificial knife is featured [App. 13]. Alongside it, some of the ceramic figures chosen to illustrate the society include a deceased "naked woman on a rectangular bed tied with bands" [App. 14], a ritual scene depicting how "cheek perforations were performed as blood sacrifice during funeral rites" [App. 15] and two plump dogs who "served the Indians as food – therefore they were fattened" but were also "considered to be the guardian to the underworld and companion of the deceased", thus, "dogs of pottery as well as real dogs were given to the dead" [App. 16]. Notably, these objects are not actually Aztec, but rather belong to the Colima and Nayarit peoples (BCE 300- 300 CE).

The incorporation of these objects achieves a similar appeal to pathos as the Mayan Latei. The exhibition makes clear that the Maya flourished well before the Aztec, however, the narrative within the room stays fairly stagnant. The types of objects displayed are incredibly similar, and the blood rituals remain dominant in the room's narrative. Presenting comparable objects for both the Maya and Aztec suggests static development; it implies that not much innovation took place in the centuries between the dominance of the Maya and the supremacy of the Aztec. Additionally, the disconnect and potential judgement evoked by displaying, for example, the dogs, could compel visitors to consider their own moral beliefs when viewing the Aztec display.

Lastly, the logos or appeal to reason, the ultimate truth the narrative is trying to persuade the viewer of can be observed in curatorial choices like order of the objects, the dates of the artefacts and the accompanying descriptions. There are 28 objects on display [Table 9 and 10] in the glass cabinet labelled "Aztec". Notably, only 13 of the 28 objects are genuinely Aztec; the other 15 belong to the ancestors of the Aztec. The ancestral objects are put on display together with the Aztec artefacts to suggest development and evolution of Mesoamerican

culture through the centuries. Additionally, much of what the Aztec knew was inherited from their ancestors the Olmec and Toltec. To an extent, the inclusion of the non-Aztec items seems justified and relevant as the older civilisations of Mesoamerica impacted the Aztec greatly. However, this is not *clearly* stated within the display. A visitor with minimal or no prior knowledge of the Aztec Empire would likely not know that the Olmec and Toltec were entirely different civilisations, existing centuries before the Aztec even arrived in the Mexican basin.

Still, when facing the display cabinet, there is a short descriptive text on the left side, best seen when leaving the Amazonian exhibit, going back into the first room. It is very easy to miss if not given explicit attention. The description states how the Aztecs "are the best-known peoples of ancient Mesoamerica" and originated from the Olmec who "showed many similarities to later Mesoamerican cultures including the Aztecs: step pyramids, ritual blood offers and the ballgame". Furthermore, the paragraph continues to explain how the Toltec were, in fact, "the main ancestor culture of the Aztecs" who had "sprung from Tula, a town that developed after the fall of Teotihuacan" and were the inventors of "the script and the calendar".

The inclusion of this information is absolutely necessary, yet, beside the fact that the museum goer is likely to miss this information, there are some elements in which the text seems partial and misleading. Firstly, the Aztec inherited much more than the step pyramids, blood sacrifices and the ballgame from the Olmec. The Olmec were the first to use and understand the properties of rubber, they had extensive interregional trade routes that connected Mesoamerica for centuries to come, and they used the slash-and-burn technique for intensive crop production. Mesoamerican cultures are more than the sacrifices they made to their gods; the persistent focus on the blood rituals creates a disconnect at best and a prejudice at worst.

Additionally, around 900 CE, the Toltec capital, Tula, covered 3-6 km^2 with a population of 30,000-40,000 people.[87] This size is more than a mere "town", it was an early example of a great city. To put it in perspective, in 1085 CE, London had a rough population of 10,000-15,000 inhabitants, making it the largest European city north of the Alps, yet still only half the size of Tula an entire century earlier. Should the visitor have seen this description, they are encouraged to limit their understanding of Mesoamerican society to blood sacrifices and a rubber ball game, for these are the main focal points within the room and the highlighted factors in the discussion about inherited culture.

[87] Healen, Dan M., and Robert H. Cobean. "Tula and the Toltecs." Essay. In *The Oxford Handbook of Mesoamerican Archeology* 21, edited by Deborah L. Nichols, 21:372–84. Oxford: Oxford Handbooks, 2012.

Table 9: The 13 Aztec objects on display in the Aztec exhibition at the Volkenkunde Museum, Leiden

Object type	Date	Museum number
Stone figure of maize god Chicomecoatl	1500-1520 CE	RV-1403-1309
Lava stone figure of man (potentially the god Macuilxochitl)	1200-1520 CE	RV-2700-1
Stone statue of man	1200-1520 CE	RV-2862-1
Ceramic temple model	1450-1520 CE	RV-2971-36
Ceramic temple model	1450-1520 CE	RV-2971-34
Ceramic temple model	1450-1520 CE	RV-2971-35
Ceramic temple model	1250-1520 CE	RV-2971-4
Sacrificial knife	1300-1500 CE	RV-3928-2
Double-flute	1300-1521 CE	RV-2720-1
Ceramic vessel	1200-1520 CE	RV-74-149
Ceramic vessel	1250-1520 CE	RV-2971-104
Ceramic vessel	1250-1520 CE	RV-2971-105
Ceramic bowl	1200-1520 CE	RV-2849-3

Table 10: The 15 non-Aztec objects on display in the Aztec exhibition at the Volkenkunde Museum, Leiden

Object type	Date	Place/people	Museum number
3 ceramic figurines of dancers	300-600 CE	Teotihuacán	RV-4669-(1-3)
Fragment of religious fresco	300-600 CE	Teotihuacán	RV-3999-1
Shell Trumpet	BCE 300-300 CE	Jalisco	RV-4541-2
Ceramic woman strapped to deathbed	BCE 300-300 CE	Colima	RV-3602-1
Ceramic plump dog	BCE 300-300 CE	Colima	RV-3843-1
Ceramic jug of plump dog with mask	BCE 300-300 CE	Colima	RV-4605-1
Double-flute	BCE 300-300 CE	Colima	RV-5409-59
Burial urn	300-900 CE	Zapotec	RV-2825-1
Ceramic figure of ritual scene	300-900 CE	Classic Veracruz	RV-3695-6
Ceramic figure of ritual scene	BCE 300-300 CE	Nayarit	RV-4445-1
Ceramic woman sitting crossed legged	300-600 CE	Huastec	RV-4541-1
Mask made of bison bone	900-1200 CE	Toltec	RV-4668-1
Ceramic baby	BCE 1150-450	Olmec	RV-5054-1

Should the visitor focus only on the touch screens that provide information, or miss the wall text explaining who the Olmec and Toltec were, the impression that is given suggests that the Colima, Nayarit, Jalisco and the other cultures on display are sub-groups within the Aztec Empire. The visitor is then led to believe that the Aztec already occupied Mesoamerica as early as 1150 BCE, indeed making them an ancient civilization. Figures 10 and 11 shows how these objects are all generalized as Aztec and what the visitor would see should they click on an item for further information.

Fig. 10: Touch screen detailing the artefacts in the Aztec display case at the Volkenkunde Museum; tables 11 and 12 present these individual objects

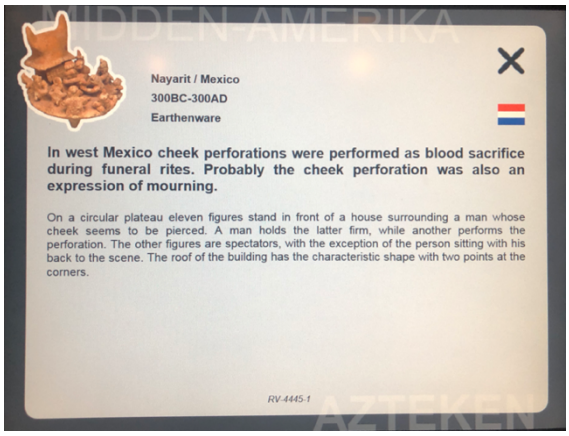

Fig. 11: Touch screen detailing a specific Nayarit object in the Aztec display at the Volkenkunde Museum

Considering the Volkenkunde Museum has several artefacts in their archives that could be used to allude to highly advanced technology, it becomes relevant to investigate what they have not put on display. Though collected in abundance, there are no printing stamps or spindle whorls exhibited, and the calendar remains hidden in storage. Even the tools representative of advanced technology, such as the hip loom and metate, do not make an appearance in the display. Instead, the focus remains on the ceramic figures that are intrinsically tied to religion. Interestingly, the temple models are placed in the display but there is little mention of the larger

structures they are representative of. The description of these models dictates that "stepped pyramids, serving as a base for a temple building, were the usual location to perform religious activities. In the temple on top of the pyramid specific gods were worshiped", yet there is no mention of how these larger temples were built nor what their impressive sizes were. Additionally, the exhibit hall has large electronic display walls, where a slideshow of visuals plays on a loop. These images are mainly of the Mesoamerican landscape, but they could have been used to depict the vast photographic collection the museum has of Aztec architecture and structures.

Overall, the Volkenkunde Museum suggests narratives of static technological development in presenting the Mayas and Aztec as practically indifferent, though they flourished centuries apart. Equivalently to the British Museum, the focus is primarily on aspects of religion and sacrifice, and the objects used to represent Aztec society do not fully encompass the intricacies of the Empire and its people. Additionally, the lumping together of objects from different time periods, yet labelling them in the general category "Aztec" creates a false perception of the time in which the Aztec flourished. In doing so, the exhibition risks leaving visitors with the impression that the Aztec are significantly older than they are in actuality, potentially feeding the 19th century narrative that the Aztec were 'primitive' and 'Stone Age'.

The Pitt Rivers Museum

The Pitt Rivers Museum in Oxford was founded in 1884 by Augustus Pitt Rivers, who donated his collection to Oxford University, with the requirements that a permanent anthropology lecturer was appointed; Edward Burnett Tylor took on this position and became the first lecturer in anthropology in the UK. The museum utilizes a different display strategy compared to other museums of ethnography as the exhibition serves more as a deposit of archeological artefacts. As such, the objects are presented typologically, rather than regionally or chronologically. Pitt Rivers intended his collection to represent evolutionary progress in human culture and knowledge, and though this approach is no longer fashionable in the fields of anthropology and archaeology, the museum has retained the original display style due to the Deed of Gift that declares that the changes in display "shall not affect the general principle originated by Augustus Henry Lane Fox Pitt Rivers".[88]

[88] Petch, Alison. "Deed of Gift: Gifting the Founding Collection of the Pitt Rivers Museum to the University of Oxford." Rethinking Pitt Rivers , July 2010.

Still, the museum commissioned various significant research projects aiming at the decolonization of the institution, but their own display strategy remains unchanged, hence serving as a remnant of a 19th century museum; it is essentially a museum of a museum. Nevertheless, several efforts were made to recognize the problematic nature of their display, and changes like the removal of human remains have been made, regardless of the Deed. The museum declared that "human remains were collected as a way of supporting academic arguments at the time, that ranked some societies as savage and barbarous and others as civilized".[89] Additionally, in an internal study, they found that "visitors often understood the Museum's display of human remains as a testament to other cultures being "savage", "primitive" or "gruesome" […] By removing human remains from display we seek to show our respect for the communities around the world with whom we work".[90]

Furthermore, the museum is undergoing an intense decolonization process. They present a self-awareness regarding the history of their collection and its close ties with British Imperial expansion causing the museum to "engage more closely with its past practices and the nature of its collections, display and interpretation and the effects these continue to have today".[91] The director of the museum, Laura van Boekhoven, explains: "With the Museum's complicated colonial history, it was important for us to lead this Ethical Review and to ensure we did not shy away from difficult conversations. The implementation of the review is part of the Museum's strategic plan to bring its public facing-spaces more in line with its contemporary ethos of actively working with communities and respecting different ways of being as we become a welcoming space for all".[92] Additionally, the museum has expressed how the removal of certain objects, like the human remains, will be missed by those seeking fascination and intrigue, but that they believe the other objects are equally able to inspire curiosity. It seems this step has been difficult for other museums to take, as many objects saturated with a fascination for their delightful horror remain publicly displayed.

During their reopening post-COVID 19, the museum offered new interpretations providing the visitors with insight regarding the way the museum formerly obtained its collections. Nevertheless, these actions only occurred in the summer of 2020, and more changes are still to be implemented. As such, the Pitt Rivers still functions as a demonstration of how ethnographic objects were, to an extent, depicted in the previous century, and before,

[89] "Human Remains in the Pitt Rivers Museum." Pitt Rivers Museum, 2021. https://www.prm.ox.ac.uk/human-remains-pitt-rivers-museum.
[90] Ibid.
[91] "Critical Changes." Pitt Rivers Museum, 2021. https://www.prm.ox.ac.uk/critical-changes.
[92] Ibid.

which can offer crucial insight into the progression (or continuation) of certain narratives in the wider museum discourse.

The Pitt Rivers does not have a specific permanent Aztec exhibition. Rather the Aztec artefacts are displayed alongside objects from other cultures and times according to their 'type'. There are 13 Aztec objects on display, as shown in table 11. The dates available for the objects are only the years in which the items were collected.

Table 11: The Aztec objects on display in the permanent exhibition at the Pitt Rivers Museum

Object type	Date collected	Museum number
Stone head	1952	1952.7.97
Ceramic model of sun stone	1970	1970.15.3
Obsidian arrow head	1943	1943.10.60 B
Stone figurine of kneeling human	1927	1954.9.254
Stone pendant	1905	1905.56.1
Necklace of red seeds	1939	1938.36.1866
Child's necklace	1939	1938.36.1884
Ceramic sherd	1889	1919.1.2
Ceramic sherd	1889	1919.1.11
Ceramic figurine	1951	1977.15.2
Ceramic head	1884	1884.67.83
Ceramic head	1884	1884.67.84
Ceramic head	1951	1977.15.1

In regard to the rhetoric, the Pitt Rivers, being a department of Oxford University, establishes its ethos through the reputation of this institution. As such, their research efforts and team of experts are intrinsically linked to Oxford University which has worldwide renown for being one of the most rigorous universities in the world; research published by the Pitt Rivers relies on the credentials of Oxford University and, therefore, the museum carries authority in the topics it addresses. Additionally, the recent focus on decolonizing the museum, and the efforts made thus far, indicate that the museum is aiming to progress with the discussion of the 21st century, in many ways leading the process of decolonization. This reputation works to their benefit as it avoids potential criticism towards their display style. Nevertheless, the efforts behind the scenes, are not always known by the unaware museumgoer. Online the museum has an abundance of reports and projects that elucidate the awareness regarding the

nature of their collection and display. However, being a museum that does not ask for an entrance fee, a fair part of their visitors simply happen to stumble in without knowing of the museum's separate projects. As the display currently presents itself, the exhibition acts as a testimony to outdated beliefs of evolution and development.

Their overwhelming plethora of objects, bundled together in tight spaces, can produce feelings of bewilderment towards the created 'Other', potentially causing a level of disconnect between 'us' and 'them'. The objects on display originating from Europe have a different nature in their level of technological development; with items like a myriad of rifles and semi-automatics, the Europeans are perceived to be more powerful in comparison to the non-European arrows and spears. As the museum does not rely on the outright telling of a narrative, but rather places similar object types together, the logos, or truth the museum is trying to suggest is represented only by what the objects themselves inform the visitors of. Allowing the visitors to form their own conclusions causes the audience to rely on what they already know or believe, which, arguably, is not always historically accurate as the visitor may not be aware of their own biases. As such, the lack of curation in the conventional sense, and the grouping together of objects by type, irrespective of their time or country of origin, can pose the indication that all non-European civilisations follow the same evolution, or lack thereof. This ultimately presents Bennett's notion that far away from Europe in space equated far away from Europe in time, as distinctions between specific non-European cultural groups are not highlighted, but rather they are displayed as the same.

The Pitt Rivers Museum occupies an interesting space in the discussion posed by this essay. They represent how there are various forms an exhibition can take, and that the stereotypical method of displaying objects by region or chronology is not the only possible way. The benefit of such a strategy is that the museum takes a step back as the all-knowing narrator of history, and simply presents the objects as they are, promoting similarities between cultures, rather than differences. Nevertheless, a potential pitfall embodies the notions of 'us' vs 'them'. Considering the original 19th century display was explicitly intending to manifest ideas about evolution and development, it cannot go unnoticed in the contemporary display, unless the museum decides to completely uproot the current display in line with their academic research on the decolonialization of the museum. Still, presenting awareness of their problematic history is a step in the right direction and can already do wonders in the manner in which the visitors observe the display.

Chapter 5

Discussion

The previous chapters suggest an incompleteness in the Aztec collections of the museums in question due to the lack of artefacts that indicate highly advanced technological developments. This deficiency ultimately seeps into the displays, which consequently only exhibit objects of clay and stone with a focus on religion and ritual. Each museum utilises a different display strategy, which poses interesting observations; even though the strategies are different, the narratives are fairly similar.

The British Museum has a contextual display. This means that the artefacts are exhibited with the aim of representing Aztec society wholly. The exhibition tries to recreate an image of what the Aztec empire may have looked like; the texts and objects document the rise and fall of the Mesoamerican empires. The Volkenkunde Museum, alternatively, uses a non-contextual display. As such, the objects are not necessarily displayed to holistically create an image of Aztec society, but rather, the museum highlights the artefacts through their style, technique, colours and shape. In this manner, the Volkenkunde Museum uses more of an art historical lens on the objects, rather than an archaeological lens. Lastly, the Pitt Rivers uses a non-contextual strategy, as the objects are not used to recreate an image of the Aztec, but it also uses a non-regional display style. Due to this, the objects are compared to similar objects found elsewhere in the world, rather than comparing the objects to other Aztec or Mesoamerican artefacts. Still, rituals are central to each strategy as the majority of the collections are indicative of this.

This raises certain questions about how museums have historically depicted the Aztec. Evidently, it does not matter which strategy the museums utilise, as the collections are incomplete in and of themselves. Perhaps, in order to avoid misleading narratives from arising, the museums should instead display their collections reflexively. This implies that museums exhibit the objects by means of their provenance or historical presence in the museum, rather than as objects indicative of Aztec society. In this way, the museumgoer is no longer led to believe the exhibitions are representative of the Aztec; instead, the museumgoer is made aware of how Europeans have represented, and understood, the Aztec historically. This requires further efforts to research the limitations of the current collections, and how to navigate their curations.

Additionally, there needs to be a change in visitors' expectations. It seems to have become somewhat of an expectation for Aztec exhibits to be central around ideas of sacrifice,

as this is the narrative that has always been told. However, there seems to be a hesitation towards radical change out of fear that visitors will be disappointed. As the director of the Pitt Rivers stated, those seeking the delightful horror expressed through these stories will miss certain objects, however, removing such narratives paves way for other stories and objects to be considered. Thompson-Odlum, a Research Associate at the Pitt Rivers, stated that "a lot of people might think about the removal of certain objects or the idea of restitution as a loss, but what we are trying to show is that we aren't losing anything but creating space for more expansive stories. That is at the heart of decolonisation. We are allowing new avenues of story-telling and ways of being to be highlighted".[93]

Nonetheless, the question still remains, how can a display be more representative when the collections are inherently partial? The discussion goes beyond simply removing certain objects indicative of outdated narratives, because which objects will take their place in the display? More so, does removing the sacrificial objects entirely not also lead to an incomplete narrative? It is then the question of whether museums are even aiming to represent Aztec society, or if they are simply exhibiting international and historical art. If that is the case, then that is what needs to be communicated to the museumgoer. Maybe it is time for the ethnographic museum to no longer be considered a European narrator of other cultures, but rather a narrator of how Europeans have historically looked at other cultures.

On another note, there needs to be a change in the relationship between distant cultures and their place in time. As highlighted previously, the common trend is to exhibit non-European civilisations as older than they truly are. However, in the case of the Aztec, it appears as though they are rather placed outside of time entirely. The narratives surrounding the Aztec led to ideas that they were a people existing in their own time and space. This is in part due to the fact that 1521 has become the fatal expiration date of the Aztec, as the objects are never dated beyond this year. Consequently, this creates the impression that the Aztec simply vanished after the Spanish colonised the region, which is illogical in the least. Museums must be more attentive in raising awareness about the aftermath of the colonial conquests, rather than only presenting all that happened before the arrival of Hernán Cortés. The citizens of the Aztec empire prevailed past 1521, yet the notion that they vanished after this particular date has led to a lack of recognition for their continuing existence in the present.

Perhaps the strange relationship with time is equally linked to the lack of agency presented in the exhibitions; all the objects displayed have an anonymous creator. In a

[93] "Critical Changes." Pitt Rivers Museum, 2021. https://www.prm.ox.ac.uk/critical-changes.

conference entitled Museum Temporalities held by the Research Centre for Material Culture, to which the Vokenkunde Museum belongs, Dr. Genner Llanes Ortiz, an assistant professor in heritage of Indigenous peoples, and Yucatec Maya, declared that "Indigenous art is presented as an object, there is no agent behind the object or the agent is not apparent, it is always the object that defines the culture and the society, but not the people that define the object".[94] Indigenous art is always tied to a place, rather than a person; the object then becomes symbolic of the traditions of that particular place and time. In doing so, the imagined tradition replaces notions of innovation, as Ortiz eloquently says: "everything that is innovation is generally rejected or seen with suspicion".

The lack of agency of the original culture in these exhibitions reflects how Indigenous art is frequently defined by precariousness; their work is template-based, repetitive, patterned after models, and entirely anonymous, without sense of personal creativity.[95] You view the objects as if they could speak for themselves, and when they cannot, the curator provides the missing information. As such, the narratives presented in the museums are second-hand accounts formed by generations of European anthropologists and archaeologists, of which the original Indigenous voice has been stripped and replaced by the modern expert who is blindly trusted by the visitor. As the creator becomes irrelevant, it seems as though the object was created by the Aztec as a whole, stemming from the imagined time and place the Aztec have been condemned to.

Nevertheless, how can a museum address agency when the agent is unknown? The artefacts excavated by archaeologists are practically impossible to trace back to their makers. However, this does not mean that the anonymity has to come at the expense of acknowledging innovation. Perhaps there needs to be a shift in perspective that does not focus on traditions or how the object explains the culture, but rather how the object came to be, and the technologies associated with them. Additionally, provenance research could receive more attention to uncover the stories behind the objects. These stories could then form the foundation of the exhibition, resulting in an overt display of the objects' postcolonial history, rather than focusing on theories of their pre-Columbian purposes.

In conclusion, as discussed throughout this paper, there seems to be an incompleteness in the manner by which the Aztec Empire is presented in the museums in question. The collections themselves, primarily originating in the 19th and early 20th centuries, suggest a bias towards collecting artefacts indicative of primitive and static technology. The technological

[94] *Museum Temporalities - Genner Llanez-Ortiz*. *YouTube*. Research Centre for Material Culture, 2018.
[95] Ibid.

advancements highlighted in chapter 2 are barely illustrated by the collections housed in the British Museum, Pitt Rivers Museum or Volkenkunde Museum. As such, the curators of these museums had little to work with in representing the Aztec Empire fully. Consequently, the incompleteness of the collections seep into the exhibitions, causing the displays to concentrate on religious practices historically used to depict the Aztec as barbaric and savage. The continuation of this narrative in the 21st century castigates the Aztec Empire, and results in a notion that they were void of highly advanced technological achievements.

Appendices

Appendix 1: Table of Aztec objects in the British Museum, London

Object type	Amount
Adorno	1
Amulet	2
Animal remains	1
Artefact	1
Atlatl	1
Axe	2
Bead	2
Bell	2
Bottle	1
Bowl	28
Box	1
Bracelet	1
Bust	1
Calendar	2
Calendar; human remains	2
Celt	1
Cement sample	1
Censer; charcoal burner	9
Codex	3
Codex; facsimile	22
Codex; map	1
Cuauhxicalli	1
Cup	2
Dish	14
Drawing	1
Ear-ornament; ear stud	3
Figure	36
Figurine	112
Finger-ring	2
Flute	2
Goblet	5
Head-dress	1
Incense burner	4
Jug	7
Lip-ornament; lip plug	10

Loom weight	3
Mask	9
(Magical) mirror	3
Medal	1
Mortar sample	9
Mould	4
Necklace	1
Needle	1
Offering dish	1
Pectoral	1
Pendant	7
Plaque	1
Plate	1
Pounder	1
(Printing) stamp	69
Rattle	3
Sacrificial knife	1
Shell sample	1
Saucer	1
Sculpture	4
Seal	1
Shield	1
Slit-drum	2
Smoking pipe	6
Spatula	2
Spear-head	1
Spindle-whorl	72
Spoon	1
Temple model	3
Tripod bowl	2
Vase	3
Vessel	44
Whistle	14
Total	559

Appendix 2: Table of Aztec objects in the Pitt Rivers Museum, Oxford

Object type	Amount
Cast of a relief model of a calendar stone	1
Cast of stone blade (techatl)	1
Ceramic figurine	1
Ceramic head	16
Ceramic model of the sun stone	1
Ceramic sherd	49
Ceramic spindle-whorl	3
Ceramic stamp	1
Child's cotton blouse	1
Child's necklace	1
Dark blue head shawl	1
Dish	3
Embroidered cotton blouse	1
Glass head	1
Miniature ceramic brazier toy	2
Mortar sample	1
Necklace	1
Obsidian arrow head	1
Obsidian tool	1
Photograph	9
Pottery brazier	1
Reproduction of the aubin tonalamatl	1
Stone arrow head	1
Stone figurine	2
Stone head	1
Stone pendant	2
Stone spindle-whorl	1
Terracotta figure of goddess Coatlicue	1
Vessel	3
Total	108

Appendix 3: Table of Aztec objects in the Volkenkunde Museum, Leiden

Object type	Amount
Bowl	6
Calendar	1
Ceramic figure	39
Ceramic figure fragment	16
Cup	1
Dish	5
Dish fragment	49
Flute	6
Hip loom	1
Incense burner	3
Jug	9
Jug fragment	4
Metate	2
Miniature skull	1
Musical instrument	1
Ornament (lip; ear; clothing)	6
Piece of temple wall	1
Pipe	3
Printing stamp	42
Sacrificial knife	1
Shard	5
Shell mask	1
Spindle whorl	33
Spoon	1
Stone bead	2
Stone figure	2
Temple model	5
Vessel	3
Wooden figure	1
Total	250

Appendix 4: Stone figure of the Aztec fire-serpent Xiuhcoatl, 1300-1521 CE, British Museum, Am1825,1210.1, acquired in 1825 from Rev. Dr. Buckland.

Appendix 5: Carved limestone lintel, showing a bloodletting ritual performed by, Lady K'ab'al Xook. The ruler of Yaxchilan, Itzaamnaj B'ahlam (her husband) holds a flaming torch over his wife, who is pulling a obsidian studded rope through her tongue. Scrolls of blood around her mouth. The lintel was painted and has traces of red and blue pigment, 723-726 CE, British Museum, Am1923,Maud.4, acquired in 1923 from Alfred Percival Maudslay.

Appendix 6: Carved limestone lintel, showing Lady K'ab'al Xook on the bottom right of the panel. Lady Xook is in the hallucinatory stage of a blood-letting ritual. She sees a Teotihuacan serpent thought to be her ancestor, 725 CE, British Museum, Am1923,Maud.5, acquired in 1923 from Alfred Percival Maudslay.

Appendix 7: Carved limestone lintel with glyphs and a scene representing Lady Wak Tuun, during a bloodletting rite. She is carrying a basket with the paraphernalia used for auto-sacrifice: stingray spine, a rope and bloodied paper. The Vision Serpent appears before her springing from a bowl set before her which also contains strips of bark-paper, 770 CE, British Museum, Am1923,Maud.1, acquired in 1923 from Alfred Percival Maudslay.

Appendix 8: Carved limestone lintel with an image of Bird Jaguar IV and a captive at his feet. Bird Jaguar wears the same warrior costume as his father did on Lintel 26 from Structure 23, and carries a spear in his right hand. His captive carries a broken parasol in his right hand, 755-770 CE, British Museum, Am1923,Maud.2, acquired in 1923 from Alfred Percival Maudslay.

Appendix 9: Carved limestone lintel with an image of Bird Jaguar IV and one of his wives, Lady Balam-Ix, taking part in a bloodletting ritual. He wears elaborate jade ornaments and a headband with a skull and skeletal snake. He is preparing for auto-sacrifice while his wife passes a rope through her tongue to draw blood. The inscription records this ritual.

Appendix 10: Aztec calendar made out of human bone, 1300-1521 CE, British Museum, Am1914,0514.6, acquired in 1914 from E. W. Martindell.

Appendix 11: Aztec spatula made out of bone, 1300-1521 CE, British Museum, Am1946,16.214, acquired in 1946 from Joseph Pyke.

Appendix 12: Mayan relief showing king Bird-Jaguar of Yaxchilan performing a blood sacrifice in front of his vassal, the ruler of La Pasadita. The blood is drawn by means of a penis perforation, evidenced by the instrument depicted before his loincloth, ca. 766 CE, Volkenkunde Museum, RV-3939-1, acquired in 1963.

Appendix 13: Aztec sacrificial knife, 1300-1500 CE, Volkenkunde Museum, RV-3928-2, acquired in 1963.

Appendix 14: Colima ceramic figure of a naked woman on a rectangular bed tied with bands. A second woman stands at the head end. It is assumed that these statuettes portray deceased placed on a bier in preparation for burial, BCE 300 – 300 CE, Volkenkunde museum, RV-3602-1, acquired in 1959.

Appendix 15: Nayarit sculpture of eleven figures on a circular plateau standing in front of a house surrounding a man whose cheek seems to be pierced, a man holds the latter firm, while another performs the perforation, BCE 300 – 300 CE, Volkenkunde Museum, RV-4445-1, acquired in 1970.

Appendix 16: (Left) Colima effigy vessel of a compact dog on short legs with a bulging belly and upright tail, BCE 300 – 300 CE, Volkenkunde Museum, RV-3843-1, acquired in 1962. **(Right)** Colima vessel in the form of a fat, hairless dog with a human mask before his snout, BCE 200 – 300 CE, Volkenkunde Museum, RV-4605-1, acquired in 1972.

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