

# HOMININ REPRESENTATIONS IN MUSEUM DISPLAYS

Their role in forming public understanding through the non-verbal communication of science

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## INTRODUCTORY REMARKS

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The underlying premise of this thesis is that human-like figures that are used in museum displays with the intention to convey information to the public, about earlier hominins may bias understanding of the human past. What is unique about them is that they are based within a constructed context of humans as social and cultural beings. We contextualise figures through the inclusion of facial expressions, body language, emotions and sounds. This extra contextual information is also ‘read’ in the hominin representations even if they are intended to be objective. The act of giving a representation a body means that it must assume some posture, thus contributing to body language. The face even when neutral still gives us information and emotion may nevertheless be ascribed to it. Museum representations are used to illustrate past peoples and taxa as well as theories about their anatomy and yet they inadvertently convey this contextual non-verbal information. In order to understand the use of hominin representations as a form of non-verbal communication, we must first place them within a 21<sup>st</sup> century context of using technology to communicate.

Humans use a variety of ways to convey their knowledge to others using various senses. Spoken words preceded visual symbols as a means of symbolic communication. Pictorial displays, petroglyphs, cave paintings and sculptures were intended to imitate real objects. Today we use a range of ways to communicate, through language, verbally or the written word (which is limited to specific groups of people depending on the language used) or pictorially through images or three-dimensional models. These reach more people but may be read in different ways depending on cultural influences. Scientific finds, theories and interpretations with others, need to be communicated in such a way that they are understood by the target audience. This was originally done on a personal basis;

the information was either hand written, drawn, or conveyed orally amongst people communicating face-to-face. Socrates, one of the founders of our Western intellectual tradition was one such orator passing on his knowledge personally to his students (Nails 2006). The knowledge that we have of his teachings is only through the writings of others.

Since the advent of the printing press, scientific information was more readily accessible, although initially, only for the privileged, the majority of which were male. Continued technological advancements, however, have made it possible for anyone to have access to some form of information be it by television, internet, newspapers or academic journals. Scientific information is generally conveyed with additional pictorial information (figures, graphs, photographs). This use of pictorial information is well documented historically as is adaptation of new technologies to illustrating science (Adkins and Adkins, 1989). The invention of these new technologies is due to scientific advancements and is therefore a synergistic relationship between science and pictorial illustration. The dissemination and publication of science in the future will be influenced by the changes occurring culturally in the present, due to the increased use of available technology. The use of computers, virtual reality technology, iPods, iPads, smart phones, electronic paper (E-ink), video-in-print advertising as well as social networking sites (Twitter, Facebook etc.) for example are changing our culture away from written/verbal communication towards pictorial/verbal communication. Science will need to follow this trend to continue to communicate information and findings to the public. In order to infer new ways in which science can be communicated through these media formats, current usage of pictorial representations needs to be analysed and understood. Currently the communication or publication of science pictorially in a stand-alone format is limited.

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However, one format that is popular with the general public that crosses a variety of scientific disciplines are hominin representations<sup>1</sup> that are featured in museums, visitor attractions, journal articles, popular magazines, documentaries, television shows and newspapers. These forms of representations are unique in that they are able to present a scientific hypothesis without the aid of written communication (see Berge and Daynes 2001 for example). Although traditionally, science has been publicly disseminated through books, journals and conferences, the use of hominin representations allows for the communication of scientific theories and interpretations directly to the public through the unveiling of museum displays as well as the more traditional forms of media. This is an attractive form of communication in our consumeristic culture as it lends itself to advertising, the generation of excitement and attracts wider audiences<sup>2</sup>. The term hominin will be used in this thesis as a term that encompasses all bipedal extinct and extant forms of humans and their ancestors including those that may be of divergent lineages.

Hominin representations have been used in various ways by museums and educational institutions to communicate scientific thought. Three-dimensional wax models have been used in this way since the fourteenth century in the teaching of anatomy (Düring and Poggesi 2001). This type of human representation is still used today to teach or illustrate anatomy. World exploration introduced exotic cultures to the west through travellers bringing back individuals from other lands who were then exhibited to the paying public (Teslow 1998). The exhibition of these exotic peoples and ‘freaks’ was eventually legitimised through their inclusion in museum exhibits which illustrated exotic far-away cultures in order to introduce them to the general public. One way in which this was done was through the use of peopled dioramas that showed a frozen moment in time. The use of museum figures was then expanded to include

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<sup>1</sup> A comprehensive definition as well as a listing of the types of representations found in museums can be found in Chapter 3 “*This Study: Museums Visited and Hominin Representations Actually Used*”.

<sup>2</sup> See for example the use of the Herr N a Neandertal representations on the Facebook page for the Neanderthal Museum. A photograph of a facial reconstruction of Ötzi – the Iceman is also used to advertise a travelling exhibition about that individual.

hominin representations with the discovery of extinct human forms. These types of hominin representations are frequently seen in documentaries, newspapers and magazines but one of the few places that the actual three-dimensional representations can be seen by the general public is in museums.

Museums are commonly used as a family leisure activity which is educational and therefore guilt free. This educational role is acknowledged by museums in general, although, different museums pitch their exhibits to different audiences depending on the target groups that are the focus of the individual museums (Ambrose and Paine 2006). Museums are also run and/or funded by an assortment of groups or individuals, both government and private, which also influences the types of exhibitions shown, the museums priorities and the focus of each exhibition as well as its target groups. The public in a sense dictate museum exhibits, as popular exhibits and new exhibitions attract customers by enticing new visitors and convincing regular visitors to continually return. As museum exhibitions are expensive in terms of money and time, travelling or temporary exhibitions are often used to attract the public to a museum. Other public initiatives such as National Science Week Activities and Palaeontology Week for example are also used to ensure repeat visits.

Museums use different presentation techniques to make exhibits interesting and help the visitors to understand the information (Ambrose and Paine 2006). When actual objects, artefacts and other forms of material culture are not able to be shown or are incomplete, reconstructions and models are frequently used; examples of these are scale models of buildings, technological devices or sites, reconstructions of dinosaurs, megafauna, rooms or buildings. This is because the more distant the object or event is in time from the present day the easier it is to understand it when we are presented with it in a visual format (see Redknap 2002).

These reconstructions, by illustrating the past and various paleontological, archaeological and historical sites have created interest in these topics amongst

the general public. This increased interest is in turn shown in the popularity of museums and visitor attractions. Continued research into our history and new finds in the area of hominin evolution also generate interest in our remote ancestors. Visual illustrations of these finds are easily accessed by the general public through a variety of media, which sustains the public's interest. Add to this the desire that we have to know who our ancestors were and where we as a species came from and hominin representations appear to be a logical and popular way to present information and current knowledge to the public.

There is, however, the danger that the narrative presented by the representation may not be specific and may also be misconstrued or miscommunicated. Humans are visual animals and by providing visual signals the information is more easily retained and remembered. The perceptions that we have about the past are influenced not only by our current knowledge but also by our prior knowledge. This prior knowledge has often been acquired from non-scientific sources such as illustrations in children's books and other forms; films, television and literature, which have in turn been influenced by older notions, myths, superstitions and other cultural constructs (see for examples Moser 1998; Redknap 2002; Scott 2007). Visual images also 'colour' our knowledge of the past as they may leave lasting impressions gained at a young age. A superficial aura of historical accuracy has also been attached to movies with memorable scenes becoming embedded not only in our psyche but in popular culture. The inaccurate belief<sup>3</sup> that 'cavemen and women' co-existed with dinosaurs is fuelled by Hollywood movies (for example 'One million years BC' and 'When Dinosaurs Ruled the Earth'), comic strips ('The Far Side' by Gary Larson), cartoons ('The Flintstones') and further strengthened with modern humans featured with dinosaurs in novels (the 'Dinotopia' series) movies ('Jurassic Park' series, 'Godzilla' series) and television series ('Primeval' and 'Terranova').

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<sup>3</sup> Scott's (2007) found that in some cases up to 14% of museum visitors believed that dinosaurs lived at the same time as humans.

Even when prior knowledge is based on a reputable source, its scientific accuracy may no longer be current as new finds, technologies and techniques continually add to our knowledge, changing interpretations and our understanding about past (see Giacomini *et al.*, 1986). So although reconstructions, representations and other visual images help us to explain and understand the past, these images are taken for granted as we do not critically analyse them and identify any biases that they may contain.

Within a museum context there are a range of reconstructions and representations that may be considered to be hominin representations. Previous research into these museum figures or hominin representations, has paved the way for this thesis. For example, sculptures of idealized figures representing various ethnic groups were analysed by Teslow (1998) to determine the presence of racial bias. Wax mannequins in Scandinavian museums feature in Sandberg's (2003) book where he details their history as well as the cultural complexity involved in their display. Authors such as Sawyer and Deak, (2007) Redknap (2002) and Ambrus and Aston (2001) discuss the reasoning behind the recreation of people in conjunction with the methods used. Milner (2007) gives an overview of the various artists that have recreated hominids over the last 150 years. He also introduces us to the way in which these earlier recreations influence modern artists, the hominids they recreate and the displays that feature them. Moser's (1998) work systematically lays out the way that images from past cultures have become embedded in our psyche and influence the way that we think about evolution. This visual language persists even when there is a change in interpretation and knowledge (Redknap, 2002). The work by Scott (2007) has shown that museum visitors bring a range of cultural insights, preconceived ideas, contradictory knowledge, beliefs as well as emotions and expectations. Her work focussed on visitor's perceptions of evolution exhibits in museums, which were complex and difficult to quantify. Scott (2007) surveyed 491 museum visitors on a range of human evolution questions as well as on specific museum exhibits. Using a mix of qualitative and quantitative methods she found that: stereotypical anthropological images from the 19<sup>th</sup> century persist and influence

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current thought and popular culture about Africa; cultural preconceptions of museum visitors were derived from images from an array of sources consisting of scientific and religious as well as mythological; and that the museum visitors also brought their own expectations of museums and what they are going to see with them. She also found that the “unilineal progress of races” is still firmly entrenched with Africans seen as living ancestors, both culturally and biologically primitive.

Scott’s (2007) research was conducted in four museums with human evolution exhibitions, these were: the Natural History Museum, London; the Horniman Museum, London; the National Museums of Kenya, Nairobi; and the American Museum of Natural History, New York. The most ‘powerful’ in terms of the presentation techniques used in these exhibitions identified by the surveyed visitors, were found to be the peopled dioramas. The main differences between the dioramas were identified as being “in the features of the head and face” (Scott 2007) of the figures within them. Scott (2007:64) indicates that;

This highlights the importance of visitors generally being able to relate to reconstructions, to make intimate, face-to-face, eye-to-eye, connections with these reconstructed ancestors.

The identified features that differed amongst the representations included such characteristics as skin colour, the individual facial features themselves, facial structure, the colour as well as the amount of hair present. The *Homo erectus* representation for example challenged the visitor in having an unexpected “intermediate” skin tone which influenced how the diorama was perceived by the visitor. The fact that the diorama figures were thought to be very lifelike was also a factor.

These results indicate that hominin representations are an important feature of human evolution displays and that the choices made in terms of what they look like and how lifelike they appear, influence the visitor and the way they think about human evolution. To date no study has analysed systematically what



features influence the visitor, nor has there been any quantitative research on how lifelike the representations are. Therefore the focus of this thesis is on those figures that are life-sized three-dimensional representations used to portray humans and their ancestors.

There are many opportunities for hominin representations to contain biases as the input of several people is needed to create them. Scientists can not convey their precise meaning through representations without an artist's help, due to the technical requirements and skills entailed in the creation of these representations. A team of researchers may also be involved from diverse fields, for example paleoanthropologists, climatologists, environmental scientists, anatomists, osteologists, primatologists and geologists, as well as people from various artistic or technical fields, including sculptors, makeup artists, wig makers, costumers and weapons makers<sup>4</sup>. Unless all of these scientists are sitting next to the artists during the creation process they lack a certain degree of control over the final product. Including all these people in the creation process is rife with difficulties as is the creation process itself. A great deal of debate can surround the issues of what to include and what to exclude in the hominin representations and there is also the issue of the gaps in the current scientific knowledge. The abilities and knowledge of the artists involved and the limitations of materials used will also influence the finished product as will the requirements of the museum. The finished product can also be influenced by the latest in technology. The Smithsonian Institute for example has created a MEanderthal app designed for iPhones and other Android device. This 'app' or application meshes a person's photograph with the facial features of other hominins. Essentially humanising these hominins or de-humanising the user, depending on how you look at it.

The premise of this thesis is that three-dimensional hominin representations are used as a way to convey scientific theories and interpretations to the public and other scientists and they also convey unintended supplementary information as

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<sup>4</sup> See the example of the facial reconstruction of King Philip II of Macedon on page 131.

well due to their uniqueness as an artefact, a presentation technique and their placement within a context. It is this other information that will be the focus of this thesis.

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## PROJECT BACKGROUND

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The topic of hominin representations draws on various disciplines ranging from the fine arts, social sciences and humanities to anatomy and palaeoanthropology. Although this thesis has a biological focus, background information is required on the way the human body is understood at culturally, how science is communicated to other scientists and, especially, the public through the medium of the museum. This leads to a variety of museum topics and the way in which humans have been displayed. To this end this chapter attempts to provide a synthesis of the literature from various disciplines in order to convey the knowledge necessary to follow the arguments presented in this thesis to clarify terminology and concepts used.

### RECREATING PEOPLE

Hominin representations are a form of material culture meant to physically represent humans or members of their evolutionary lineage. They are however, viewed differently from other forms of material culture<sup>1</sup>, such as artefacts, as they represent in effigy a ‘person’, which is dynamic, sentient and animated rather than an inanimate object. Even if not acknowledged openly or consciously, inspecting a hominin representation is similar to looking at a ‘person’ and because of this, several factors influence the observer. These factors are either biological<sup>2</sup> or cultural<sup>3</sup> in nature giving a visual background to our knowledge

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<sup>1</sup> Material culture is defined as artefacts and ecofacts (floral and faunal material with cultural significance) used by a group of people in order to culturally manage their social and physical environment (Kipfer 2000).

<sup>2</sup> Biological is used in this instance to mean those factors that relate to our biological makeup such as the anatomy, behavioural traits, and manifestations of the basic functions of the central nervous system.

about people and their physical bodies. This visual or non-verbal information means that an individual's preconceptions, prior knowledge and personal opinions all play a part in how these representations are viewed. Non-verbal information is also transmitted by the representations through their intended purpose, the decisions made by artists/scientists prior to manufacture, the manufacturing process itself as well as the context it is displayed in, not only in its exhibition space but also within the gallery and museum space.

Primates have a high level of visual acuity (Kirk and Kay 2004) which humans have expanded upon through their use of signs, symbols and visual media that are so much a part of many cultures including modern Western culture. These visual signals and symbols have been incorporated into all areas of our lives through our love of consumerism, entertainment and technology. An important focus of our visual imagery is centred on the human body which is recreated in many ways for a variety of reasons which range from the biological to the cultural<sup>4</sup>. These various factors play a part in how we 'perceive' the representations, what we 'read' into them and what information we take away with us after viewing them. These all depend on or are shaped by what preconceptions we already have about the human body.

## **A Biological Basis**

Biologically speaking, the human body and the face in particular are important to our species, guiding behaviour and allowing the expression of social signals. Infants instinctively learn to 'read' their caregiver's face for emotive signals due to their total dependency upon their caregiver for safety, nourishment, warmth, comfort and shelter. Modification of emotive responses by both the caregiver and

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<sup>3</sup> Cultural in this thesis relates to cultural and social behaviours and mores that are not due to biological reasons.

<sup>4</sup> These biological and cultural factors will be expanded upon as they relate to specific topics throughout the thesis.

the baby results in behaviour reinforcement (Jones *et al.* 1991) as well as opportunities for social interaction. The first people we learn to ‘read’ constitute our caregivers/families and then as we age and our social interaction increases, our awareness expands to include friends, significant adults (e.g., teachers), acquaintances and finally strangers. Therefore we are more adept at reading the expressions of those most important to us rather than those who are less well known or are strangers (see for example the review by Schmidt and Cohn 2001).

The underlying importance of reading these non-verbal signals in social situations is highlighted when there are people that are unable to decode emotive signals or do not understand them and react in culturally or socially problematic ways. A variety of disorders can impair the way people identify facial expressions and associated gestural and postural elements and interpret their meaning, which result in ineffective social interaction. Examples of these disorders include schizophrenia (Grusser *et al.* 1990) and autism (Howard *et al.* 2000).

Interacting socially has been a crucial aspect of our evolution as communal primates. Anatomical evidence of this can be found in our eyes, as we have the largest amount of exposed non-pigmented sclera (the white section of the eye) of any primate species, as well as an elongated horizontal eye outline (Kobayashi and Kohshima 2001). These structural changes are thought to be an adaptation to communal living as they enhance our gaze-signalling, refining communication needed during co-operative behaviours such as group hunting.

There are six emotive expressions which are universal; disgust, anger, fear, sadness, surprise and joy (see for example Darwin 1872/2005 ; Schmidt and Cohn 2001). These expressions may include gestural or postural elements that are commonly known as body language. When these gestural/postural elements conflict with the individuals’ facial expression the identification of the overall emotional expression is biased by the emotive body language (Meeren *et al.* 2005). The perception of these emotive displays is individual due to the context

in which they are displayed or perceived, other stimuli, the demographic background of the individuals, anatomical structural variation and timing of the expression as well as the pattern of movement (see Schmidt and Cohn 2001 for detailed information). These universal expressions are not always clearly seen on hominin representations that are used in museum displays although emotion may be ascribed to the representation by the viewer even if not actually present.

## Culturally Constructed Importance

In addition to these biological and evolutionary factors, there are a variety of cultural influences that also affect the way that we perceive the human face and body. Modern Western culture has not come about in an isolated fashion but rather has been influenced for millennia by previous cultures.

- The ancient Egyptians used a grid system to control body proportions in their art (Robins 1994; Robins 1997).
- Historical artistic canons – for depicting the human face and body (such as those of the ancient Greeks) still have relevance to modern forensic and medical practices for example facial surgeries (Vegter and Hage 2000).
- Leonardo de Vinci’s artistic canon regarding facial features (rule of thumb) is still anatomically relevant to today in art or plastic surgery (Oguz 1996).
- Anatomical knowledge was originally recorded by the ancient Egyptians and Greeks, contributed to by Islamic cultures, expanded upon during the Renaissance and is continually updated by modern research (Geranmayeh and Ashkan 2008; Lyons 1978).

These are all examples of how previous cultures have played a part in creating European derived cultures. But these are only a tiny fraction of the way that we are influenced by the past. We are highly susceptible to visual imagery and

when this is related to the human body it creates a cultural context (essentially a mental database) on which we can base our understanding of the body and each other. This cultural database is built upon the symbolic significance as seen in art and ritual (religion, spirituality) as well as our scientific understanding of the body and evolution. Symbolism is one of the identifying traits of modern humans and many symbolic acts are based on or around the human body.

By understanding these cultural influences, we are then able to understand why hominin representations are a unique form of material culture and discuss them in terms of the non-verbal information that they impart to the viewer. This non-verbal information as it relates specifically to hominin representations will be discussed in-depth in Chapters 4 to 7.

## Artistic Representations

The human face and body have been a source of inspiration for millennia and have been depicted in a range of media. The earliest symbolic acts that have been identified are those that have been interpreted as possible art. The oldest artefacts interpreted as ‘possible’ art are of rocks reminiscent of a human-like shape that has been manually enhanced to increase their anthropomorphic shape. Examples are:

- the 3 million year old Makapansgat cobble resembling a ‘humanoid face’ (Bednarik 1998; Oakley 1981);
- the Moroccan Tan-Tan figurine (approximately dated to 400 Ka) (see Bednarik 2003 for detailed description);
- the Berekhat Ram figurine from Israel (250–280 Ka) (Bednarik 2003; Marshack 1997); and
- a “proto-figurine” found at the site of La Roche-Cotard, in France is a Mousterian artefact attributed to Neandertals which is reminiscent of a face with evidence of modification (Marquet and Lorblanchet 2003).



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The interpretation as ‘possible’ art is due to the debate about what constitutes art and how art is defined (see Baines 1994; Corbey *et al.* 2004 for further details)<sup>5</sup>. Although, we consider certain items to be art, that does not necessarily mean that the makers considered them to be an art form. For example the Ancient Egyptians had no word that corresponds to our abstract concept of art and yet their visual legacy is considered to be art (Aldred 1980; Robins 1997). Why then is it difficult to ascribe artistic modification to these artefacts?<sup>6</sup> The ancient Egyptian example shows that the cultural perceptions of the makers do not necessarily preclude a modern interpretation of art. These older artefacts have subjects that are visually identifiable to ‘modern’ humans and they have been modified indicating that they had an ‘economic/cultural’ cost as modification takes time away from what would be generally spent in maintaining survival of the individual and/or group. This ascribed importance is therefore not essential for survival and can then therefore be considered to be visually significant. This then means that these anthropomorphic representations indicate that the hominin body has been a consistent ‘artistic’ or visual theme for hundreds of thousands if not millions of years.

The ‘art’ of temporally distant cultures speaks to us about both its ‘creators’ and its audience leaving a visual legacy through which we can understand and relate to them and it is this knowledge that then influences (subconsciously) our future interactions and thoughts. Examples of this are some of the most well known European pieces of art from the Upper Palaeolithic known as Venus figurines. These female forms have been the subject of much debate about why they were created (Absolon 1949; Berenguer 1973; Dickson 1990; MacCurdy 1924; Neumann 1999; Price and Feinman 1997) although the crux of the situation is that they represent female bodies. McDermott (1996) has suggested that they are actually self-portraits done by women in various stages of pregnancy. Identifiable representations of the male body from this period are rare and often confined to phallic symbolism. Insight into the Palaeolithic human body as well

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<sup>5</sup> For a comprehensive review on the evolution of art see the article by Morriss–Kay (2010).

<sup>6</sup> For further information see Balter (2009).

as their clothing and hairstyles can be deduced through this form of portable art in conjunction with European, African and Australasian cave art from the same period (Berman 1999; Soffer *et al.* 2000).

Images of human/hominin bodies and faces are consistently found in the artwork of many cultures throughout history. The earliest clay masks are dated to 3500 BCE from the Boar Mountain site in China (Barnes and Dashun 1996), while the earliest life-size metal sculptures found to date are Egyptian, dated to 2300 BCE (Heinz 2002). Gold masks have been found in Mycenae graves (Hanfmann 1973; Schliemann 1878) and both jade and clay masks in Central and Southern America (Poswillo 1989). The Greeks and Romans created portraiture statues which were used to define and display messages about an individual's personality through the use of body posture and build (Hanfmann 1973). Throughout classical antiquity, faces of family members and famous personages were created in wax.

This long visual history of human (hominin) representations has continued through the centuries culminating in the 'art' of today and its use of modern media. The superrealism (also known as hyperrealism or photographic realism) artistic style, for example began in the 1960s and 70s. This style of sculpture focuses mainly on the human body with highly realistic details (see for example the photograph of Duane Hanson's sculpture in Chapter 3, Figure 3.5 on page 67). The scale of superrealistic art is often greater than life-sized (Chilvers and Glaves-Smith 2009). Performance art, where the artists' body becomes 'art' through movement performed in front of an audience, became a recognised art form at this time as well (Chilvers and Glaves-Smith 2009).

The biological importance of the human face and body also has an impact on artistic representations. Human representations do not need to be accurate copies to be recognisable as human. Early drawings by children are identifiable as humans and consist of circles or basic stick figures (Cox 1993). Stylized Henry Moore sculptures, as well as paintings from Picasso's cubist period, are also

identifiable as humans. Identifiable features such as an upright, bipedal posture with the head placed higher than the body or an eye with a visible pupil/iris (unconsciously noticing the amount of visible sclera) are sufficient features to distinguish the representation as humanoid.

## Ritualistic Representations

While there has been a long, continuous link between the humanoid body and art, there is also a similar link between the human body and death. The idea of an afterlife and rituals associated with it indicates the importance placed on the body even after death. These universal rituals are centred on the body, its disposal and the way in which the individual is remembered. Such rituals and beliefs are archeologically recognisable among Neandertals and other Upper Palaeolithic peoples with the deliberate burial of bodies, particular placement of the body within the grave and the inclusion of grave goods, as well as the use of ochre on the remains.

This long tradition and its continued use, especially in Western society, has resulted in various historical practices that incorporate the combined use of skeletal remains and a representation of the living individual. In the Neolithic period, individualistic plaster faces were created over an underlying skull in places such as Jericho (Kenyon 1957) and Köşk Höyük in Anatolia (Bonogofsky 2005). More recent examples of this type of ritual or ‘memorial effigies’ were found on the island of Malekula, New Hebrides, where the facial features were reformed with vegetable matter and then painted, while those from the Solomon Islands were modelled in a hard black substance and finished with inlaid shell eyes and vegetable matter for hair (Balfour 1901). There are also European examples of Catholic practices involving painted skulls and secondary burial practices in a Hallstatt charnel house dating from the 18<sup>th</sup> through to the 20<sup>th</sup> century (Carson 2006; Martínez-Abadías *et al.* 2009; Sjøvold n.d.).

Other practices consist of body preservation such as mummification and embalming. The bodies of Christian saints were thought to be ‘incorruptible’ and without sin and therefore it was believed that there was no decay of their physical body (Chamberlain and Pearson 2001). Generally, preservation was brought about intentionally through the practice of mummification by many cultures, although unintentional mummification due to taphonomic factors also occurred. While the most well known mummies would be those of Ancient Egypt, mummified remains are also associated with the Incas (Chamberlain and Pearson 2001) and Chinchorro people of South America (Arriaza 1995) as well as being found in China (Lawler 2009). Modern political figures have also been embalmed mainly for political reasons, these include Abraham Lincoln, Lenin and Eva Peron (Chamberlain and Pearson 2001). Lincoln’s embalmed body for example was then taken around the United States and put on display.

If the physical body was not preserved then the memory of the individual often was. This was done through the placement of bodies and worldly possessions into graves leading to the creation of cemeteries, status markers and other symbolism (memorials, tombstones and effigies) in order to mark the passing of an individual. Modern technology means that photographs are now able to be attached to grave stones, markers and memorials; this is a continuation of a long historical tradition. The Etruscans modelled reclining individuals on their sarcophagi. The Romans placed death-mask portraits in household shrines (Hanfmann 1973), while the Romano–Egyptians painted an individual’s portrait on his/her coffin. The Egyptians in addition to their mummification practices also modelled the individual on their sarcophagi.

Traditional portraits were also created after the death of an individual. Francois Clouet the court painter to Francis I of France for example created a drawing of him after his death (Wilson 1960). Effigies have also been used to grace tombs of royal personages (Chamberlain and Pearson 2001) as well as during funerary rites, especially when these rites occurred sometime after death (Wilson 1960). These historical practices in conjunction with modern funerary rites create a link

between death and some form of representation and this link is often observed in museums through the exhibition of tombs, recreation of burials, the exhibition of Ancient Egyptian artefacts and mummified remains, and other ethnographic exhibits.

## Knowledge Base

As shown in previous sections, there has been a long history of artists depicting humans in various shapes and sizes. While the accuracy of representations is not necessarily important to the recognition of them as humanoid, individuality and some degree of realism can be established from these artistic works. We know that ancient artists had an understanding of anatomy as well as a need to be realistic in their portrayals through the evidence of what their art recorded and their subject matter. For example, early cave carvings in Spain show a pregnant woman and her foetus (Lyons 1978). Other representations indicate portrait-like qualities as they show individual characteristics and pathologies (Appenzeller *et al.* 2004; Geranmayeh and Ashkan 2008; Poswillo 1989).

Our initial understanding of human anatomy is actually due to artists and their working illustrations from medical dissections. These would have been difficult to document as human dissection has been prohibited by many cultures across the centuries: the Romans, Greeks (although condemned criminals were used for dissection), Egyptians and Chinese and these prohibitions persisted until 19<sup>th</sup> century (Tsafrir and Ohry 2001). Knowledge of human anatomy until this time was often based on animal dissection or anatomical knowledge gained from patients, and misconceptions were often perpetuated or handed down because of this (Tsafrir and Ohry 2001). Leonardo da Vinci (1452–1519) was the first artist to do scientifically accurate anatomical drawings from his own cadaver dissections (Pegus 1978; Petrucelli 1978; Toledo-Pereyra 2002). During the Renaissance, accurate drawings were difficult to obtain as the Catholic Church frowned upon the dissection of cadavers. This prohibition in conjunction with the

lack of embalming had an impact on the actual dissection process by limiting the time available for observation and recording the actual anatomy (Tsafrir and Ohry 2001). Da Vinci also invented specific pictorial techniques such as the exploded view and the solid section which are still in use today (Kemp 1998).

The anatomy of the human body is now well documented and easily accessed through textbooks, anatomy atlases and interactive computer programs. Artists study anatomy in order to understand what they are drawing. Art classes and masterclass workshops on life drawing (figure drawing or nudes) involve a range of topics with some specifically on anatomy and proportion (for example Adelaide Central School of Art 2010). Sections on human anatomy are also a common feature in books about drawing the human figure (see for example Gordon 1979; Hamm 1963).

Eckert (1982) gives several instances of artists portraying their human subjects accurately. This may be done by using callipers to obtain the correct measurements of individuals for their artwork. The superimposition of busts over mummified bodies, in conjunction with historical written evidence and an individual's anthropometric measurements are evidence that artistic portraits can be accurate portrayals of a person. The individuality of faces (such as that found among the plaster skulls from Jericho as previously mentioned) is another indicator that portraits are of individuals rather than representing a standardised face. Neurological conditions such as facial palsy, paraplegia, ptosis and muscle atrophy are also identifiable in reliefs, frescos and paintings (Geranmayeh and Ashkan 2008).

## COMMUNICATION OF SCIENCE

Medical illustration is just one example of how science is communicated to other scientists, to students and to the general public. Science as it relates to hominin representations is sourced from a range of disciplines; medicine, anthropology (palaeoanthropology, biological anthropology, ethnology, archaeology), history, and

museum science. The visual language of science is not just limited to these areas of research. Various fields have all used some form of visual language at some stage to assist in the communication of results be it through the use of drawings or diagrams, models, reconstructions, photographs, or computer representations.

## Visual Language of Science

The visual language of science consists of two-dimensional graphics or three-dimensional reconstructions<sup>7</sup>. Scientific art is, however, drawn ‘to order’ rather than simply being the result of a creative process (see Carey 1978 on the invisible artist for an example). This ‘order’ is influenced by the intended purpose, the audience, necessary content, current conventions and technologies as well as the understanding reached between the scientist and the artist and any other stakeholders (Piggott 1978; Redknap 2002). It must be remembered that the visual impact of an illustration or reconstruction can remain with the viewer even long after interpretations and/or knowledge change becoming embedded in our visual memory (Redknap 2002).

For example early medieval archaeological illustrations reflected the superstitions of the period, with stone tools thought to be the product of thunderstorms and giants and fairies creating monumental architecture of the past rather than basing the illustrations on factual information (Adkins and Adkins 1989; Sklenář 1983). Scientific archaeological illustrations gradually became more factual. By the mid-18<sup>th</sup> century it was common for artists, historians and architects to work together (Adkins and Adkins 1989). In all scientific fields, the 19<sup>th</sup> century brought improvements to the communication of science in the form of published illustrations. Advances continued into the 20<sup>th</sup> century with rapid developments in various technologies such as printing, photography, x-rays, computer simulations and virtual reality. These new technologies are now commonly used to communicate scientific findings and

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<sup>7</sup> See page 29 of this chapter for more information about three-dimensional reconstructions.

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interpretations to both scientists and the public. Virtual archaeology, for example is becoming main-stream concept (Bawaya 2010). This is where computers are being used to recreate such things as climate, landscapes, buildings, and even human behaviours. The need for scientific publication of findings and hypotheses as well as economic growth that can be derived from tourism has encouraged the use of visual interpretation (Redknap 2002). For example a theme park featuring a replica of Chauvet Cave in France is planned to enable tourists to see the cave art without damaging the actual cave (Herzog 2010).

## MUSEUMS

Modern Western museums are a way to link science and tourism together. Tourism is used to increase the museums audience base which in turn has an economic benefit funding the museum and research. This funding then goes into creating new displays thus attracting more visitors. Museums are the ideal way to bring science to the general populace and turn it into a leisure activity thus making education fun. The definition of a museum used in this study is that from the International Council of Museums (ICOM) (2007:2).

A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment

This is based on the European museum structure which may differ from that of other cultures. Not all Western museums are labelled as museums. They may also be known as heritage centres<sup>8</sup>, halls of fame, cultural centres, visitor attractions or known by the name of the building that they are situated in. Art

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<sup>8</sup> Heritage Centres tend to be theme based rather than collection based and were originally called Architectural Interpretation Centres (Sterry 1998).



galleries may also be classified as museums although for the purposes of this study they are not included as museums. Other cultures may have differing ideas about what a museum is, or may present the European idea of a museum within their own cultural framework. For example, Japanese names for museums are treasure house, storehouse, cultural hall and ceramic hall (Roberts 1987). Museums also come in a large range of layouts such as open-air villages populated with actors, historic buildings, a room within a business or university, a series of connected buildings or purpose built premises.

## Evolution of European Museums

The modern form of today's museums was shaped in the 17<sup>th</sup> century and evolved from the private collections of wealthy upper-class men (for further reading see Ambrose and Paine 2006; Bennett 1995 ). These often began as curio cabinets and the collections they contained reflected the interests of the collectors. Expansion of these collections led to private museums, with entry by invitation only, so that the nobility, the rich and the powerful could display their collections and their power to one another. This growth of the museum came about during a period of great change, the Industrial Revolution and coincided with the birth of the department store, international exhibitions and designated working and leisure hours. Leisure hours led to an increase in various forms of publically accessible activities such as art galleries, libraries, theatres and museums (Cunningham 1980). Museums also became a place of learning with scholars actually working in the museum in front of visitors. This concentration on education in the late 19<sup>th</sup> century has persisted as a museum focus to this day. However, in the mid- to late- 20<sup>th</sup> century museums were thought to be boring due to this focus on education. This in turn led to a shift towards entertainment in the late 20<sup>th</sup> and early 21<sup>st</sup> centuries in order to increase visitor numbers<sup>9</sup>.

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<sup>9</sup> This is a simplistic summation of the evolution of museums given the complexity of the topic. This is an overview in order to show the reader that there are several focus areas to a museum in addition to their collections and preservation briefs. Museums while featuring in this study are not the main focus of it, but rather the hominin representations displayed within them are.

The focus on entertainment has not detracted from the educational value of the museum. This long tradition of museums as places of learning has given a degree of authenticity to museum displays. This means that the information portrayed by museums through their displays, publications and outreach programs is taken as “fact”. The ascription of authenticity means that museums are the perfect public vehicle for the dissemination of science.

## **On Display**

Several words are used to describe items that are on display in a museum and these have been well defined by Miles and colleagues (1982). Display is a generalised term which may refer to an entire exhibition, a group of exhibits or an individual exhibit as well as the actual process of putting an item on display. An exhibition is a series of displays or exhibits that have a common theme, while an exhibit is a single section of a larger exhibition. Burcaw (1995) expands on this by defining an exhibit as a display with the addition of interpretation. Museum exhibits differ from commercial exhibits at trade shows, which are used to sell a product or service. Although there have been instances where dioramic exhibits from International World Expositions were then donated to museums (see for example Russell 2001). This was a common practice in the 19<sup>th</sup> century. There is also similarity in certain presentation techniques between museums and shops such as the use of mannequins, the placement of items behind glass or on pedestals as well as the defined pathway passed various displays.

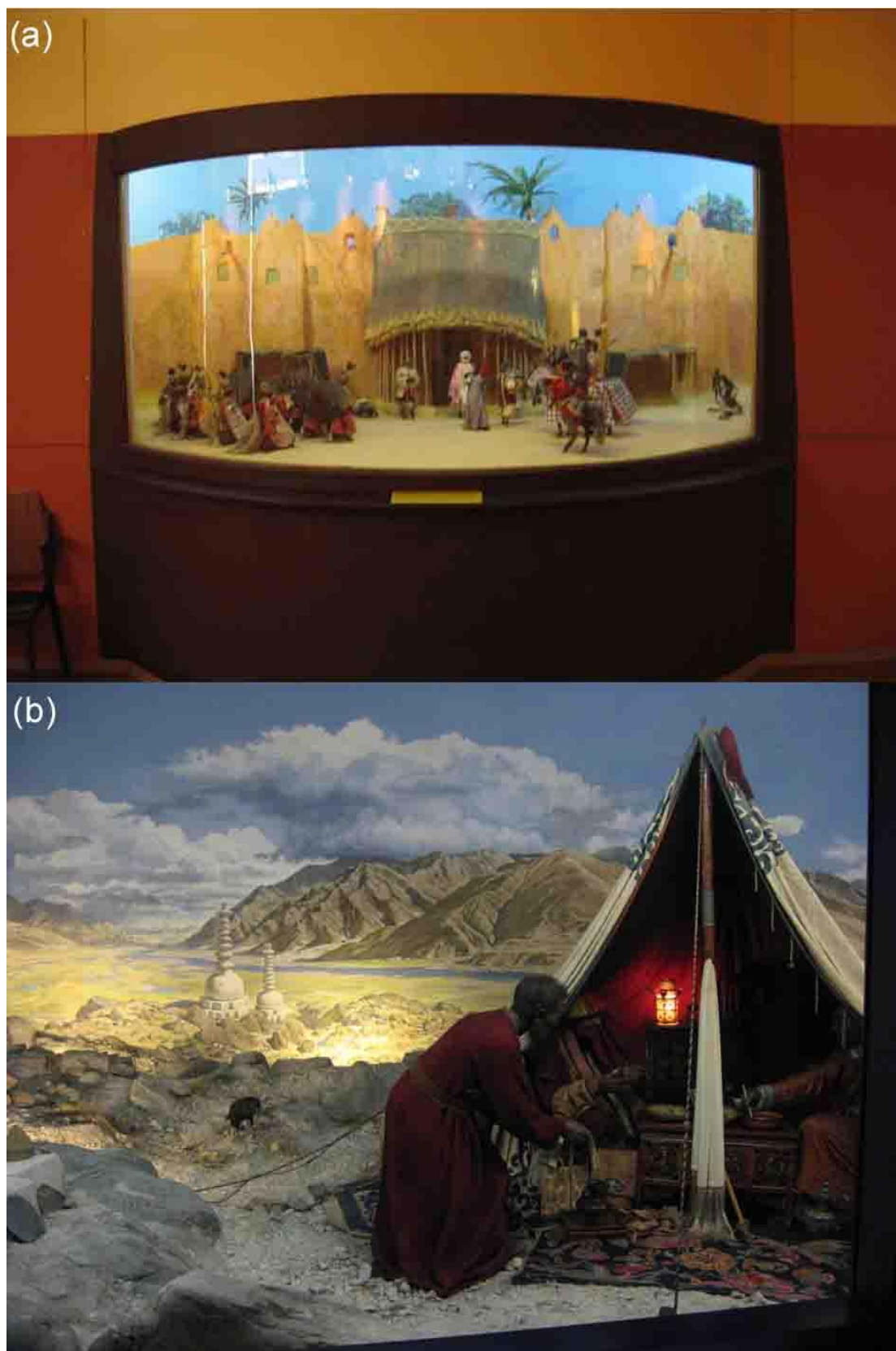
## **Presentation Techniques**

Museums use various presentation techniques to both engage and inform visitors about the artefacts or other objects being exhibited. These presentation techniques take the form of either a two-dimensional (text panels, maps and

photographs) or a three-dimensional (models, reconstructions etc) format. The three-dimensional techniques will be discussed further as they are the focus of this study. Ambrose and Paine (2006) discuss several techniques in use: dioramas, room settings, tableaux, models and people movers. In addition to these other techniques were viewed in museums and identified in the literature, these were: reconstructions, replicas, restorations, casts and life-groups. These various techniques are used to inform and engage visitors in specific ways. They are not always used in isolation. A diorama for example may consist of casts, models and animatronics and be viewed from a people mover. The following are general definitions and a guide to understanding the various displays viewed during the studies' data collection.

### *Dioramas*

Dioramas show a particular moment in time within a lifelike scene. It combines a life-sized or scaled model with a painting to give a complete overview of the scene in question (Figure 2.1). The foreground or groundwork is generally modelled and the background, often curved, is painted to merge with the foreground to create a lifelike scene. Dioramas are often used to portray animals in their natural habitats and are often referred to as habitat dioramas (Quinn 2006) or habitat groups (Alvey 2007; Burcaw 1995). Those that portray people may also be referred to as ethnographic dioramas (Alvey 2007), anthropological dioramas (Freed 1997) "manikinned" dioramas (Russell 2001) or occasionally life group dioramas (Arnoldi 1999), groups or museum groups (Anon. 1933) or simply life-groups (Griffiths 1996). However, in this study the term diorama will refer to those displays that feature a painted background and the definition of life-



**FIGURE 2.1** Two different types of dioramas at the same museum: (a) a small scale diorama; and (b) a life-sized (ethnographic) diorama at the Haus der Natur, Salzburg, Austria.

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group will be elaborated on later. Dioramas are used to either represent a typical scene or a specific historical moment. They have also been historically used to record endangered ethnic groups<sup>10</sup> and for the display of hominins (Russell 1999).

### *Life-groups*

A life-group is a display with figures placed within a contextual scene (with artefacts) that lacks a background (Lee 1998) (Figure 2.2). This lack of background is the main difference between life-groups and dioramas<sup>11</sup> (Lee 1998). The contextual information contained in a painted background gives the viewer extra information about the display. When this extra context is lacking the viewer is able to fill in these contextual details from their own experiences and knowledge. Older life-groups were often shown in vitrines (glass display cases) enabling them to be viewed from all angles. These have also been referred to as “tableaus” (Alvey 2007). Griffiths (1996) uses the term “life group” to refer to dioramas as well as life-groups as defined here.

### *Room Settings*

Room settings are either an original room (which may have been relocated) or a reconstruction of a room. These, however, do not feature ‘people’ (Ambrose and Paine 2006) (Figure 2.3). Room settings show the room at a point in time but without a person they lack the extra context supplied by a figure and look more like a theatre set than someone’s home. A novel approach by the Museum of London uses actors to perform in these room settings. The scripted story informs the museum visitors about the historical aspects of the exhibition.

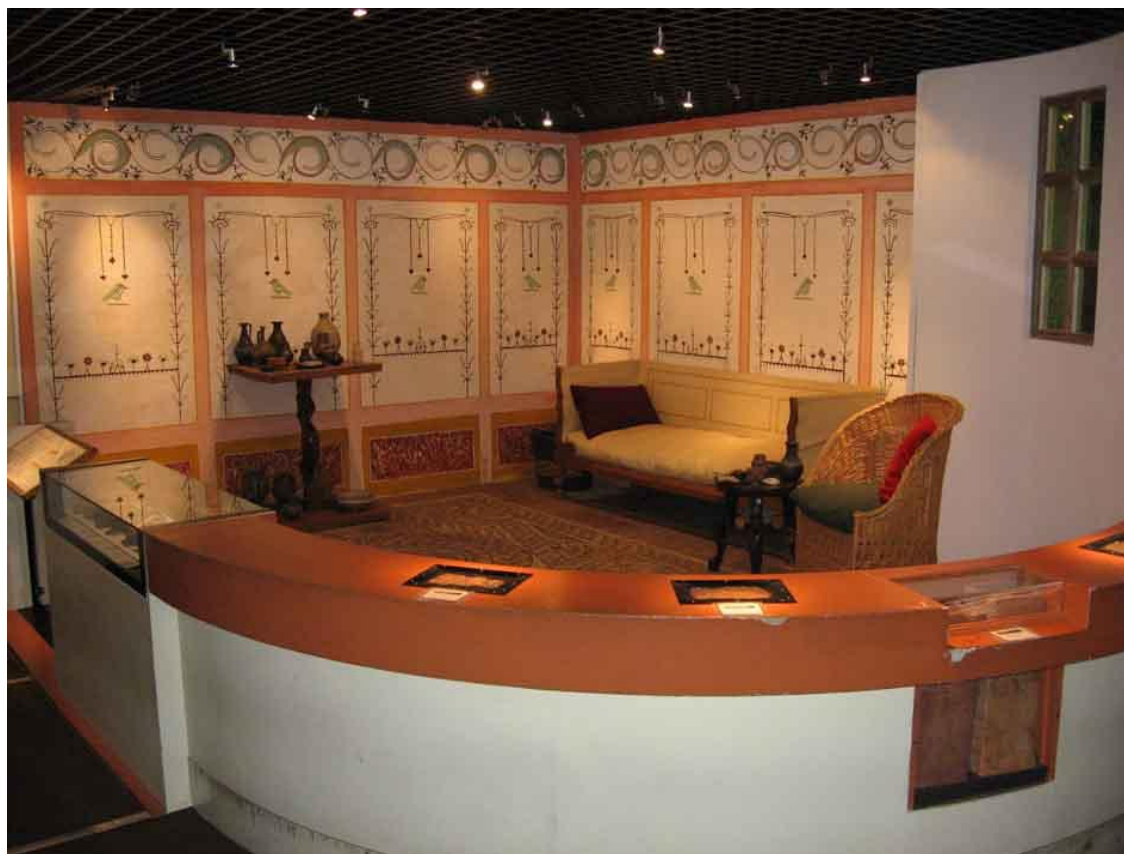
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<sup>10</sup> The Australian Aboriginal for example was thought in the late 19<sup>th</sup> century, on the brink of extinction due to British colonisation (Russell 1999).

<sup>11</sup> For an example in the literature see Lee (1998).



**FIGURE 2.2** A life-group at Neanderthal Museum, Mettmann, Germany. Note the lack of painted background and the contextual information on the floor of the display.



**FIGURE 2.3** A un-peopled room setting at the Museum of London, London.

## *Tableaux*

A tableau is similar to a room setting with the addition of costumed ‘people’ that fit within the context (Figure 2.4). The addition of human figures assist the visitor’s interpretation by showing the use of items/buildings, and illustration particular events, times or places without the need of additional text. Historically the tableau has been a common feature of ‘waxwork’ shows (Ambrose and Paine 2006).



**FIGURE 2.4** A tableau showing a Roman family at the Corinium Museum, Cirencester, England.

## *People Movers*

Although tableaux and dioramas were already described, the use of people movers gives the public a different perspective on these still displays and they deserve to be described separately. People movers are often ‘ride’ type cars within which the visitor is transported through the exhibition often through a series of tableaux or dioramas (Figure 2.5). These may also be called electric cars (Velarde 1988) or time-cars (Sterry 1998). They are used to control what the visitor sees, when and in what order and limits the number of visitors at any one time (Ambrose and Paine 2006). Another example of a people mover is a horse and carriage which is often used in historical villages. A unique characteristic of three-dimensional techniques is that they offer the visitor the chance to move around the display. This may involve a multi-sensory experience and enable the viewer to see different aspects of the display as they move around or through the exhibit (Belcher 1991). Thus, although people movers differ from the other presentation techniques in that they move people around a display in a specific way, visitors still engage with them in the same way that they engage with the other three-dimensional techniques.



**FIGURE 2.5** Examples of people movers used at the Jorvik Viking Centre, York, England in 2006.



## *Reconstructions*

Reconstructions are used by museums to ‘re–create’ an object or an animal in order to illustrate certain points or to show what they looked like. There are several types of three–dimensional reconstructions; replicas, restorations, casts, and models which also includes animatronics and hominin representations. These reconstruction types define objects that have specific intentions and differing manufacturing methods.

### REPLICAS

A replica is an exact working copy of an item, often made using similar techniques and materials as the original item (Ambrose and Paine 2006). They therefore tend to be technical objects such as weaponry, transportation or clothing. Replicas are generally created when the actual object is too fragile or poorly conserved to handle or the display is created in such a way that visitors are encouraged to use the replica.

### RESTORATIONS

Broken artefacts that have been reassembled are known as restorations (James 1999). Even if the artefact is incomplete, restoration can be completed by adding missing pieces. This is generally done so that the missing sections are obvious to the viewer; they may be left blank (for example on a Grecian urn with a painted decoration, the decoration is not reproduced on the reconstructed surface, which is left blank), be of a different material or colour (Figure 2.6).



**FIGURE 2.6** A restored Roman wall and floor on display at the Corinium Museum, Cirencester England. The restored areas have been left blank, that is the mosaics or painted sections have not been continued so that the viewer can see which sections are the original and which sections have been restored.

## CASTS

A cast is not an exact copy of an object although it will look like it externally. A mould is made of the object to be copied. A liquid material is then poured into the mould and allowed to solidify. Casting materials that are commonly used in this process are plaster of paris, resins, silicones and even wax. Once the material has solidified the mould is removed from the cast. Depending on the material used the cast may be either solid or hollow. A cast is used in similar

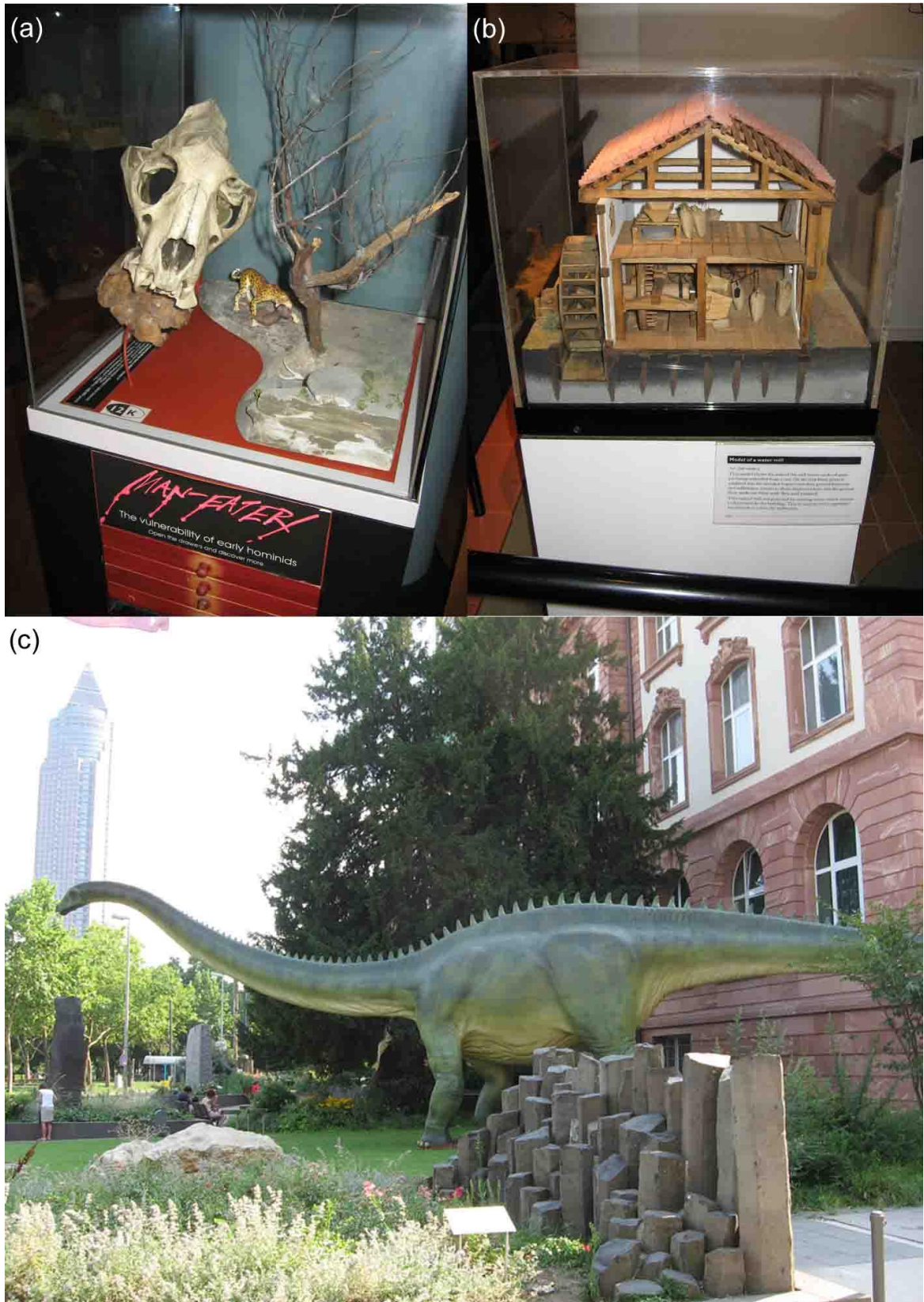
situations to a replica but has no working parts. Common items that are cast and displayed in museums are skulls and other hominin bones.

## MODELS

A model is often made of an object, animal or landscape that no longer exists and there is no other way in which to visualize it. These are commonly used within museum contexts, and assist the visitor in interpreting the exhibition and may be of anything relevant to the exhibition, from dinosaurs to archaeological sites. Models range in size from small models of buildings to life-sized dinosaurs (Figure 2.7). The only human representations that are technically considered models are anatomical models. The purpose of which is to show in internal workings of the body. Ambrose and Paine (2006) have also placed military uniforms and machinery in the model category, even though by definition they are actually replicas. Miles and colleagues (1982) define all three-dimensional representations such as dioramas and mounted specimens as models. The term model has also been used to refer to human figures or representations (Jordanova 1989). These examples indicate that these categories are not consistently used in the literature.

## PEPPER'S GHOST

A 'Pepper's Ghost' is an interesting presentation technique and as the name implies gives the impression of one scene or object transforming into another or disappearing from sight. Essentially it is a reflection of an object which is placed above and in front of a screen while a second object is placed behind the screen (Miles *et al.* 1982). As the light changes first one object will be illuminated and then the next giving the impression of one object changing into another.



**FIGURE 2.7** Three examples of various models that are found in museums: (a) a small scaled model of a ‘man-eater’ at the Hunterian Museum, Glasgow; (b) a small scaled model of a building on display at the Museum of London, London; and (c) a life-sized model of a dinosaur outside the Senckenberg Museum, in Frankfurt.

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## ANIMATRONICS

Moving or animated models are also called animatronics or machines (Miles *et al.* 1982). These involve various moving parts and may be part of a larger diorama. The movement may be accompanied by audio–visual effects (Figure 2.8 and see also the CD for Video 2.1).



FIGURE 2.8 A still from video showing an animatronics life–sized Tyrannosaurus Rex at the Natural History Museum, London. © The Natural History Museum, London / Kokoro Ltd

## HOMININ REPRESENTATIONS

Hominin representations have been added to this list of presentation techniques for this study. They are not recognised as a separate category in the literature although they are unique among this list of reconstructions. They are unique in

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the way that they are perceived due to the biological and cultural importance placed upon the human ability to ‘read’ information from the human body<sup>12</sup>. For example, when looking at a human (whether actual or representational) we subconsciously assess them in various ways: for example their sex, age, social status, posture and facial expression. Hominin representations may also be found in the other categories as some representations are models, some are animatronics, some are Pepper’s Ghosts and some are casts. As there is no one category that all hominin representations can be placed into, for simplification this study will use hominin representations as an all-encompassing term to refer to all types of life-sized human-like figures.

## HUMANS ON DISPLAY

The display of humans in a museum context dates back to at least the early 1800s. ‘Curiosities’ or ‘exotic’ people were brought back from overseas trips and displayed in order “to educate and titillate” (Teslow 1998). These people were ‘exhibited’ in museums, travelling shows and circuses with a Victorian veneer of scientific justification. There are various examples that illustrate the thoughts of the time, a common theme of which was the ‘progress of humanity’ (Redknap 2002) which was often depicted metaphorically as a ladder, with modern white males situated at the top of the ladder, denoting the peak of humanity, showing the increase in intellectual, cultural and technological abilities through time. Those ethnic groups that were considered lower down the ladder of humanity were treated like the other animals that were brought back from exotic lands. Qureshi (2004) gives an example of the Hottentot Venus (Sara Baartman) who was displayed in an Ethnographic show along with other human ‘curiosities’ in 1810. After her death in 1815, she became a specimen at the Muséum d’Histoire Naturelle, Paris, and her full body cast and skeleton were displayed there until they were moved to the Musée de l’Homme in 1937. Although her cast was

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<sup>12</sup> See Chapter 7 “*Supplementary Hypothetical Information Embedded in the Hominin Representations*”.

removed in 1976 due to public outcry, she was again put on display for a short time in 1994.

A second example is given by Robertson (1993) where a 27 year old African male (now known as ‘El Negro’) was treated like a non–human taxidermy specimen in the 1830s. He was later exhibited at the Barcelona World Exhibition in 1888 and then displayed at the Darder Museum, Spain in 1916. Controversy over his continued display at the museum occurred prior to the Spanish Olympics in the early 1990s and continued until his remains were repatriated in 2000 (Good 2002; Rapoo 2011). Interestingly there were also “two complete human pelts, stretched out parchment–flat” (Robertson 1993) on display at the same museum which no one commented on.

Museums then moved away from the ‘freak show’ style of exhibiting living people. Although living people were removed from the museum display context, static human figures have continued to be displayed in various ways by museums.

## **The Type of Figures used in Museums**

Museums use hominin representations to illustrate human evolution, historical events, places and people, indigenous cultures, and costumes. These figure types are often known as facial reconstructions, diorama figures, wax–figures, animated figures, mannequins, and costume dummies. The literature concerning these representations varies in focus. For instance, some of this literature describes the manufacture of the representation the context in which it is displayed. There are also many instances where photographs of hominin representations are presented solely as ancillary illustrations not mentioned in the text. Inconsistency also occurs in naming or labelling the types of representations or figures used.

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Facial reconstructions are faces built from skulls and are often featured in a variety of mediums and exhibited in museums (see Chapter 3 “*This Study: Museums Visited and Hominin Representations Observed*” for detailed definition). These are now well-known because of documentaries like the ‘Ancient Worlds’ series and ‘Lost Worlds: The Real Neanderthal Man’ (Omphalius 2006) and television programs such as ‘Meet the Ancestors’, ‘Bones’ and ‘CSI’, as well as popular magazines such as National Geographic, have brought facial reconstructions to the attention of the masses. This type of exposure, as well as the forensic uses, have made facial reconstructions a popular museum exhibit (Allan 2005).

Information about facial reconstructions in the literature tends to focus on specific examples or on the manufacturing process. Prag and Neave (1997) use archaeological examples of their work to introduce the reader to the use of facial reconstructions in museum research. Details are given on the manufacturing process as well as the historical background. They also list the museums that display their archaeological examples. Wilson (2002) also gives examples of archaeological facial reconstructions as well as the methods used. Other books on specific archaeological finds such as Lindow Man (Brothwell 1986; Ross and Robins 1989), Marcus van Eindhoven (Arts 2003) and bog bodies (Bergen *et al.* 2002; Van der Sanden 1996) do not include information about methods or museum contexts. The majority of facial reconstruction or facial approximation literature details the manufacturing methods or the research into the guidelines that are used to depict specific facial features<sup>13</sup> (for e.g., Stephan 2002a; Stephan 2002b; Stephan 2003; Stephan and Henneberg 2003; Stephan *et al.* 2003; Taylor 2001; Taylor and Angel 1998; Wilkinson *et al.* 2003). Those that discuss specific reconstructions (Bouwman *et al.* 2008; Musgrave *et al.* 1995; Wilkinson 2003; Wilkinson *et al.* 2001; Wilkinson and Neave 2003) do so without mentioning if the reconstruction is displayed within a museum context. There are some articles on facial reconstructions that discuss their use as a part of an existing

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<sup>13</sup> For example, there is a guideline to determine the width of the external nose using a calculation involving the width of the skull’s nasal cavity.



exhibit (Prag 1994) or of a planned exhibit (Conservaton Technologies n.d.; O'Reilly 2005). These articles do not, however, discuss the type of information that facial reconstructions can impart to the museum visitor.

Facial reconstructions are also common in human evolution books aimed at the public (Curtis *et al.* 2000; Lynch and Barrett 2002; McComb 1990; McKern and McKern 1972; Shapiro 1976; Waechter 1976). Textbooks and scientific papers on human evolution regularly include photographs of hominin facial reconstructions and artists interpretations (Pfeiffer 1969; Stanford *et al.* 2009; Swisher III *et al.* 2000) often supplied by museums, although no exhibit information is included. In some cases these reconstructions are not only specific facial reconstructions but body reconstructions as well (Sarmiento *et al.* 2007).

Other hominid reconstructions are shown as part of diorama displays (Anon. 1933; McKern and McKern 1972). These hominin reconstructions are not always facial reconstructions. For example, the human evolution dioramas once displayed at the Field Museum in Chicago were peopled with life-sized sculpted figures which were as scientifically accurate as leading anthropologists at the time could make them (Anon. 1933). Not all evolution figures are facial reconstructions or sculptures, others are a mixture of types with faces based on skulls (either facial reconstructions or sculptures) and bodies cast from modern humans (Editor 1992).

Hominid reconstructions are not the only figure types found in dioramas. Peopled dioramas or “manikined” displays (Russell 1999) are commonly called ethnographic or anthropological dioramas as opposed to the more commonly known habitat dioramas. Literature about these dioramas often refers to the historical aspects of museum exhibitions or to exhibition redisplay (that is a new display which is a continuation from an earlier display or an updated display). Russell (2001) discusses the history of the Aboriginal “mannikined” dioramas that were on display at Melbourne Museum, Australia. The figures displayed in these dioramas are called variously manikins, plaster figures and models. They

were sculpted by August Saupe and first displayed in 1886 in London. These figures have been “much renovated and repaired” and are now displayed at the Shepparton Aboriginal Keeping Place (also called the Bangerang Cultural Centre), Australia. The age of these types of diorama figures and the materials that they are made from in conjunction with changes made to displays means that figures are often reconditioned. A good example of this is given by Coffee (1991) where he discusses the restoration of a life group at the American Museum. The group were first displayed in 1910 and had undergone a series of repairs and changes during their 80 years of display. During a major restoration of these figures in 1989/1990 it was found that they had been repaired several times, undergone skin colour changes as well as anatomical changes. Coffee (1991) also labels the life group as a tableau and the figures as figures, mannequins and sculptures even though they were cast from live models.

Arnoldi (1999) gives an overview of the way that the African exhibit at the Smithsonian’s Museum of Natural History changed or evolved during its 100 year history. Family life–group dioramas were originally a successful part of the exhibition, featuring realistic mannequins in the early 20<sup>th</sup> century. Single figures were also used to display African racial types. In 1922 bronze sculptures of Congolese were incorporated into the exhibition and in the 1960s new dioramas were installed. Through all these changes, the exhibits featured figures or mannequins, and while there is discussion about their clothing and occupations, there is no information about the figures themselves. In the final years of the 1990s a redisplay occurred in which these figures were removed from the displays and replaced with photographic cut–outs for a more contemporary exhibit. In an older example Ewers (1955) discusses the redisplay of a series of exhibits at the United States National Museum and the popularity of the life–group displays which were populated by modelled life–sized figures ensured their continued display in the new exhibition. Some of these figures were first exhibited in 1893. The continued use of these figure types in redisplays is due in part to the consistently reported popularity of these dioramas, life–groups and tableaux presentation techniques (Arnoldi 1999; Ewers 1955; Russell 2001).

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Three Bushman exhibits are discussed by Kasfir (1997) and two of these exhibits contain life-sized casts of San individuals<sup>14</sup>. These two exhibits when compared, show the differences between an early 20<sup>th</sup> century museum exhibit and a modern artistic piece 'Miscast' in an art gallery. The South African Museum exhibit featured a diorama and, although, they are casts of specific people they are displayed as generic San people from a specific era. 'Miscast' at the South African National Gallery, while a controversial art piece (consisting of the Bushmen casts piled together in a heap), featured anthropological information, newspapers and animal heads was designed to inform about the de-humanising of the Bushmen as a people.

There is very little literature about specific representations, why they have been used, the decisions made about specific features of the representation and their subsequent context within a museum display. One museum that provides this information about the figures on display and the context in which they are displayed is the Jorvik Viking Centre, York, England (Addyman and Gaynor 1984). Examples of their figures and the contexts in which they have been placed have been given by several authors (Belcher 1991; Halewood and Hannam 2001; Velarde 1988). The Viking representations have in turn been referred to as figures (Addyman and Gaynor 1984), models (Velarde 1988) and mannequins (Halewood and Hannam 2001).

Several other exhibition reviews, while mentioning that mannequins were used in exhibitions, give little additional information other than stating who the figure represents, although occasionally the accompanying context is described (Casey 2004; Wilson 1996). In Kelly's book (2001) on South East Asian Museums, several museums are featured that have mannequins on display. The majority of which, while used to display costumes, also show additional information such as occupations, hair and skin colour or are used to add realism to a scene.

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<sup>14</sup> The term Bushman and San are used interchangeable in this article. This is to reflect the terminology used in the examples as well as the rejection of the term San by some San-speaking groups. For more information on the use of these names, refer to the second note on page 92 of Kasfir (1997).

Mannequins have also been made-to-order for specific exhibits/museums. For example in order their genitalia (Coleman 1995) or to illustrate a specific occupation (Anon. 2000). Olmert (1985) gives an overview of a company that manufactured these type of museum figures or mannequins for the Smithsonian. The figures are first sculpted then cast to create “lifelike human models”. These museum figures were made out of a variety of materials; vinyl plastic, Styrofoam, fibreglass and wood. One type of mannequin is known as a talking head, in which a film of a person talking is projected onto the blank face giving the impression that the mannequin is talking (Miles *et al.* 1982).

Photographs of various human figures within a museum context are often included in books and articles. Borowski (1986), while not discussing human representations in the text, does mention them in the figure captions. They are termed variously: a figure, a woman, a person and a mannequin. Few details of the figures are visible due to the outfits that they are wearing. Their placement within the display shows their context and occupation, indicating that they are more than simple costume dummies. Brothwell’s (1986) work, in addition to the facial reconstruction information included shows photographs of human representations wearing clothing found on bog bodies supplied by two museums. Three of the mannequins are posed and give additional information such as skin and hair colour and hair styles. Other figures used to display costumes are called costumed lay figures (Ewers 1955).

The ‘Body Worlds’ touring exhibition displays a very different type of human figure. These are not necessarily displayed in museums. These exhibitions, however, feature actual plastinated human cadavers, dissected and displayed in particular poses (Linke 2005; van Dijck 2001; Walter 2004) and as such are not representations at all. Anatomical models, however, are found in museums (Conde-Salazar *et al.* 2007; Conde-Salazar and Heras-Mendoza 2007; Düring and Poggesi 2001; Messbarger 2001; Rader and Cain 2008). These are given various names: anatomical wax models (Düring and Poggesi 2001), anatomical wax sculptures (Messbarger 2001) wax models, models (Conde-Salazar *et al.* 2007;

Conde-Salazar and Heras-Mendoza 2007), medical moulages (Schnalke 2004) or wax moulages (Sticherling and Euler 2001).

Not all anatomical models are made of wax, the ‘Transparent Woman’ displayed at the American Museum of Natural History, New York, in 1954 had organs and body systems that lit up, while the Boston Museum had plastic models (Rader and Cain 2008). Other anatomical models discussed in the literature refer to manikins (Tsai *et al.* 2003) or mannequins (Cooper and Taqueti 2008) used in teaching medical procedures.

Anatomical models are not the only figures that are made from wax. Older shop models were originally made of wax and wax museums (such as Madame Tussauds) are well known for their wax-figures. In a chapter on exhibition-making, Bouquet (2001) includes a photograph of “fourteen unidentified wax heads in glass boxes”, which were included in an example of a temporary exhibition at the University of Oslo Ethnographic Museum used in the chapter; however, no other information about the heads was given.

These examples from the literature indicate that a range of figures are found in museums. However, terminology varies a great deal and many terms appear interchangeable not only with regard to the figures but to the context in which they are found. Therefore the first objective of this study is to describe, assess and study the types of hominin representations on display in a range of museums and the context in which they are displayed. Terminology will be standardised in relation to the sampled hominin representations in order to avoid confusion.

## PROJECT AIMS

The aim of this project is to assess how hominin representations are used for public display in museums and whether they fulfil the purpose of effectively conveying scientific information and specifically about human evolution.

In order to achieve this aim, several objectives must be met:

1. to describe the types of hominin representations on display in museums and the contexts in which they are displayed;
2. to describe the surface finishing and cosmetic characteristics in terms of the influence on the perceived fidelity of the representations;
3. to describe and assess the levels of anatomical accuracy of the extinct hominin representations;
4. to determine if the various hominin taxa, especially the extinct ones, are perceived as separate identifiable species; and
5. to determine the type of supplementary information embedded in the hominin representations and to consider to what extent those biases can influence the understanding and communication of scientific information.

It is hoped that achievement of these objectives will provide suggestions for the future improvement of the use of hominin representations in museums so as to effectively convey current information about the human past.

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# 3

## THIS STUDY

### Museums visited and Hominin Representations observed

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#### MUSEUM SELECTION

In order to describe the types of hominin representations present in museums, a variety of museums were visited to document the representations on display. As there are over 16 500 museums in Europe only it was not feasible to visit all museums in one particular country or every museum in the world. A cross-sectional sample of institutions was a more feasible option for research and data collection.

To refine the selection process two continents, Europe and Australia, were chosen. This was done for several reasons. Europe has some of the oldest museums in the world as well as some of the newest. This range in museum ages gives insight into the evolution of museums as they have changed over the centuries into the modern museums of today. Australian museums, while originally based on the European model, have also had other multicultural influences. Europe contains a range of cultures, ethnic groups and countries within a comparatively small geographical area. Australia, though geographically the same size, contains a multicultural population of various ethnic groups within the one country. European ethnic groups and cultures in conjunction with the indigenous population have shaped Australian culture. Europe is also the initial geographical area of the greatest pigmentation diversity. This diversity may also be reflected in the Australian population due to the European background of many Australians. Pigment diversity (i.e., skin colour) has been used as a reason for the display of various types of cultural content in ethnographic life-groups for example, in order to show the differences of other cultures when compared to

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European peoples. Other English speaking countries (e.g., the USA, Canada, Belize, Falkland Islands, Sierra Leone, Jamaica, Nauru, Samoa, Gibraltar and New Zealand) have not been included in this study as they have similar historical and cultural backgrounds to Australia and have continued interaction with both the United Kingdom and Australia. Australia, however, has the benefit of a long history of Asian influences which predates European occupation that many other English speaking countries do not, which may again be seen in the museum representations. In addition to this, limited funding and time has confined this study to these two geographical areas.

Once the continents were determined, institutions were chosen that included a range of establishments: old and new, large and small, city and town, national and local (Appendix A). The institutions consisted of various types of museums (e.g., natural history, local, specific interest) and visitor attractions, as well as some associated institutions such as artist's studios, university collections and other types of public displays. This cross-sample was essential as museums often differ in purpose, function, collection type and audience (Ambrose and Paine 2006). The range of institution types gave an opportunity for comparison between differing types of displays: some used solely for entertainment, others for information or education, there were also economic differences in the money and time spent on the displays.

The initial literature and Internet search identified 30 European institutions as having facial and archaeological reconstructions on display, and these were the original focus of this study. From these searches five reconstruction artists were also identified as being instrumental in the manufacture of these reconstructions. Of these 35 institutions and artists that were approached by email or fax, 25 responded and visits were arranged over the 2006 European spring and summer. After initial visits to the Belgian and some of the English museums, the range of hominin representations viewed was found to be greater than anticipated. The museum sample was also expanded to museums that were recommended by locals as having 'human representations' on display, had advertising featuring



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representations or were easily accessible. Natural history and ethnographic museums were also targeted as literature searches had indicated that these types of museums were more likely to contain hominin representations.

The experience gained from the European museum selection resulted in a greater range of Australian museums being chosen. Literature and Internet searches along with the author's prior knowledge of local museums and recommendations by others were used to identify museums. Once the initial museums were selected additional museums in the same cities and towns were contacted to determine if they also had representations of some type on display.

Several visitor attractions (n=7) such as Madame Tussauds (London only) were also included in this study as they were known to display human figures. In addition to the museums (n=58) and visitor attractions, other associated institutions (n=6) were visited. These associated institutions consisted of businesses, university collections and artist's studios that had displays. This resulted in 48 European and 23 Australian institutions, visited between 2006 and 2009, being included in this study (Appendix A).

## COLLECTING INFORMATION FOR THIS STUDY

There were many variables in relation to collecting information for this study. The museums differed in age, size, language, and cultural influences. The exhibitions that the representations were featured in also differed in size, age and type. This resulted in the differing types of information for this study being collected in several ways, through personal visits, photographic documentation and the gathering of background information. This information will be discussed further in the following section.

Visits to individual institutions were undertaken to view the representations within their display, gallery, museum and cultural contexts. This enabled

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interaction with the representations and insight into the public's interaction with, and reactions to, the representations and their exhibits. Photographs of the representations were taken as a memory backup to assist later study and experiments. Museum staff were interviewed about the representations and anecdotal information involving the representations was documented. Several facial reconstruction artists were also interviewed with regard to their experiences in making facial reconstructions for museum display.

## Photographic Documentation

The representations were photographed, where possible, to enable later analysis in the laboratory rather than the difficult and time-consuming process of analysis at individual institutions. It also facilitated comparisons between various representations within the same institution separated spatially as well as with those from institutions in other countries. The photographs also served as a visual record of each individual representation and as a memory aide throughout this study.

All of the photographs of the hominin representations were taken using a Canon PowerShot A540, 6.0 mega pixel digital camera. The 6.0 mega pixel capability allowed for photographs to be enlarged to view details and to enable close-up views of those representations that were behind barriers or at a distance such as a modern human representation in a biplane hanging from the ceiling.

Photographs of all representations were taken with the camera being handheld for several reasons. Tripods could not be consistently used as many institutions do not allow tripods or preferred them not to be used. Consequently a tripod was used in very few museums and generally only in those instances where the display was very dark and the camera flash was damaging to the artefacts exhibited, thus requiring a tripod and special camera settings. This is a study to describe and assess the hominin representations seen, therefore a handheld

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camera was the best way to document what was seen and from the vantage point that a visitor would see it. This point of view also mimics the way that a visitor would view the representation on a museum visit.

Several institutions did not allow photographs; Oxford Story in Oxford, England, the Archaeology Museum in Frankfurt and Leiria Castle Museum in Leiria, Portugal (although photographs were taken at this museum on the proviso that they were not published). Although unable to take photographs at the Oxford Story, postcards and bookmarks picturing various human representations were brought as a record of the representations from that institution. The reconstruction of Ötzi that was on display in a travelling exhibition at the Archaeology Museum in Frankfurt in 2006 was again viewed at the Australian National Maritime Museum (ANMM) in Sydney in 2008. Photographs of the reconstruction were able to be taken at the ANMM. Other institutions gave the author special permission to take photographs in certain exhibitions. These were: the 'Death in Wales' exhibit at the Cardiff National Museum, the 'Mind and Body' gallery at the Melbourne Museum and the 'Secrets, Fates, Mummies: Stories from the Dominicans' Crypt of Vác' at the Magyar Természettudományi Múzeum, Budapest. Other museums had copyright issues to ensure that the photographs taken were only used for research or the appropriate institutions were acknowledged: Hessisches Landes-Museum, Darmstadt, Germany; Leiria Castle Museum, Leiria, Portugal; Melbourne Museum, Melbourne, Australia; Naturhistorisches Museum, Vienna.

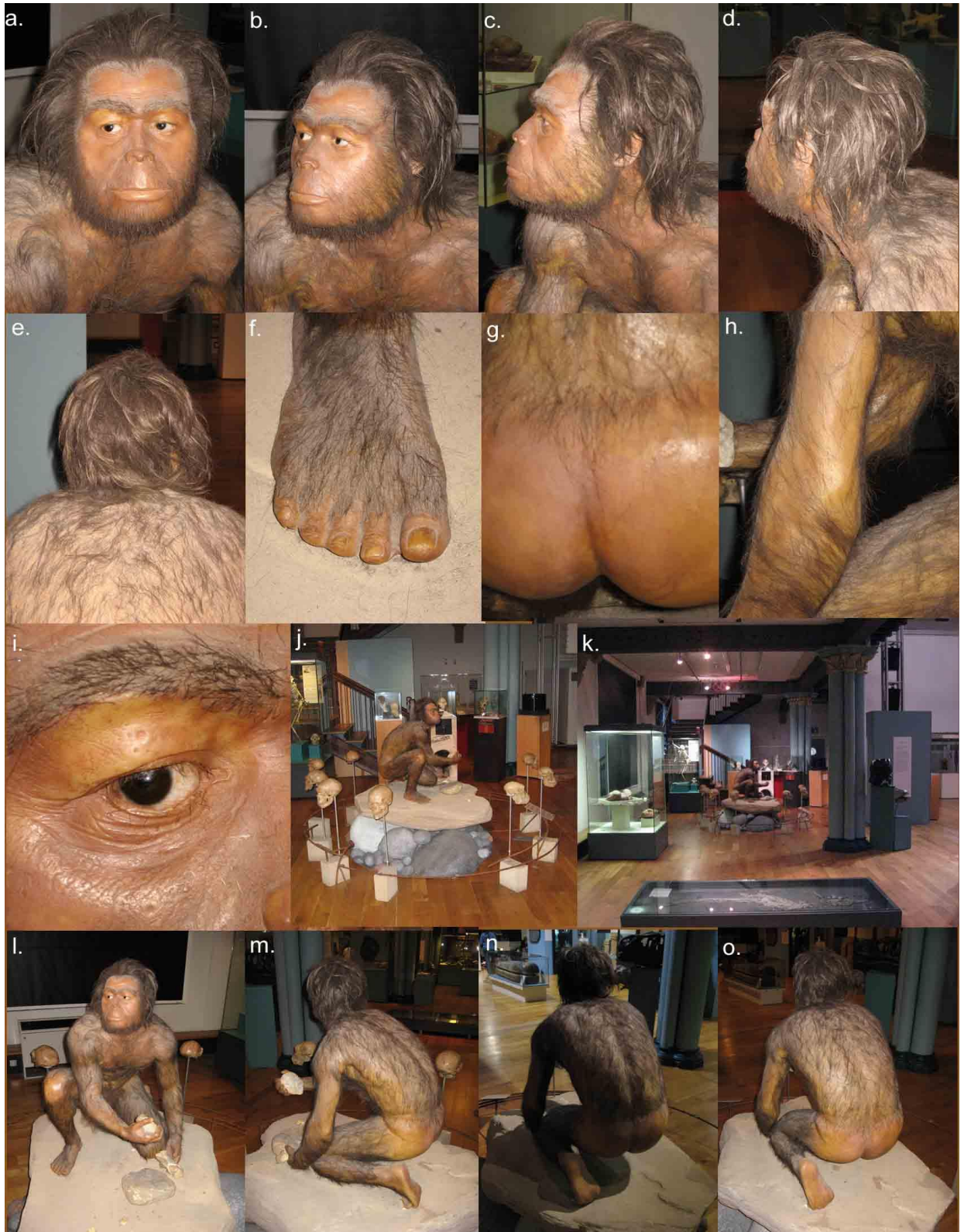
The type and number of photographs taken were determined by the construction of the exhibit and the context of the display and its context within the institution. Photographs were taken with and without flash if there were difference between shots due to lighting:

- full-face shots – anterior, profile and 3/4 face as well as posterior views if possible (Figure 3.1a–e);

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- close-ups of the facial features (e.g., open mouth, the eyes) and other body parts if available (e.g., genitalia, elbows, feet) (Figure 3.1f–i);
  - full body shots, if available/visible from anterior, profile, 3/4 and posterior views (Figure 3.1l–o);
  - context shots, from as many angles as possible (Figure 3.1j); and
  - also views of the representation from other galleries or areas of the museum if visible (Figure 3.1k).

Consistency in distance, lighting and angles was not possible due to the individual nature of the representations and their display context. When the representation or display was accessible there was no impediment to photography. If, however, the display was behind a barrier that obstructed it in some way, there was difficulty in obtaining clear photographs. Representations were often displayed behind glass, perspex, rope or fence barriers, on raised platforms, above head height, or some distance away from the visitor (Figure 3.2). Those displays/exhibits behind glass/perspex caused problems with the flash as well as with reflection of museum lights. The occasional marks or smears on the glass or perspex also showed up in the photographs. Taking photographs from a people mover such as those at the Jorvik Viking Centre, York, England, also limited the types of photographs taken. Close-ups of faces were not always possible and positioning of the more distant figures prevented some of the figures from being photographed.

Photographs were taken where possible without visitors featured in them. This was not always possible when the exhibition was busy. In some instances visitor behaviour was also recorded. When visitors are visible in the photographic examples in this thesis, their faces have been blurred for anonymity. At the Melbourne Museum the Everybody Family (several human representations) were on display in a gallery featuring sensitive photographs. When this display is in the background of photographs of the Everybody Family, it has been blurred.



**FIGURE 3.1** The *Homo erectus* representation at the Hunterian Museum, Glasgow, Scotland, showing some of the various photographs taken, close-ups of: (a) anterior face; (b) three quarter face; (c) profile; (d) three-quarter head; (e) posterior head; (f) a foot; (g) the buttocks; (h) an elbow; and (i) an eye. Also taken were: (j) a contextual view of the exhibit; and (k) the view of the exhibit from other areas of the gallery. Full body shots included: (l) anterior; (m) profile; (n) three quarter back without flash; and (o) three quarter back with flash.



**FIGURE 3.2** Examples of display barriers: (a) reflection on the display case glass due to natural and museum lighting at the Haus der Natur, Salzburg; (b) fence-type barriers at the Neanderthal Museum, Mettmann, Germany; (c) a representation placed above head height; and (d) a representation viewed at a distance, both at the Australian National Maritime Museum, Sydney, Australia.

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## Background Information on the Representations

Requests for interviews and information were sent to each institution. Curators and staff were asked a standard series of questions about the representations on display at their museum (Appendix B). Staff at the visitor attractions were not interviewed because of commercial constraints. A certain amount of information was available from associated text panels and labels and existing museum literature. Other background information was available in the literature.

### *Artists*

Reconstruction artists were also interviewed, two in United Kingdom, three in The Netherlands and one in Australia (Appendix C). The two artists interviewed in the United Kingdom were Richard Neave in Manchester, England, and Caroline Wilkinson in Dundee, Scotland. Richard Neave co-authored the book *Making Faces* with John Prag and his work includes the facial reconstructions of 'Yde Girl' and 'Phillip of Macedon'. Caroline Wilkinson is a Senior Lecturer in Forensic Anthropology at the University of Dundee, Scotland. At her studio based at the Unit of Human Anatomy and Forensic Anthropology at the University of Dundee three facial reconstructions were photographed.

The three Dutch artists interviewed were Remie Bakker, Maja d'Holloosy and Alfons Kennis. Remie Bakker creates a range of animal and hominin reconstructions through his Rotterdam company 'Manimal Works'. He has made animal and hominin reconstructions for museums as well as for films, television and theatre productions. Maja d'Holloosy is a physical anthropologist and facial reconstruction practitioner who created the reconstruction of 'Marcus van Eindhoven'. The third artist, Alfons Kennis works with his twin brother Adrie, and they have created hominin and animal reconstructions. Their work on human evolution includes 'De Oermens' (an illustrated children's book) and 'Evolution: The Human Story', as well as work for museums and National

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Geographic Magazine. The Australian artist interviewed was forensic sculptor Ronn Taylor, who works at the School of Dental Science at the University of Melbourne. Although Ronn Taylor mainly does forensic facial reconstructions or approximations, his work has also been displayed in Melbourne museums. Of all the artists, only the European ones have facial reconstructions that are a part of this study.

## FINDINGS AND INITIAL DISCUSSION

Initially the criteria to consider an object as a hominin representation were; that it was hominin-like in appearance, life-sized and three-dimensional. Using these criteria only 55 of the 71 institutions visited had hominin representations. At these 55 institutions, 860 hominin representations were identified. These hominin representations were either on display to the general public (n=679, 79%) or were not displayed (n=181, 21%). Initial assessment indicated that categorisation of the representations was essential. This could be done in several ways:

- the representation type;
- the function or intention of the figure;
- the context in which they were displayed;
- the various taxon/taxa represented;
- what anatomical forms the representations take; and
- the number of representations in total, on display or not currently displayed, by country and institution.

### Clarification of Representation Types

The representations viewed at institutions consisted of a variety of representation types, which were identified by a variety of names which were



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either common terms or terminology used in the literature. Difficulties, however, arose in grouping the representations by similarities as a diorama figure for example could also be identified as a mannequin or a cast. Ambiguity of terminology as well as the variability in the presentation techniques used meant that common themes within the representations had to be identified in order to classify the representations. This led to categories being determined by two different factors: the intention behind the display of the representation and the method of the construction of the representation's face where possible. The intention of the displayed representations was discernable from the type of exhibition, associated labels and curatorial information as well as visible clues from the representation itself. The construction method of only the face rather than the whole body, was chosen for several reasons. The face when it is present is often a visual focus for the viewer. When it is not present the intention of the representation is clearly visible e.g., costume dummies where the focus is on the costume rather than the representation. The face is generally more visible than the body which may be covered by clothing, hidden by contextual items or elements of the display. The body may also be of different construction from the head taking advantage of cheaper alternatives because it is less apparent to the viewer. The categories used were: facial reconstructions, casts, educational sculptures, museum mannequins, standard mannequins, portrait figures, medical models, costume dummies and a miscellaneous category to accommodate those few representations that did not fit into a defined representation type. These categories are the basis of this study and definitions and illustration of examples are to follow. The criteria for the chosen categories include easily recognisable visual clues. Manufacturing and historical information was not available for each representation due to the age of the representation, changes in staffing or this information had not been retained as they were considered to be a display item rather than an artefact. Thus such criteria could not be reliably used for categorisation. These criteria will be explained further in the sections relating to each individual representation type. A table summarising the variety of terminology for each representation type is on page 65 at the end of this section (Table 3.1).

TABLE 3.1 A summary of the various terminology used, shown in relation to the categories defined in this study.

Face reconstruction	Casts	Educational sculptures	Museum mannequins	Standard mannequins	Portrait figures	Medical models	Costume dummies	Miscellaneous
Anatomical reconstructions	Death masks	Sculptures	Figures	Artist's lay figures	Wax figures	Anatomical (wax) sculptures	Body forms	Art models
Écorché figures	Diorama figures		Figures	Display figures	Wax-work figures	Anatomical manikins	Conservator's dummies	Hair mannequin heads
Facial approximations	Ethnographic casts		Life-like human models	Dolls		Anatomical wax models	Dress forms	Hairdresser's heads
facial reconstructions	Figures		Mannequins	Fashion figures		Écorché	Dummies	Manikins
Facial restoration	Life casts		Museum figures	Lay figures		Manikins	Mannequins	Mannequin heads
Facial sculpture	Manikins		Museum figures	Manikins		Mannequins	Tailor's dummies	Mannequin practice heads,
Figures	Mannequins		Museum forms	Mannequins		Medical moulages	Trade mannequins	Practice manikin heads
Forensic anatomical reconstruction	Models			Models		Models		Puppets
Forensic facial reconstructions	Plaster figures			Shop figures		Wax models		Wooden artist's models
Full bodied sculptures	Realistic mannequins			Shop mannequins		Wax moulages		Wooden manikins
Mannequins	Sculpted figures			Wax figures				
Models	Sculptures							
Mortiplastics								

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## *Facial Reconstructions*

- *Facial reconstruction is the process by which the face is built up over a skull using methods based on facial anatomy, soft tissue depths and various guidelines used to determine aspects of the facial features.*

Facial reconstructions are also known as forensic facial reconstructions, facial approximations, facial sculpture, facial restoration (Brothwell 1986), forensic anatomical reconstruction (Sawyer and Deak 2007), anatomical reconstructions (Gifford-Gonzalez 1993) and mortiplastics (Curry 1947) (Table 3.1 compares terminology). This category includes the facial reconstructions that were displayed both with (n=92) and without a body (n=100) (Figure 3.3).

Facial reconstructions and approximations are used to illustrate what a particular individual looked like when only skeletal remains are found. This gives this representation type both forensic and archaeological applications. The reconstructions were displayed on bodies of several types including full anatomical body reconstructions, body casts or mannequin bodies. The facial reconstructions in this study were easily identified in museum displays as they are identified as facial reconstructions in the label or the method used to create them is incorporated into the exhibition in some way, be it a photographic storyboard, a series of skulls and heads showing the method used, a video of the making of the reconstruction or information accessible via a computer display. This additional information links facial reconstruction methods to scientific and anatomical research making these particular representations unique in that respect.

Two other representation types were identified as part of this category. The first, is a facial restoration of the “Pyjama Girl”, an Australian murder victim from 1934. Her face had soft tissue damage and the restoration was done to assist in the identification of her remains. Although the restoration was not built up from the skull, but rather from the existing damaged face, it was used in the same way



**FIGURE 3.3** Examples of facial reconstructions: (a) the 'Death in Wales' exhibit showing the skull, facial reconstruction and photoboard of method, Cardiff National Museum, Cardiff, Wales; (b) a facial reconstruction on a cast body, Neanderthal Museum, Mettmann, Germany; (c) a coloured facial reconstruction with individually inserted hairs; and (d) a terracotta facial reconstruction, both at the Manchester Museum, Manchester, England; (e) a facial reconstruction with reconstructed body, Neanderthal Museum, Mettmann, Germany; (f) the facial restoration, Justice and Police Museum, Sydney, Australia; (g) a bronze resin facial reconstruction; and (h) skull, écorchés and facial reconstruction at the Manchester Museum, Manchester, England.

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that a forensic facial reconstruction is used today. The second type, are facial reconstructions that were also écorché figures. Écorché figures are those that have a portion of or all of the skin removed in order to display the underlying anatomy, these figures are also known as ‘flayed’ figures (Cody 1990; Stephens 2007). These were commonly used by art and medical students between the Renaissance and the 19<sup>th</sup> century as an anatomical reference and are often used by facial reconstruction practitioners to illustrate the anatomical structures used to assist in the reconstruction of the face.

Facial reconstructions are made of several materials, each creating a specific look. For the more statue-like appearance, clay and plaster are used as well as resins that simulate the look of bronze, terracotta and plaster. Reconstructions made of waxes and silicones can be coloured, have realistic eyes added and individual hairs inserted for a life-like look. However, those made of wax differ from those figures that are known as wax-work figures that are discussed in the portrait figures category or the wax moulages discussed in the medical models category.

### *Casts*

- *A mould of an actual person is made and a cast is then made from the mould.*

Casts (n=158) were often taken from individuals representing indigenous ethnic groups and as the result of ethnographic studies (Figure 3.4). The older diorama figures are often good examples of these. Although these representations are casts of specific individuals, they are generally displayed in order to represent a specific ‘type’ illustrating that indigenous ethnic group. Anonymity is imposed on the representation by not naming the individuals represented and by the way in which the text panels and labels are written. Death masks, however, are often of particular infamous or famous individuals and for that reason, are placed on display. Even though death masks are in essence portraits they do not fulfil all of the criteria necessary to include them in the portrait figure category.



**FIGURE 3.4** Examples of various casts: (a) the death mask of murderer Frederick Deeming, Victorian Police Museum, Melbourne, Australia; (b) an ethnographic cast at the Australian Museum, Sydney, Australia; (c) a cast of a mineralogist, Australian Museum, Sydney, Australia; (d) a cast of a Chinese man, Chinese Museum, Melbourne, Australia; and (e) a Bushman at the Haus der Natur, Salzburg. Please note that a, b and d show closed eyes resulting from the initial mould made of the face, while c and e have open eyes the result of sculpting.

Ethnographic casts are often part of a large collection of casts acquired during research trips by ethnographers, anthropologists or anatomists. These are often only a part of the information compiled by the researcher and there is generally associated data such as specific information about the individual.

Very few of these representations are full casts due to the casting methods used. They generally have some sculpted areas particularly in the eye area. Standard moulding techniques prevent the casting of open eyes in a living individual. This means that a certain amount of sculpting has to be done in order to change closed

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eyes to open ones on a finished cast. The casts with open eyes are those taken from deceased individuals and are known as death masks, these are really a subcategory within this representation type. Casts also exhibit individual variation such as scars, and moles. Representations in this category are those that contain very few changes or additions through sculpting and therefore very little artistic input. Casts may also be known as life casts (Anatomic Studio n.d.), sculptures, figures, mannequins (Coffee 1991) (Table 3.1 compares terminology).

### *Educational sculptures*

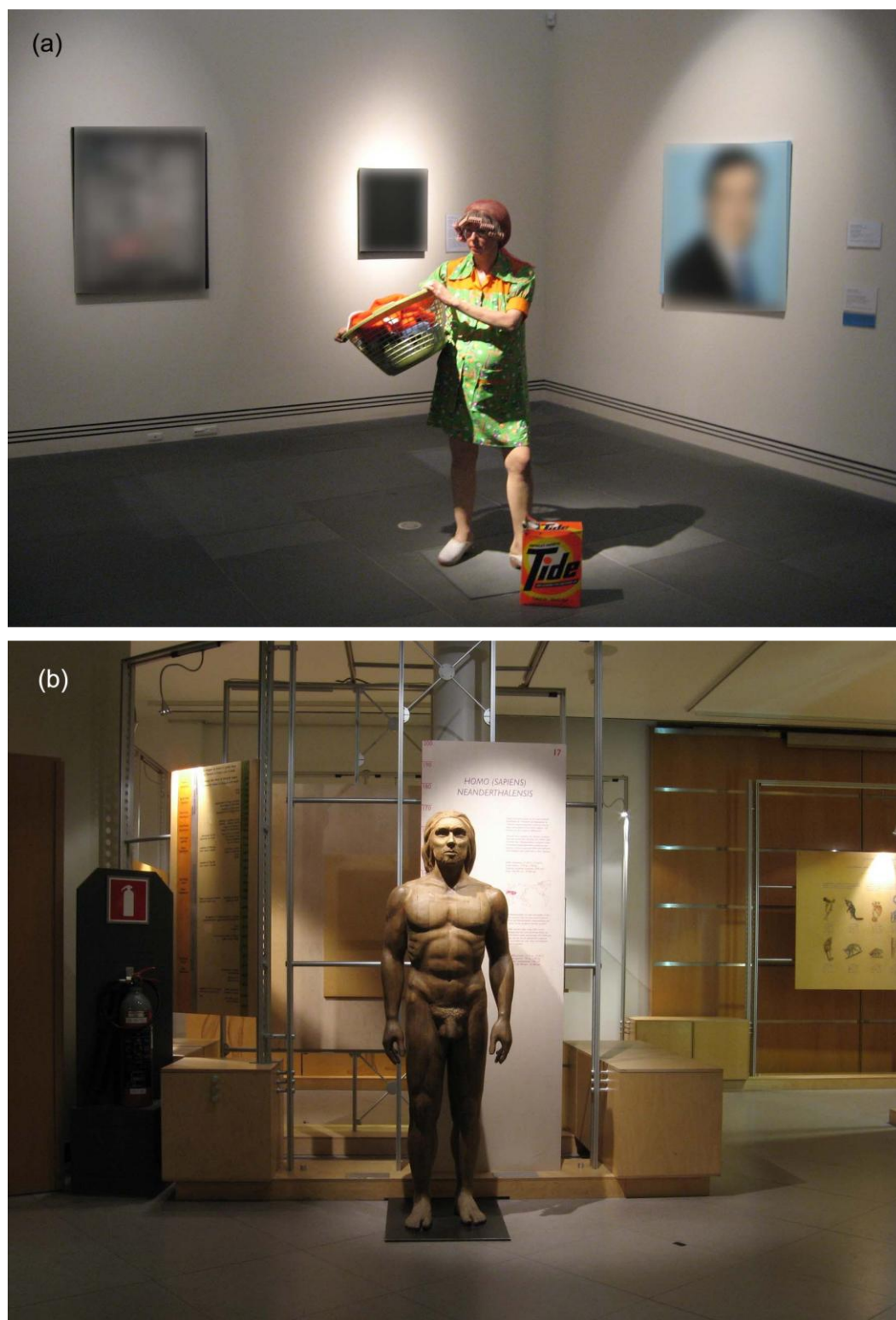
- *Educational' sculptures are created with the intent of informing, to educate and to portray scientific and objective information.*
- *They are displayed differently to artistic sculptures.*

Although sculpture is in itself a form of reconstruction, sculptures are displayed differently from the facial reconstructions. Educational sculptures (n=104) differ from those that are created solely as artistic works and displayed within art galleries. The intention behind the creation of these 'educational' sculptures is different from that of 'artistic' sculptures (Figure 3.5 a–b). They are a result of the combined effort of the artist and scientist. 'Artistic' sculptures are intended to convey the artist's message, which may be political, social, cultural, or religious in nature, and convey the artist's personal perspective.

The way in which the two types of sculpture are displayed also differs. Artistic sculptures are displayed in a minimalist<sup>1</sup> setting within a gallery. The gallery has many focal points with each of them being an artistic work. Any labels are divorced from the work so as not to detract from the impression conveyed by the piece but they are placed nearby to inform the curious visitor. Educational sculptures, however, are displayed as a component of a larger exhibition and are

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<sup>1</sup> Artistic sculptures may be displayed on a plinth or pedestal base in its own space, an identifying label will be associated with it but not necessary near it. No other information will be associated with it and it may have its own lighting.



**FIGURE 3.5** The differences between an art sculpture and an educational sculpture: (a) The art sculpture ‘Woman with a laundry basket’ by Duane Hanson 1974, Art Gallery of South Australia, Adelaide—note the placement of the sculpture in a prominent position within the gallery and divorced from the other artworks (which have been blurred to comply with the moral rights of the artists) as well as the captions, so she is an entity in isolation within the gallery. (b) The sculpture of a Neandertal at the Museum of Natural Sciences, Brussels, has an informative text panel placed behind the sculpture, there are no other artworks in the vicinity, he is positioned within a larger display and the light is focussed on both the sculpture and the text showing the equal importance of the text and the sculpture.



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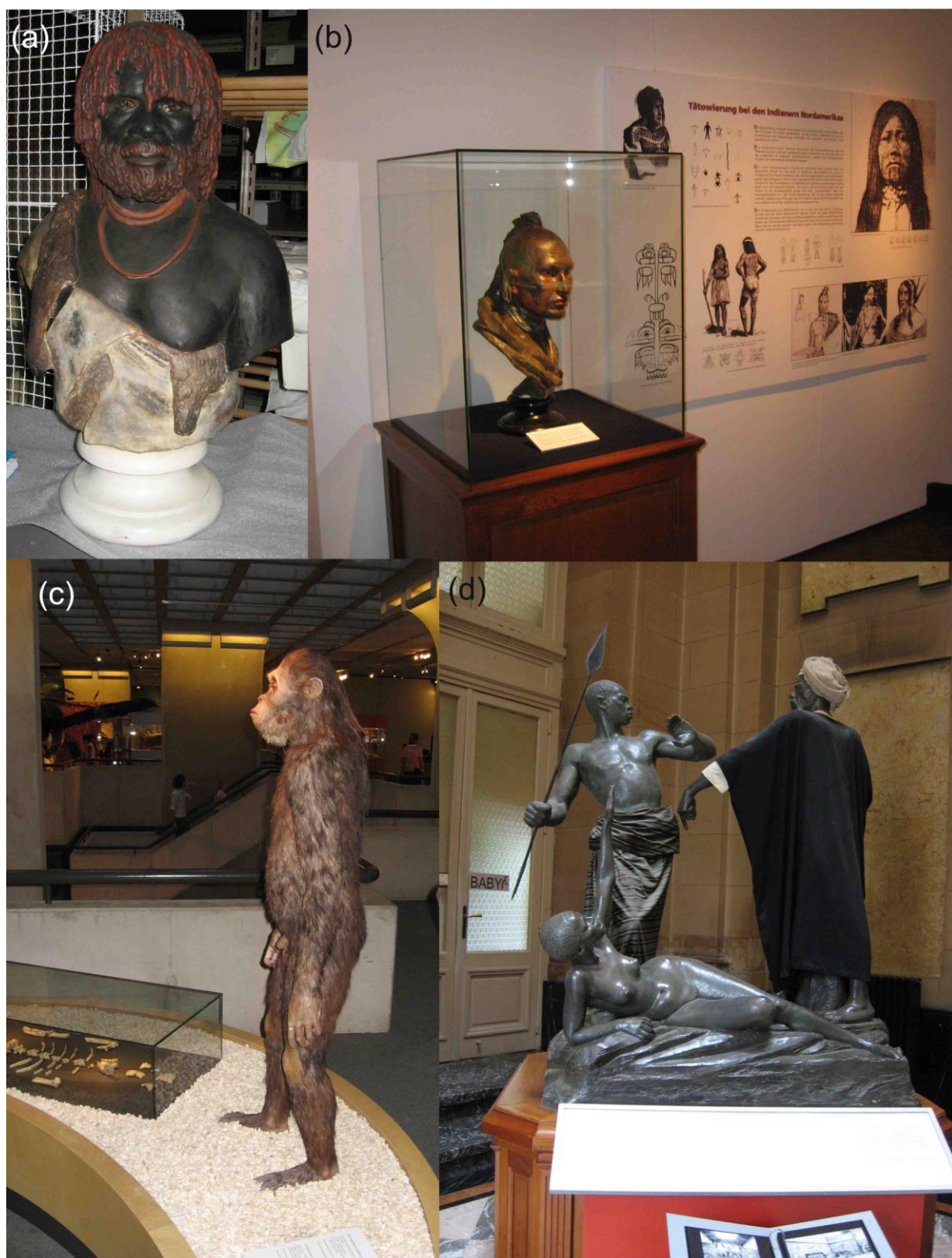
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often displayed with associated text and contextual items that are part of the sculpture (Figure 3.6). The display of sculptures within a museum context also changes the visitor's perception of the sculpture and conveys an aura of authenticity to it and also reinforces the scientific basis to the information portrayed by the sculpture. Such representations are generally identified by museum staff or accompanying text panels as sculptures.

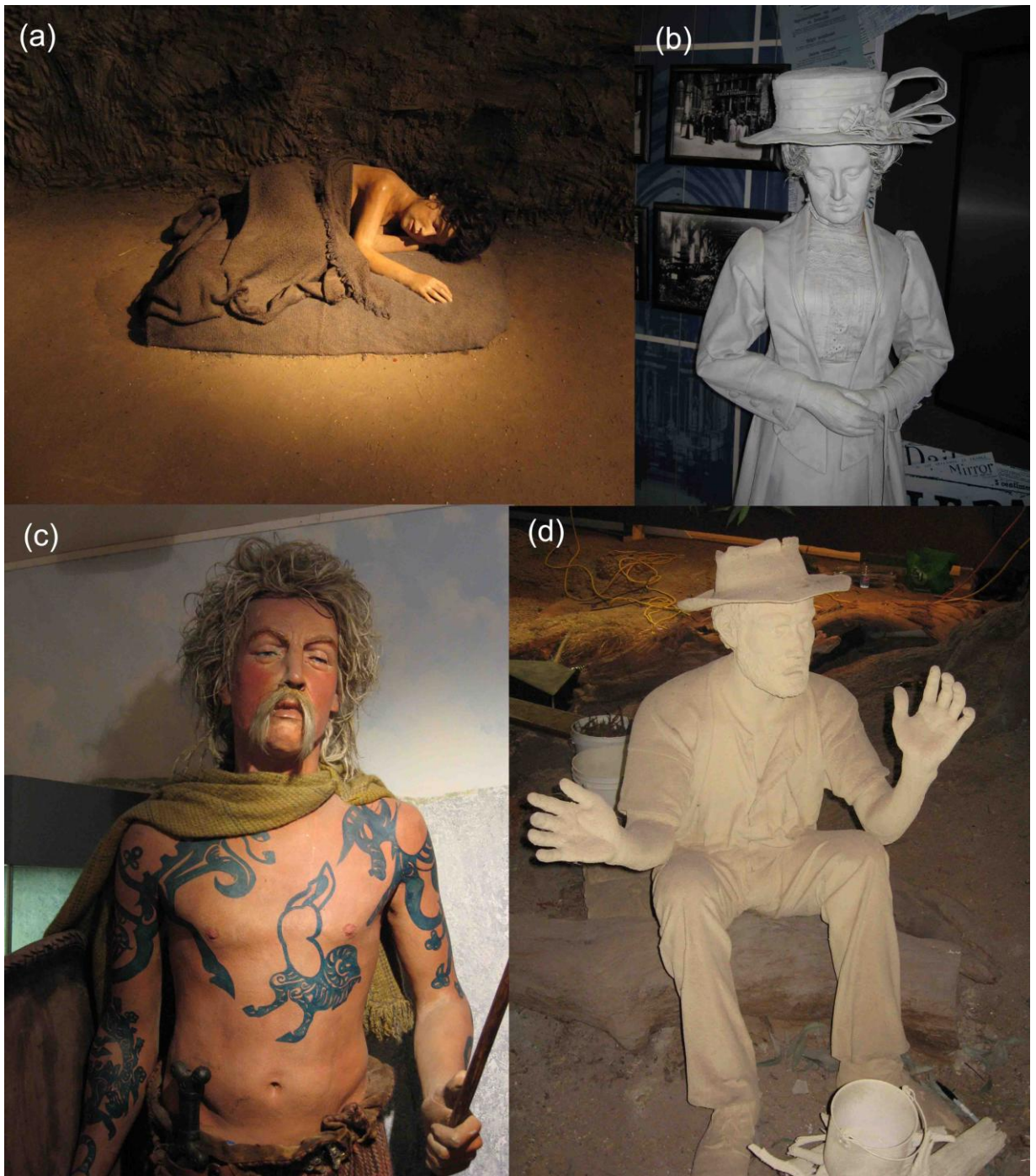
### *Museum Mannequins*

- *Museum Mannequins are made to museum specifications and are not stylised in form.*

Museum mannequins (n=99), although commercially available, differ from the standard commercial mannequins as they are made to specifications and are not stylised in form. These representations are made to illustrate a specific 'type' of individual, be it on the basis of ethnic group, age or a particular stance or position (Figure 3.7). They are manufactured in order to convey information chosen by the museum to complement the information to be conveyed by the whole exhibit. Some museum mannequins may not be easily categorised because of the manufacturing process involved, museum mannequins may also combine the features of casts and sculptures but not be clearly discernable as belonging to either of these categories because of the changes made. Examples are the anonymous textured representations from the Waltzing Matilda Centre, Winton, Queensland (Australia) (Figure 3.7d). Mannequins are also called museum forms (Anatomic Studio n.d.), museum figures (Dorfman Museum Figures Inc. 2003) and simply figures (Olmert 1985; Time Machine AG n.d.) (Table 3.1 compares terminology).



**FIGURE 3.6** Examples of educational sculptures: (a) a cast of Benjamin Law's sculpture of 'Wouraddy' at the Australia Museum, Sydney, Australia; (b) a sculpture of 'Wakusasse' in the Naturhistorisches Museum, Vienna; (c) an Australopithecine, Museon, Den Haag, Netherlands; and (d) a figurative group of indigenous people from the Congo, Africa Museum, Tervuren, Belgium.



**FIGURE 3.7** Museum mannequin examples: (a) a sleeping child, Dover Museum, Dover, England; (b) a woman in period dress, Flanders Field Museum, Ypres, Belgium; (c) a Celt, Dover Museum, Dover, England; and (d) a swagman, Waltzing Matilda Centre, Winton, Queensland (Australia).

### *Standard Mannequins*

- *Standard Mannequins are stylised and are commercially available.*

Stylised humans or human shapes represent standard mannequins (n=87). They are available commercially and are generally used as shop mannequins. This means that popular culture such as make-up style, body stance, body size and colours that date them to specific time periods are incorporated into the mannequins (Figure 3.8). Standard mannequins are not recognisable as particular or average individuals but rather as ‘idealised’ humans. This category also includes those representations identifiable as dolls. These are essentially ‘standard mannequins’ of very young individuals that fulfil the above criteria of being commercially available, stylised and not recognisably of a specific individual. Standard mannequins are also called models, manikins and shop mannequins and historically those made of wax were called wax figures (d'Aulaire and d'Aulaire 1991; Schneider 1997) (Table 3.1 compares terminology).

### *Portrait Figures*

- *Portrait figures are of specific individuals and the figure is often made during an individual's lifetime or immediately after death so that the actual person is used as a reference.*

Portrait figures (n=147) are often familiar as wax-work figures or wax figures and are traditionally displayed at a wax-works such as Madame Tussauds (Figure 3.9). The term portrait figures was coined to prevent confusion with other representations that are made of wax, such as facial reconstructions, mannequins and medical models, and in order to incorporate similar figures that are made of materials other than wax (Table 3.1). Photographs, anthropometric measurements and casting may also have been used to assist in the creation of these figures. The purpose of these figures is to portray famous or infamous people, or in the case of the representations in Ripley's Believe It or Not!, attractions, unique individuals who are generally considered to be outside the ‘normal’ range of human variation.



**FIGURE 3.8** Examples of standard mannequins: (a) a mannequin at the Australian Tennis Museum, Sydney, Australia, note the typical 1980s stance and makeup; (b) a standard mannequin from China at the Chinese Museum, Melbourne, Australia, note the hands on hips stance; (c) a mannequin in the display at the Cairns District Police Headquarters, Cairns, Australia, note the silvery–grey colour of the mannequin and the stylised facial features; and (d) a baby doll on display at the Waltzing Matilda Centre, Winton, Queensland (Australia), showing stylised baby features in a typical sleeping baby pose.



FIGURE 3.9 Portrait figure examples: (a) actress Angelina Jolie featured at Madame Tussauds, London, England; and (b) Wang the human unicorn, shown at Ripley's Believe It or Not!, Surfers Paradise, Australia.

## Medical Models

- *Medical models are displayed in order to teach or inform about particular areas of the anatomy, often internal anatomy such as nerves, blood vessels or musculature.*

Medical models (n=27) showing external pathologies are also part of this category (Figure 3.10). Those *écorché* that are solely displayed in order to demonstrate anatomy are included in this category as well. Older medical models were commonly made of wax and were used to instruct medical students on human anatomy. The Museum of the History of Medicine in Vienna contained many of these types of models as well as those that represented pathologies; unfortunately photographs could not be taken at that museum and consequently they have not been included in this study. Medical models are also known as anatomical manikins (Russell 1972), manikins (Tsai *et al.* 2003), mannequins (Cooper and Taqueti 2008) anatomical wax models (Rosito *et al.* 2004) (Düring and Poggesi 2001), anatomical (wax) sculptures (Messbarger 2001), wax models, models (Conde-Salazar *et al.* 2007; Conde-Salazar and Heras-Mendoza 2007),



**FIGURE 3.10** Examples of the different types of medical models found in the visited museums: (a) a wax moulage of a nasal pathology, Haus der Natur, Salzburg; (b) a female figure showing the internal organs, Natural History Museum, London; and (c) an écorché figure, Musée de l'Homme, Paris.

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wax moulages (Sticherling and Euler 2001) or moulages (Schnalke 2004) (see Table 3.1 compares terminology).

### *Costume Dummies*

- *Costume dummies are the headless, body-only figures that are used solely to display clothing, uniforms or other types of clothing.*

The intention of costume dummies (n=31) is to display only the clothing and not to give any indication of or information about the wearer (Figure 3.11). These torsos are also called dummies (Museum of New Zealand Te Papa Tongarewa n.d.), tailors' dummies (Hinds and McCartney 1990; Murthy 2008; Museum of New Zealand Te Papa Tongarewa n.d.), body forms, trade mannequins, mannequins (Hinds and McCartney 1990) and conservator's dummies (see Table 3.1). The mannequins used in shop windows to display clothing to the public, are not included in this category as they have a head and are posed as if they are a living person to make the clothing more personally appealing.

### *Miscellaneous Representations*

- *The miscellaneous category contained representations that did not fit within any of the previously described categories.*

The miscellaneous representations (n=15) were those that did not fit within the previously described categories (Figure 3.12). These consisted of representations made up of bits and pieces of other representation types, an example of which is the Cairns museum that had figures on display that consisted of hairdresser's heads on top of costume dummies or standard mannequin bodies (Figure 3.12c). Hairdresser's heads are used by apprentice hairdressers to practice cutting, styling and colouring hair. They are also called mannequin heads, mannequin practice heads, practice manikin heads and hair mannequin heads. Another type of figure that is included in this category are wooden poseable figures known as



art models. These are also advertised for sale as manikins, wooden manikins, wooden artist's models and puppets (A. van Berge Henegouwen 2006: pers. comm.) (Figure 3.12b) (Table 3.1 compares terminology). Some of these representations could be put into yet another category, e.g., the art models, but for practical reasons the number of categories was not expanded to include these.



**FIGURE 3.11** Examples of the types of costume dummies found in the visited museums: (a) a close-up of the neck area of a torso from the Victorian Police Museum, Melbourne, Australia; (b) a female costume dummy from the Melbourne Museum, Melbourne, Australia; and (c) a torso from the Qantas Outback Founders Museum, Longreach, Queensland (Australia).



**FIGURE 3.12** Examples of figures in the 'miscellaneous' category: (a) a figure with a wig base for a head and a stuffed body, Waltzing Matilda Centre, Winton, Queensland (Australia); (b) a art model at the Museon, Den Haag, Netherlands; (c) a hairdresser's head at the Cairns Museum, Cairns, Australia; and (d) an example of different mannequins joined together, Cairns Museum, Cairns, Australia.

## Qualitative Summary

The percentage of each representation type observed for this study was then determined for each country visited (Table 3.2):

- casts were the most common representation type at 18% followed by portrait figures at 17%;
- facial reconstructions, facial reconstructions on a body, sculptures, museum mannequins and standard mannequins all ranged from 10 to 12%;
- the least common representations were costume dummies (4%), medical models (3%) and the miscellaneous representations (2%);
- no one representation type was found in each European country although

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- all representation types were found in Australia;
  - England had all of the representation types except for the miscellaneous ones;
  - the Netherlands and Austria each had six different representation types
  - Scotland had five representations types, Belgium and Portugal had four, France and Hungary had three and Wales had only one type;
  - facial reconstructions and sculptures were each found in nine of the countries visited;
  - facial reconstructions on a body and museum mannequins were found in six countries;
  - casts, standard mannequins and medical models were found in five countries; and
  - portrait figures and costume dummies were found in three countries and the miscellaneous representations were found in only two countries.

### *A Brief Discussion on Representation Types*

Initially there were many difficulties in defining both the representation and context types. This was due to the lack of standardisation of terminology in the literature as various terms were found to refer to the same representation type or context type. Dioramas were discussed in terms of ethnographic dioramas, anthropological dioramas, ‘mannikinned’ dioramas, peopled or ‘manikined’ displays, and the term was often interchangeable with life-groups and tableaux. Diorama figures were often labelled manikins, plaster figures, models, sculpted figures, realistic mannequins, figures, mannequins or casts (Table 3.1 compares terminology). Mannequins are variously called dress forms, artist’s lay figures, display figures, fashion or shop figures, lay figures and costume dummies in reference to those that are used to display clothes. Museum figures, life-like human models, figures and mannequins are all terms used to describe representations used in museum displays. Likewise, medical models have a

range of names; anatomical wax models or sculptures, wax models, models, medical moulages, wax moulages, manikins as well as mannequins.

**TABLE 3.2** The percentage of representation types in each country visited, the total percentage of representations in each country and the total percentage of each representation type (n=860).

Country	%	facial reconstruct- ions only	facial reconstruct- ions with body	casts	Educational sculptures	museum mannequins	standard mannequins	portrait figures	medical models	costume dummies	Miscellaneous representations
Australia	30.1	1.5	0.1	9.5	3.8	2.3	6.5	2.3	0.1	2.9	0.9
Austria	12.4		0.9	6.5	1.9	0.7	1.2		1.3		
Belgium	4.7	0.2			2.9	1.2				0.3	
England	29.9	2.7	4.2	0.3	0.6	6.5	0.6	14.1	0.6	0.3	
France	2.8				1.3			0.7	0.8		
Germany	4.5	2.3	2.2								
Hungary	4.4	3.4			0.3	0.7					
Netherlands	7.2	0.8	3.0		0.7	0.1	1.7				0.8
Portugal	2.1	0.1	0.2	1.6	0.1						
Scotland	1.6	0.3		0.3	0.5		0.1		0.3		
Wales	0.2	0.2									
<b>Total</b>	<b>100.0</b>	<b>11.6</b>	<b>10.7</b>	<b>18.4</b>	<b>12.1</b>	<b>11.5</b>	<b>10.1</b>	<b>17.1</b>	<b>3.1</b>	<b>3.6</b>	<b>1.7</b>

The Jorvik Viking Centre is an example of this mixed terminology being used to describe the representations that they had on display. The representations are referred to as mannequins (Halewood and Hannam 2001), static models (Velarde 1988) or figures (Addyman and Gaynor 1984). The centre went through a redisplay and reopened in 2001 and now contains representations of the ‘facial reconstructions on bodies’ type as defined by this study using information on

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their manufacture displayed at Jorvik. The Naturhistorisches Museum in Vienna, has another example of mixed terminology, with facial reconstructions on a body that have been labelled as full bodied australopithecine sculptures (Berge and Daynes 2001).

Essentially the literature indicates that the main representation types in museums are mannequins (a loose term used to refer to many types of representations), facial reconstructions and sculptures. However, these terms only account for 56% of this study's sample when taking the term mannequin to only mean museum mannequins and standard mannequins. There is also a range of differences between the two mannequin types as defined in this study. If medical models, casts, sculptures and costume dummies are included in the loose definition of mannequin then these terms would account for 93% of this sample. These are very different types of representations which are intended to convey different messages to the visitor, from specific anatomy/pathology of the medical models to the anonymous body forms of the costume dummies. Using the same label for these representation types misrepresents the representation, generalises its use and lacks specificity.

This variability in terminology as it relates to life-sized three-dimensional hominin representations is confusing. As seen in the summary table (Table 3.1) these representations may be named after their type of representations, a generalised term, such as mannequin or figure, the display context, method of manufacture or an incorrectly used term. This confusion can hinder research, and when used incorrectly gives the wrong information. Representations may also be made of a combination of representation types. The defined categories in this study are all based on the method of manufacture of the face of the representation as well as the intended use of the representation. These categories are also general enough to encompass the range of terminology for each representation type.

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## Clarification of Context Types

The ten representation types, as previously defined, were found in an assortment of display contexts. The issue of context is one of extreme complexity in regard to representations and their display. Representations are viewed within several contexts; within a display, an exhibition, a gallery, and a museum. When viewed, the context can then be expanded by the visitor's own contextual thoughts about it as well as the use of their imagination when viewing it. The context types referred to in this study relate to the degree of contextual "information" present in the display. This contextual information is influenced by the economic cost of the display, the amount of space required as well as its placement within the museum and the intention of the display.

As some representations are defined in the literature by their context or presentation technique, a logical progression was to determine the type of context, or degree contextual information found in the displays. Several context types were initially identified, these were diorama, life-group, tableaux, group and single or solo representations. The single category was then expanded to include single tableau figures and single context figures. An additional category was also identified, that of representations not on display at the time of viewing. These extra categories for single representations were created as the life-group and tableaux categories assume two or more representations within these contexts. Further analysis, however, revealed that many representations did not precisely fit into these eight categories. For instance there were contexts that contained aspects of both dioramas and tableaux. Some contexts had diorama-like or tableau-like elements but did not fit within the actual definition of these context types. Other representations were displayed in such a way that although they were not grouped, as such, they were not displayed as solo exhibits. By refining the contexts, four categories were identified that incorporated the previous categories.

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These were:

- complete context, which included both dioramas and tableaux;
- partial contexts which included life-groups, single tableau, single context and those displays that had diorama-like or tableaux-like elements but did not have all the elements to be classified as such;
- a series of figures rather than labelling them a group as the intention differs and while a group can be a series, a series does not necessarily function as a group; and
- single representations.

There were also hominin representations that were not on display to the general public because they were either in storage or were in limited access collections. Representations in storage were there for several reasons; they were part of older exhibits that had been replaced or updated, their exhibition was currently going through a redisplay, they were part of a planned exhibit for future display, or they had been removed for conservation purposes. The limited access collections consisted of university, artist and museum ethnographic collections. These collections were accessible to researchers but were not necessarily available for exhibition.

### *Complete Context*

- *Complete context means that all of the contextual information is provided within the display leaving nothing to the viewer's imagination.*

Diorama and tableaux displays fall into this category. In addition to this, are those displays that do not conform specifically to the diorama and tableaux definitions but do represent complete contextual displays. This context type also includes those displays that by definition can be both dioramas and tableaux. The display at the Jorvik Viking Centre, York, England, is an example of this, particularly as the Viking village is displayed within a large gallery. The walls of the gallery are painted in the diorama fashion. As this is a reconstruction of the

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Viking Village found at the site buildings, fences and streets are incorporated in the gallery. This means that the painted backdrop is not always visible. While there are ‘Vikings’ displayed in tableaux settings, there are also a number of ‘Vikings’ scattered throughout the village scene which do not conform to either contextual definition. By subsuming dioramas and tableaux into a complete context category, those context types that are not traditionally well-defined but include similar contextual information within the display can be included within this category. Complete contextual displays were found to contain seven of the representation types as well as various numbers of the representations (Figure 3.13).

### *Partial Context*

- *Partial context means that only selected aspects of the context are included in the display with the representation.*

The context that is not included is left to the imagination of the viewer; this is often the surroundings. These displays include those that contain diorama and/or tableaux elements but don’t conform to those particular display definitions. An example of these, are those displays containing paintings/photographs which are part of the display but are separated in some way from the rest of the display. This context type also includes life-groups and the previously identified single context displays. Context may be limited to very specific information such as the representation standing on a particular surface, sitting on a horse or holding contextual items. The associated text panels may indicate extra information which has not been included. Other displays/exhibits may encroach on the displays in this category which will influence the viewer’s perception of the display. The positioning and stance of the representation may also influence people’s perception of these displays especially when the representation is placed in unrealistic positions within the display. Every representation type is found in this category (Figure 3.14).





**FIGURE 3.13** Shows a range of representation types within the complete context category. Figures are cropped to show only the specific context type and do not show any other aspects of the exhibits. (a) Facial reconstructions on a body in a village scene at Jorvik Viking Centre, York, England; (b) prisoners (body casts) escaping from the Pandora's box, Museum of Tropical Queensland, Townsville, Australia; (c) a native American educational sculpture in a hut, Haus der Natur, Salzburg; (d) the hanging of Guy Fawkes (portrait figures), Madame Tussauds, London; (e) a Bronze Age hut featuring museum mannequins, Dover Museum, Dover, England; (f) a helicopter display with a standard mannequin pilot, Australian National Maritime Museum, Sydney, Australia; and (g) a baby doll in an incubator, Waltzing Matilda Centre, Winton, Queensland (Australia).



**FIGURE 3.14** The various representation types found in the partial context display category. Photographs have been cropped to show specifically the context type and no other features. (a) Facial reconstructions on bodies at the Neanderthal Museum, Mettmann, Germany; (b) a portrait figure of Madonna, Madame Tussauds, London; (c) hominin educational sculptures at the Musée de l'Homme, Paris; (d) an anatomical model of a child and associated birthing equipment, Hunterian Museum, Glasgow, Scotland; (e) museum mannequins of whalers, Australian National Maritime Museum, Sydney, Australia; (f) artist models showing early clothing, Museon, Den Haag, Netherlands; (g) a facial reconstruction of Worsley Man showing the peat moss where he was found, Manchester Museum, Manchester, England; (h) a body cast of a female Bushman weaving leaves, Naturhistorisches Museum, Vienna; and (i) standard mannequins and a costume dummy, with a tennis backdrop, Australian Tennis Museum, Sydney, Australia.

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### *Series of Representations*

- *A series of representations are displayed as a discrete unit within the exhibit.*

Thematic representations may be grouped together, positioned in rows or on shelves within a display case or vitrine. By intentionally placing representations in this way comparisons can be made between them. They may also be placed in a specific order, for example, facial reconstructions may be displayed with their associated skulls and in some cases with skulls and/or écorchés showing the methods used to make the facial reconstructions. Although there may be some contextual information associated with the series it is not a focus of the display and in some cases may simply be a by-product of the exhibit created as a barrier to keep people from touching the representations. This context type was populated by all of the representation types identified in this study (Figure 3.15).

### *Single Representations*

- *A single representation is displayed by itself with no additional contextual information.*

Single representations are those that are a solo display. They may be accompanied by text panels<sup>2</sup>. All representation types are represented as a solo display except for facial reconstructions on a body (Figure 3.16).

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<sup>2</sup> While contextual information may be included in text panels this has not been included in this category as not all visitors read the text panels or are able to, as they may be in a different language. There is also a difference between written context which can still be added to by the visitor's imagination and context visually associated with a hominin representation.



**FIGURE 3.15** Various examples of the differing representation types placed within a series context type: (a) sculptures at the Musée de l'Homme, Paris; (b) museum mannequins, Natural History Museum, London; (c) casts and educational sculptures, Justice and Police Museum, Sydney, Australia; (d) standard mannequins, Queensland Police Museum, Brisbane, Australia; (e) medical models, Haus der Natur, Salzburg; (f) facial reconstructions on a body, Neanderthal Museum, Mettmann, Germany; (g) costume dummies, Justice and Police Museum, Sydney, Australia; and (h) facial reconstruction, Manchester Museum, Manchester, England.



**FIGURE 3.16** The different representation types in a solo context type: (a) an ‘miscellaneous’ representation type – a wooden artist’s model, Museon, Den Haag, the Netherlands; (b) a portrait figure, Ripley’s Believe it or not!, Surfers Paradise, Australia; (c) a museum mannequin Qantas Outback Founders Museum, Longreach, Queensland, Australia; (d) a costume dummy; (e) a standard mannequin, both from the Victorian Police Museum, Melbourne, Australia; (f) an educational sculpture, Africa Museum, Tervuren, Belgium; (g) a facial reconstruction, Colchester Castle Museum, Colchester, England; (h) an anatomical model, Hunterian Museum, Glasgow, Scotland; and (i) a cast of a death mask at the Victorian Police Museum, Melbourne, Australia.

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## Qualitative Summary

The percentage of each context type was observed for each country that was visited (Table 3.3):

- the most common context type was the partial context and it made up 27% of the sample;
- the series context was the next common at 21% of the sample;
- complete context made up 19% of the sample and the single context was the least common at 13%;
- 21% of the sample was not on display;
- all four context types as well as non–displayed representations were found in three countries; Australia, Austria and England;
- Hungary also had all four context types on display;
- three of the context types were found in Belgium, France, Netherlands and Scotland ;
- two context types were found in Germany and in Portugal, while only the series context type was identified in the single Wales institution that was visited;
- partial context types were found in all countries except Wales;
- only two countries, Netherlands and Portugal did not have any representations in series contexts;
- single contexts were not found in France, Germany or Wales;
- while representations found in complete contexts were found in the least number of countries, only six of the 11 that were visited, 10% of the representations found in complete context were in England; and
- representations that were not on display were viewed in seven of the countries; Australia, Austria, England, Netherlands, Portugal, Scotland and Wales.

**TABLE 3.3** The percentage of representations in each context type found in each country visited, the percentage of representations in each country and the percentage of representations found in each context type (n=860).

Country	%	Complete context	Partial context	Series	Single	Not displayed
Australia	30.1	4.5	4.0	8.0	3.4	10.2
Austria	12.4	2.2	1.2	1.5	0.6	7.0
Belgium	4.7		3.6	0.7	0.3	
England	29.9	10.3	8.6	3.7	6.3	0.9
France	2.8	0.7	1.6	0.5		
Germany	4.5		1.6	2.9		
Hungary	4.4	0.6	0.5	3.0	0.3	
Netherlands	7.2	0.3	5.1		0.9	0.8
Portugal	2.1		0.2		0.2	1.6
Scotland	1.6		0.3	0.3	0.6	0.3
Wales	0.2			0.1		0.1
<b>Total</b>	100.0	18.7	26.7	20.8	12.7	21.0

All representations were then tabulated to show both representation and context type (Table 3.4). The results of which are as follows:

- the most common context type was the partial context at 27% followed by series context at 21% then complete context at 19% with the least number of representations found in solo context at 13%;
- 21% of the representations were not on display;
- although casts were the most common representation type found, the majority of them (14%) were not displayed, this was the highest percentage of a representation type that was not on public display;
- 7% of the facial reconstructions were displayed in a series, this was the highest percentage found in any of the context types;

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- all ten representation types were found in the partial context and the series context;
  - the only representations not found in the complete context were facial reconstructions, medical models and costume dummies; and
  - in the single context all representation types were present except for facial reconstructions on a body.

### *Discussion on the Context Types*

The only forms of display context mentioned in the literature (Addyman and Gaynor 1984; Anon. 1933; Arnoldi 1999; Coffee 1991; Ewers 1955; Kasfir 1997; McKern and McKern 1972; O'Reilly 2005; Prag 1994; Prag and Neave 1997; Russell 1999; Russell 2001) in relation to hominin representations are: dioramas, life-groups and tableaux. These three presentation types do not account for the range of exhibits found in the museums in this sample. There was no terminology to effectively describe the context of these types of display that encompassed the range of variation found. In order to define the types of context that representations are found in, the exhibits were categorised according to the information they imparted to the viewer. This led to the exhibits being placed into four categories based on the context of the representation: complete, partial, series and solo contexts.

Dioramas and tableaux became a part of the complete context category; this was in addition to other displays that could not be defined as either of these presentation techniques. The literature suggested that dioramas were no longer a common presentation technique. Although, dioramas are included in the complete context type, this type still accounts for only 19% of the sample. There were also a range of dioramas that did not fit the parameters for the sample. These included: dioramas with two-dimensional representations and those that were not life-sized.



The context type that the representation is displayed in gives additional information to the viewer/visitor. It assists in defining the importance of the representation within the exhibit, which in turn defines the importance placed upon the representation by the viewer/visitor. The amount of contextual information can assist the viewer with ascribing more details to the representation than it actually has. Jorvik Viking Centre, York were actually congratulated on their actors by a visitor who had not realised that they were representations (C. Warner 2006: pers. comm.). The audio, lighting, visual and olfactory effects combined with animated representations in the complete context had convinced the visitor that there were ‘real’ people in the Viking village.

**TABLE 3.4** The percentage of representation types in each of the contexts, with a total percentage for each representation and context type (n=860).

Context type/ representation type	Complete context	Partial context	Series	Single	Not on display	Total %
Facial reconstructions only		0.1	7.1	1.9	2.6	11.6
Facial reconstructions on a body	4.1	5.2	0.6		0.8	10.7
Casts	1.9	0.5	1.0	0.8	14.3	18.5
Educational Sculptures	1.7	4.0	3.1	0.5	2.7	12.0
Museum mannequins	5.9	4.7	0.6	0.3		11.5
Standard mannequins	1.9	3.6	3.0	1.3	0.5	10.2
Portrait figures	3.0	6.6	2.4	4.9		17.0
Medical models		0.9	1.2	1.0		3.1
Costume dummies		0.1	1.9	1.7	0.2	4.0
Miscellaneous representations	0.2	0.8	0.2	0.1		1.4
<b>Total %</b>	18.7	26.5	21.2	12.6	21.0	100.0

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## Exhibitions

There were three different types of exhibitions identified in the sample. These were classified by the expected duration length of the exhibitions. The duration of the exhibition influences the amount of time that the exhibitions are generally on display and the number of visitors that will ultimately see the exhibition. These three exhibition types consisted of: permanent, touring and temporary exhibitions.

### *Permanent Exhibitions*

The majority of the exhibitions viewed were on permanent display, meaning that they were created for the museum space that they were displayed in and are intended to be on display for at least several years. The duration of these exhibitions may be extended for decades or indeed for several generations of visitors before or even if changes are made (Arnoldi 1999). The audience type is known and the exhibition is planned according to specific target groups.

### *Touring Exhibitions*

The sample includes two touring exhibitions that were created by museums other than the museum they were viewed in. The first was the 'Neanderthals in Europa' exhibition at the Drents Museum, Assen, Netherlands (2006), and the second was 'Iceman: the story of Ötzi' which was viewed twice, once at the Archaeology Museum, Frankfurt, Germany (2006), and at the ANMM, Sydney, Australia (2008). The 'Neanderthals in Europa' exhibition originally created by the Gallo-Romeins Museum, Tongeren, Belgium, which was closed during the European research trip in 2006. 'Iceman: the story of Ötzi' exhibition was from the South Tyrol Museum, in Bolzano, Italy.

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Another consequence of touring displays is that particular exhibits may be removed from museum display. An example of this was the facial reconstruction of 'Yde Girl' from the Drents Museum, Assen, Netherlands. Yde Girl was one of the facial reconstructions from the book 'Making Faces'. During the research visit to the Drents Museum, Assen, Netherlands (2006) the Yde Girl viewed was different from that expected from the literature. This was due to the original Yde Girl being included in 'The Mysterious Bog People' travelling exhibit which was travelling around the United States of America at that time. Due to her popularity amongst the visitors to the museum, she was replaced while the original facial reconstruction was on tour<sup>3</sup>.

### *Temporary Exhibitions*

Several temporary exhibitions were also viewed; these have a limited display time, often only several months and may have very specific target audiences. These were:

- 'Blue Jeans and Jungle Greens' at the History Trust Gallery, Adelaide, Australia (2009);
- 'Secrets, Fates, Mummies: Stories from the Dominicans' Crypt of Vác' at the Magyar Természettudományi Múzeum, Budapest (2006);
- 'CT-scans Onthullen Eeuwenoude Egyptische Mummies' exhibit at the Museon, Den Haag, Netherlands (2006); and
- 'Rulers, Warriors and Druids' exhibition at Colchester Castle Museum, Colchester, England (2006).

A range of exhibition types, featuring hominin representations were viewed at the visited institutions. Permanent exhibitions can remain on display for several decades with very few changes or updates made to the exhibitions. This means

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<sup>3</sup> More information on Yde Girl is provided in the section of famous facial reconstructions on page 129-130 of this chapter.

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that exhibits assumed by the visitor to be factual may no longer be so as information/knowledge can change quite quickly especially in the area of palaeoanthropology due to new finds changing interpretations and adding to existing and established knowledge.

Peopled displays can be quite popular and visitors miss them when they are removed or if Museums close down as in the Everybody Family now on display at the Melbourne Museum, Melbourne, Australia. This can mean that certain displays and/or representations may be displayed longer than anticipated due to public demand. The problem is when the information and interpretation contained within the representations has changed and the display had not been updated. Many museums in Europe were in the process of updating displays with newer displays during the 2006 research trip. This meant that there were new and quite innovative displays in addition to the older displays which were showing their age. The Haus Der Natur, Salzburg, Austria for example still had hand written labels for some of their exhibits.

One of the Touring exhibitions, 'Iceman: the story of Ötzi' was seen at two different museums, the Archaeology Museum, Frankfurt, Germany, and the Australian National Maritime Museum, Sydney, Australia. This meant that the exhibition was observed in two different museum galleries and the differences in the placement of the Ötzi representation within the exhibit. Interestingly, photographs were allowed in the Sydney museum but not in the Frankfurt museum.

Three of the institutions, Madame Tussauds in London, The Oxford Story in Oxford and the Jorvik Viking Centre, York had people movers as defined in Chapter 2 "*Project Background*" (Page 27). The people mover at Madame Tussauds was confined to a particular section of the visitor attraction. This differed from The Oxford Story and Jorvik where the 'ride' was the major part of the centres and they both had sections at the beginning that were to give the impression that the visitor was travelling back in time. These people movers or

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time—cars ensured that visitor saw specific displays in conjunction with the audio commentary. This meant, however, that extra time could not be spent at particular sections of the display nor could particular objects or features be observed for any length of time. Also once the ‘ride’ is finished the visitor must then proceed to the next section of the institution, before exiting through the shop. Jorvik was the only one of these institutions that gave permission for several rides to be taken to ensure complete photographic documentation of the centre. Due to the ‘ride’ and the various atmospheric effects (smoke and lighting) as well as the distance between the Vikings and the people mover it was difficult to get close-ups of each representation. The displays that the ride went through did give a ‘snapshot’ look at history and often had several representations in each ‘snapshot’. This meant that normal human variation was shown in the sex, age, body shape, clothes and occupation of the representations more effectively than when only a single representation is shown.

## Taxa Range

A range of hominin species were found in the 71 institutions visited. Only 55 (77.5%) of the institutions had representations. These 55 institutions consisted of 45 museums, five visitor attractions and five associated institutions. The representations at these institutions consisted of modern humans (*Homo sapiens*) and a range of extinct species from Neandertals, to australopithecines (Table 3.5). The designations of these taxa are according to the information ascribed to the representations at each museum. In case a taxonomic designation was not specified by the museum and the appearance of the representation was that of a *H. sapiens*, the representation was categorised as a *H. sapiens*.

- 88.5% were *H. sapiens* and they were found in 96.4% of the visited institutions that had representations;
- 7.6% were Neandertals, and they were recorded in 20% of the institutions;

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- the remaining 4% portray the other 13 taxa, 2.1% of which are of australopithecines while 1.7% are of early *Homo* forms, not including Neandertals, and one representation was a *Kenyanthropus platyops*;
  - only *H. sapiens* were on display at the five visitor attractions and five associated institutions that had finished representations;
  - two museums, the Hessisches Landes–Museum, Darmstadt, Germany, and the Leira Castle Museum, Leira, Portugal, did not have any *H. sapiens* on display;
  - 10.9% of museums had representations of the *Homo erectus* taxon while 9.1% of museums had *Homo habilis* representations;
  - those classified only as Australopithecines and the *Australopithecus afarensis* taxon were both found in 5.5% of museums;
  - the *Australopithecus africanus*, *Australopithecus boisei*, *Homo ergaster* as well as those classified as gracile and robust australopithecines were each found in 3.6% of the museums;
  - the remaining 0.4% of representations consisting of *Australopithecus anamensis*, *Homo rudolfensis*, *Homo heidelbergensis* and *K. platyops* were each displayed in 1.8% of the museums that had representations;
  - of the earlier hominins (excluding Neandertals) there were an equal ratio of representations per taxon to museum except for the Australopithecine taxon and the *Au. afarensis* taxon; and
  - the australopithecine taxon had 5 representations on display in 3 museums and the *Au. afarensis* had 4 representations on display in 3 museums.

The taxa were then assessed by country (Table 3.6). *H. sapiens* were the main taxon found in all countries except Germany which had a larger number of Neandertals than *H. sapiens*. The Netherlands had similar numbers of *H. sapiens* and Neandertals representations at the institutions visited.

- The largest number of taxa were found in Germany (n=10), the Netherlands (n=9) and France (n=8).

- 4 taxa were in the samples from Australia and Belgium.
- Austria, England, Hungary and Portugal each had 3 taxa.
- While Scotland had a *H. habilis* in addition to *H. sapiens* and Wales with only *H. sapiens* representations had the least number of taxa.
- Combined the United Kingdom had 4 taxa in total.

TABLE 3.5 The various taxa found in the hominin representation sample, their frequency and the number of institutions that had each taxa are listed (shown as either a total amount or as a percentage).

Taxon	Total representations n= 860	% of representations	Number of institutions with representations total n= 55	% of institutions
<i>Homo sapiens</i>	761	88.5	53	96.4
Neandertal	65	7.6	11	20.0
<i>Homo erectus</i>	6	0.7	6	10.9
Australopithecine	5	0.6	3	5.5
<i>Homo habilis</i>	5	0.6	5	9.1
<i>Australopithecus afarensis</i>	4	0.5	3	5.5
<i>Australopithecus africanus</i>	2	0.2	2	3.6
<i>Australopithecus boisei</i>	2	0.2	2	3.6
Gracile australopithecine	2	0.2	2	3.6
<i>Homo ergaster</i>	2	0.2	2	3.6
Robust australopithecine	2	0.2	2	3.6
<i>Australopithecus anamensis</i>	1	0.1	1	1.8
<i>Homo rudolfensis</i>	1	0.1	1	1.8
<i>Homo heidelbergensis</i>	1	0.1	1	1.8
<i>Kenyanthropus platyops</i>	1	0.1	1	1.8

The high number of Neandertal representations sampled in Germany may be due to the specific museums visited in that country. Of the four museums that were visited, one museum had no representations, a second had one *H. sapiens* representation, the third had a range of the earlier hominin taxa and the fourth, the Neanderthal Museum at Mettmann, Germany, had 23 of the 24 German

TABLE 3.6 The various taxa observed in each country that was visited shown as a percentage of the overall total (n=860).

Country	%	<i>Homo sapiens</i>	Neandertal	<i>Homo erectus</i>	<i>Homo habilis</i>	Australopithecine	<i>Australopithecus afarensis</i>	<i>Homo ergaster</i>	<i>Australopithecus africanus</i>	<i>Australopithecus boisei</i>	robust australopithecine	gracile australopithecine	<i>Homo heidelbergensis</i>	<i>Homo rudolfensis</i>	<i>Kenyanthropus platyops</i>	<i>Australopithecus anamensis</i>
Australia	30.1	29.7	0.2	0.1	0.1											
Austria	12.4	11.6	0.6				0.2									
Belgium	4.7	4.3	0.1								0.1	0.1				
England	29.9	29.7	0.1			0.1										
France	2.8	1.7	0.1	0.1	0.1	0.3		0.1			0.1	0.1				
Germany	4.5	0.7	2.8	0.2	0.1		0.1		0.1	0.1				0.1	0.1	0.1
Hungary	4.4	4.0	0.3	0.1												
Netherlands	7.2	3.3	3.1	0.1	0.1		0.1	0.1	0.1	0.1			0.1			
Portugal	2.1	1.9	0.1			0.1										
Scotland	1.6	1.5			0.1											
Wales	0.2	0.2														
<b>Total</b>	100.0	88.5	7.6	0.7	0.6	0.6	0.5	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1

Neandertals in the sample as well as two other taxa (*H. sapiens* and *H. erectus*). A comparison can be made with the Netherlands, where five institutions were visited. One museum had a travelling exhibition of Neandertals which contained the same number (n=23) of Neandertals as the Neanderthal Museum in Mettmann, Germany. The other three museums had four *H. sapiens* representations between them. The fifth museum had a large number of representations (n=34) of various taxa, the majority of which were *H. sapiens* (n=24). These examples show that individual museums made a difference to the number of taxa observed.



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Neandertals were more common in the institutions on the European continent than in the United Kingdom or Australia. The other earlier taxa were also more likely to be found on the European continent than the United Kingdom or Australia. Due to the location of Neandertal sites in Europe it was expected that there would be more Neandertal representations in continental Europe than in the United Kingdom. It was not expected that so few taxa would be in Australian institutions.

The taxa were then separated into representation types (Table 3.7). The *H. sapiens* were the only taxon that was found in all of the representation types. The other taxa were of the facial reconstruction types and the educational sculpture type. The context types that the various taxa were found in were quite varied (Table 3.8). *H. sapiens* and the Neandertals were found in all of the context types. The majority of the extinct taxa (5.3%) were displayed in partial contexts, 4.3% of those were Neandertals. A further 3.6% of the extinct taxa were found in a series context and 0.7% were in solo displays. Of the 21% that were not currently on display, 19.3% were *H. sapiens* and 1.7% were of the earlier hominin taxa.

Russell (1999) suggested that many hominids or proto-humans would be found in dioramas (complete context in this study), while others would be displayed in single exhibits. The earlier hominin representations in this sample in these two context types only account for 0.8% of the sample. The majority of these earlier hominins were found in either partial context or in series. This means that curators prefer to display the earlier hominin with some contextual information or in a series so that variation can be compared, whereas, they are less likely to display them in a complete context or in solo displays. They are also more likely to be facial reconstructions (with and without a body) than sculptures. Neandertal representations are the most common of the earlier hominin taxa.

TABLE 3.7 The various taxa observed at the visited institutions separated into their representation types and shown as a percentage.

Taxon	%	Face reconstructions	Facial reconstructions with body	Casts	Educational Sculptures	Museum mannequins	Standard mannequins	Portrait figures	Medical models	Costume dummies	Miscellaneous representations
<i>Homo sapiens</i>	88.5	8.1	5.1	18.5	9.5	11.5	10.2	17.0	3.1	4.0	1.4
Neandertal	7.6	1.7	5.1		0.7						
<i>Homo erectus</i>	0.7	0.3	0.1		0.2						
Australopithecine	0.6		0.1		0.5						
<i>Homo habilis</i>	0.6	0.2			0.3						
<i>Australopithecus afarensis</i>	0.5	0.1	0.2		0.1						
<i>Australopithecus africanus</i>	0.2	0.1			0.1						
<i>Australopithecus boisei</i>	0.2	0.1			0.1						
Gracile australopithecine	0.2	0.1			0.1						
<i>Homo ergaster</i>	0.2	0.1			0.1						
Robust australopithecine	0.2	0.1			0.1						
<i>Australopithecus anamensis</i>	0.1	0.1									
<i>Homo heidelbergensis</i>	0.1	0.1									
<i>Homo rudolfensis</i>	0.1	0.1									
<i>Kenyanthropus platyops</i>	0.1	0.1									
Total	100.0	11.6	10.7	18.5	12.0	11.5	10.2	17.0	3.1	4.0	1.4

TABLE 3.8 The various taxa observed in the visited institutions separated by context types that were on display as well as those representations that were not on display. These numbers are shown as a percentage (n=860).

Taxon	%	Complete context	Partial context	Series	Single	Not displayed
<i>Homo sapiens</i>	88.5	18.6	21.4	17.1	12.1	19.3
Neandertal	7.6	0.1	4.3	1.9	0.3	0.9
<i>Homo erectus</i>	0.7		0.1	0.3		0.2
Australopithecine	0.6		0.2	0.3		
<i>Homo habilis</i>	0.6		0.2	0.1	0.1	0.1
<i>Australopithecus afarensis</i>	0.5			0.1		0.3
<i>Australopithecus africanus</i>	0.2		0.1	0.1		
<i>Australopithecus boisei</i>	0.2			0.1		0.1
Gracile australopithecine	0.2		0.1	0.1		
<i>Homo ergaster</i>	0.2		0.1		0.1	
Robust australopithecine	0.2		0.1	0.1		
<i>Australopithecus anamensis</i>	0.1			0.1		
<i>Homo heidelbergensis</i>	0.1				0.1	
<i>Homo rudolfensis</i>	0.1			0.1		
<i>Kenyanthropus platyops</i>	0.1			0.1		
<b>Total</b>	100.0	18.7	26.7	20.7	12.8	21.0

The hominins in this sample are only those of our ancestral lineage. Extant primates were excluded from this sample for the reason that they are extant, they are not bipedal and that the majority of the examples were taxidermy specimens. Although, many museums had evolution displays they did not all have life-sized three-dimensional representations although two-dimensional ones were often present. There were two museums that had no modern humans

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(*H. sapiens*) on display, these were the Leiria Castle Museum, Leiria, Portugal, and the Hessisches Landes–Museum, Darmstadt, Germany. The Leiria Castle Museum had a Neandertal and an australopithecine on display in a temporary exhibition while the Hessisches Landes–Museum had a series of the earlier hominins on display.

## Partial vs. Complete Representations

The hominin representations in this sample were either partial body parts or complete representations. This meant that they consisted of six partial categories defined by their body parts as well as a complete representation category; face or facial part only (Figure 3.17a), head only (Figure 3.17b), head and neck only (Figure 3.17c), bust (head, neck and part of the torso) (Figure 3.17d), complete representation (Figure 3.17e) body only (Figure 3.17f) and non-cephalic body part (Figure 3.17g). A separate category: that of undetermined was included for those representations that were displayed in such a way that the full extent of the representation was not visible to the viewer. The partial and complete representations were then analysed by representation type, context type, taxon and country.

The representation types were first placed into a partial or the complete category (Table 3.9). These categories were in part suggested by the representation types themselves. The facial reconstructions had already been separated into two categories; facial reconstructions only and facial reconstructions on a body. The costume dummies also indicated their category as the ones in this sample were body only.

- The partial facial reconstructions were found to include face or facial part only (0.1%) head only (0.3%), busts (11.2%) and the remaining facial reconstruction consisted of complete representations (10.7%).
- The heads only were only found amongst the facial reconstructions.

- Casts consisted of all body parts except for the heads. One of the casts was only of the body only, while 0.6% were of non-cephalic body parts. The majority of the casts were of the bust (7.4%) type, or were of the face only (6.6%). The remaining casts were of complete bodies (3.6%).
- Educational sculptures consisted of busts, complete representations and non-cephalic body parts.



**FIGURE 3.17** The partial and complete representation categories in this sample: (a) the face or facial part only, a cast from the Naturhistorisches Museum, Vienna; (b) the head only, a facial reconstruction from Museum of Natural Sciences, Brussels, Belgium; (c) the head and neck only, a facial reconstruction from the Magyar Természettudományi Múzeum, Budapest; (d) the bust, a facial reconstruction from the Hessisches Landes-Museum, Darmstadt, Germany (©Wiss. Rekonstruktionen: W. Schnaubelt & N. Kieser-Atelier WILD LIFE ART für das Hessische Ladesmuseum Darmstadt); (e) the complete representation, a museum mannequin from the Dover Museum, Dover, England; (f) the body only, a costume dummy from the Justice & Police Museum, Sydney, Australia; and (g) the non-cephalic body part, a cast from the Hunterian Museum, Glasgow, Scotland.

TABLE 3.9 The percentage of hominin body parts found in each of the representation types (n=860).

Representation type	Face only	Head only	Bust only	Complete representation	Body only	Non-cephalic body part	Un-determined	%
Facial reconstruction only	0.1	0.3	11.2					11.6
Facial reconstruction with body				10.7				10.7
Cast	6.6		7.4	3.6	0.1	0.6	0.1	18.5
Educational sculpture			1.6	10.0		0.3		12.0
Museum mannequin			0.1	11.2			0.2	11.5
Standard mannequin			0.8	8.6			0.8	10.2
Portrait figures			2.3	14.0	0.3		0.3	17.0
Medical models	0.3		0.2	0.9	0.1	1.5		3.1
Costume dummies					4.0			4.0
Miscellaneous				1.2			0.2	1.4
<b>% of body parts</b>	<b>7.1</b>	<b>0.3</b>	<b>23.7</b>	<b>60.1</b>	<b>4.5</b>	<b>2.4</b>	<b>1.7</b>	<b>100.0</b>

- Museum and standard mannequins consisted of busts and complete representations as well as some that were undetermined, 0.2% and 0.8% respectively.
- The majority of the portrait figures were complete representations (14%), busts (2.3%) and body only (0.3%) and undetermined (0.3%).
- The medical models consisted of all body parts except for the head.
- Costume dummies were only of the body only type.
- The miscellaneous representations were either complete or undetermined.
- Complete representations were the most common body part found and consisted of 60% of the sample.

- Busts were the next most common form of body part at 24%.
- Faces/facial parts were the next most common at 7% of the sample.
- Three body parts made up 7% of the sample, they were body only (5%), non-cephalic body parts (2.4%) and heads at 0.3%.
- Those representations that were undetermined consisted of 2% of the sample.

All of the body parts were found in a range of context types (Table 3.10). The complete context had representations that were complete or were busts although 1% of the representations were undetermined due to limited visibility and so were not assigned to a body part. All body parts were found in both the series and single context types.

**TABLE 3.10** The percentage of body parts (n=860) in each of the context types as well as those not displayed.

Type	Complete context	Partial context	Series	Single	Not displayed	% of body parts
Face only			0.9	0.1	6.0	7.1
Head only			0.2	0.1		0.3
Bust only	0.3	1.6	9.0	3.0	9.8	23.7
Complete representation	17.3	23.7	7.7	6.9	4.5	60.1
Body only		0.5	1.9	1.9	0.3	4.5
Body part		0.6	1.0	0.5	0.3	2.4
Undeterminable/ not visible	1.0	0.3		0.3		1.7
% of context types	18.7	26.7	20.7	12.8	21.0	100.0

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Separating the various taxa into body parts showed that the *H. sapiens* representations had the largest range of body parts, whereas, the majority of the other representations consisted of busts and complete representations except for the three representations that were heads (Table 3.11). The *H. sapiens* representations were found in all of the body parts categories except for the head only category. The head only examples consisted of a *H. habilis* and two australopithecines. All other extinct taxa consisted of busts or complete representations. These two body parts made up 84% of the representations.

When separating the body parts by country, it was found that, Australia was the only country to have representations in each of the body parts (Table 3.12).

- The representations that consisted of only a face part were found in Australia, Austria and Scotland.
- Those that were only a head (with no visible neck) were found in Australia (n=1) and Belgium (n=2).
- Busts were found in all of the countries visited except Belgium and France.
- Complete representations were found in all countries except Wales, with the majority found in England (24%) and Australia (15%).
- Four other countries had more complete representations than any other body part, these were the Netherlands (6%), Austria (5%), Belgium (4%) and France (2%).
- Three countries had more busts than complete representations, Germany 2.3% of busts and 2.2% of complete representations, Hungary had 3.5% of busts and 0.9% of complete representations and Portugal with 1.8% of busts and 0.4% of complete representations.
- The body only representations were recorded in Australia, Belgium and England only.
- Non-cephalic body parts were only recorded in four countries Australia, Austria, France and Scotland and combined are less than 3% of the sample.



- The undetermined category contained the representations that the entirety of the representation could not be visually determined and these were in four countries, Australia, Austria, England and the Netherlands.
- Germany, Hungary, Portugal had only bust and complete representations.

TABLE 3.11 The individual taxa separated into anatomical type with the resultant numbers shown as a percentage.

Taxon	n=	Face or facial part	Head	Bust	Complete representation	Body only	Non-cephalic body part	Unsure
<i>Homo sapiens</i>	88.5	7.1		20.6	52.1	4.5	2.4	1.7
Neandertal	7.6			1.7	5.8			
<i>Homo erectus</i>	0.7			0.3	0.3			
Australopithecine	0.6				0.6			
<i>Homo habilis</i>	0.6		0.1	0.1	0.3			
<i>A. afarensis</i>	0.5			0.1	0.3			
<i>A. africanus</i>	0.2			0.1	0.1			
<i>A. boisei</i>	0.2			0.1	0.1			
Gracile australopithecine	0.2		0.1		0.1			
<i>Homo ergaster</i>	0.2			0.1	0.1			
Robust australopithecine	0.2		0.1		0.1			
<i>A. anamensis</i>	0.1			0.1				
<i>Homo heidelbergensis</i>	0.1			0.1				
<i>Homo rudolfensis</i>	0.1			0.1				
<i>Kenyanthropus platyops</i>	0.1			0.1				
Total	100.0	7.1	0.3	23.7	60.1	4.5	2.4	1.7

**TABLE 3.12** The percentage of anatomical types in each country that was visited, with the total percentage of representations in each country and the percentage of each anatomical type (n=860).

Country	Face only	Head only	Bust only	Complete representation	Body only	Non-cephalic body part	Unsure	Total Country %
Australia	6.3	0.1	5.0	14.4	3.4	0.5	0.5	30.1
Austria	0.7		4.9	6.2		0.7	0.3	12.4
Belgium		0.2		4.1	0.3			4.7
England			4.8	23.8	0.8		0.5	29.9
France				2.2		0.6		2.8
Germany			2.3	2.2				4.5
Hungary			3.5	0.9				4.4
Netherlands			0.8	6.4			0.3	7.2
Portugal			1.7	0.3				2.1
Scotland	0.1		0.5	0.3		0.7		1.6
Wales			0.2					0.2
<b>UK in total</b>	0.1		5.5	24.2	0.8	0.7	0.5	31.7
<b>Total</b>	7.1	0.3	23.7	60.9	4.5	2.4	1.6	100.0

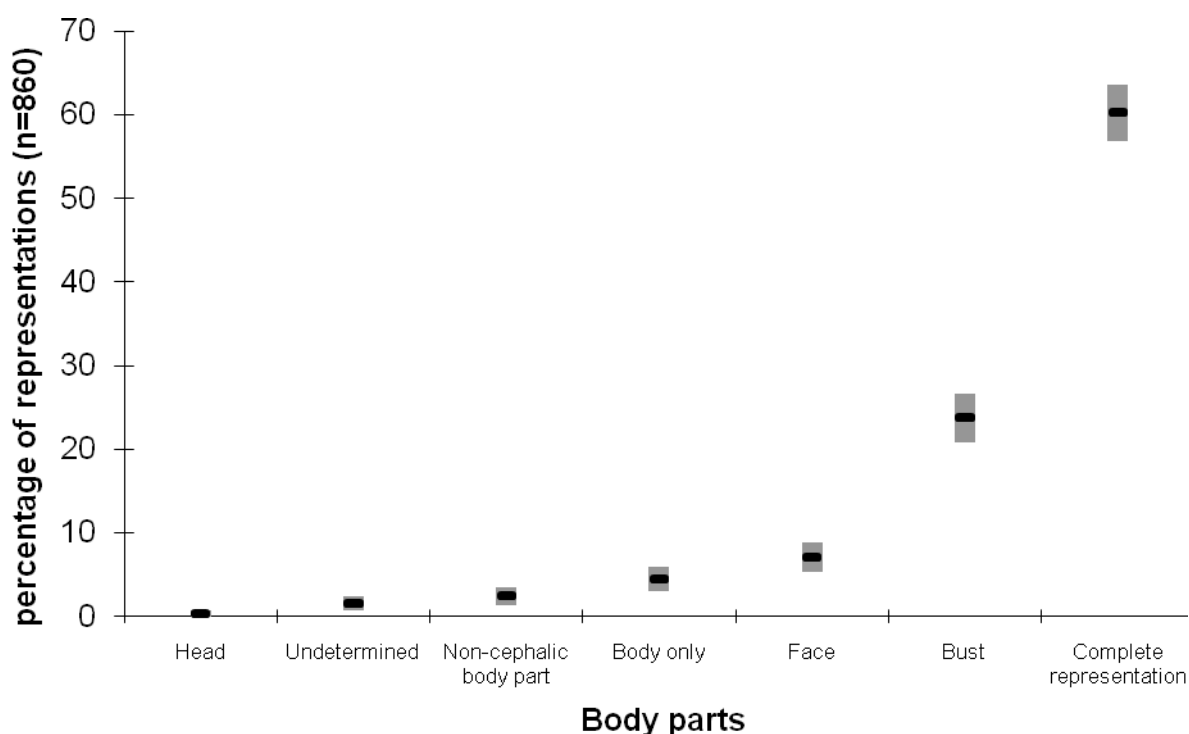
The confidence interval was then determined using the following equation to find the error of the percentages (Ep)

$$E_p = 100 \cdot \sqrt{\frac{p(1-p)}{n}}$$

where E stands for error, p for percent and n is the number of representations (n=860) (Figure 3.18).

- There was a significance difference between the number of complete representations and busts as well as between complete representations and busts and all other body parts.

- There was a significant difference between the heads and all other body parts.
- There was no significant difference between the undetermined category, the non-cephalic body parts, the body only and the face body parts.



**FIGURE 3.18** The confidence interval in relation to the percentage of representations in each of the body parts and the undetermined category. The black mark represents the percentage of representations in each category. The grey rectangle represents then individual error of each score.

The majority of body parts fit the context they were in, although, there were some that did not. There were three representations that were just a head, two of these heads were disconcerting as they were suspended within a display case and looked like they were floating. The other head, however, fit within the context in which it was displayed, and that was on a shelf along with a range of hominin skulls. There was one bust that was displayed in such a way as to be disconcerting as well. This was at the Cairns Museum in Cairns, Australia. The representation was dressed and positioned as if it was a complete representation,

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however, it had no legs and was clothed in a dress, this meant that it appeared to float above its stand. The importance of the body parts of the representation only becomes apparent when the context does not fit with the representation as in the above examples. If there is a logical explanation for the body parts used then the representation is understood within its context.

## Number of Representations

The number of representations was analysed in several ways: firstly by determining how many of the total sample were either on display or not displayed and secondly grouping by country, institution and individuals. The total number of representations in this sample was  $n=860$ , 79% ( $n= 679$ ) of which were on display to the general public at the time of viewing and 21% ( $n= 181$ ) were not on display.

### *Representations by Country*

The majority of representations were viewed in Australia (30%) and the UK (32%) with the other European countries having the remaining 38%. This corresponded with the numbers of institutions visited in those countries, Australia (32%), UK (28%) and other European countries (39%) (Table 3.13). Austria provided the third highest number of representations at 12.4% ( $n=107$ ) in only 4.2% ( $n=3$ ) of the institutions visited. This number changes dramatically if only the representations on display are considered as Austria drops below the Netherlands into fourth place with 6.9% ( $n= 43$ ) (Table 3.14).

The numbers for Belgium, Germany and Hungary were consistent as all the representations viewed in these countries were on display. Hungary, however, had 5.6% ( $n=38$ ) of the representations on display in only one museum. While Austria, Belgium, Germany and Hungary had similar numbers of

representations, the number of institutions visited along with the number of institutions that had representations on display differed.

**TABLE 3.13** The total number of hominin representations viewed in each country is shown in descending order and these totals are shown as a percentage of the overall total. In addition to this the number of institutions visited per country is included and as an overall percentage.

Country	Representations n=	Overall % of representations	Institution n=	Overall % of institutions
UK	273	31.7	20	28.2
Australia	259	30.1	23	32.4
Austria	107	12.4	3	4.2
Netherlands	62	7.2	6	8.5
Belgium	40	4.7	4	5.6
Germany	39	4.5	4	5.6
Hungary	38	4.4	2	2.8
France	24	2.8	4	5.6
Portugal	18	2.1	5	7.0
<b>Total</b>	<b>860</b>	<b>100.0</b>	<b>71</b>	<b>100.0</b>

**TABLE 3.14** The number of representations on display in each of the countries visited and this number is also shown as a percentage, along with the number of institutions that had representations on display in each of the countries.

Country	Displayed representations n =	%	Number of institutions	Institutions as a %
UK	261	38.4	14	28
Australia	171	25.2	19	38
Netherlands	55	8.1	3	6
Austria	47	6.9	2	4
Belgium	40	5.9	3	6
Germany	39	5.7	3	6
Hungary	38	5.6	1	2
France	24	3.5	2	4
Portugal	4	0.6	3	6
<b>Total</b>	<b>679</b>	<b>100.0</b>	<b>50</b>	<b>100</b>

### *Representations by Institution*

Of the total number of institutions visited (n=71), 50 had representations on display to the general public. Sixteen institutions had no representations at all, five had no representations on public display and a further eight had their numbers reduced due to the number of representations not on display (Appendix D). Two museums, the Australian Museum, Sydney, (n=65) and the Naturhistorisches Museum, Vienna, (n=66) had a drop in numbers, to 3 and 6 representations respectively due to the high number of representations recorded that were not on display.

### NUMBERS AT INDIVIDUAL INSTITUTIONS

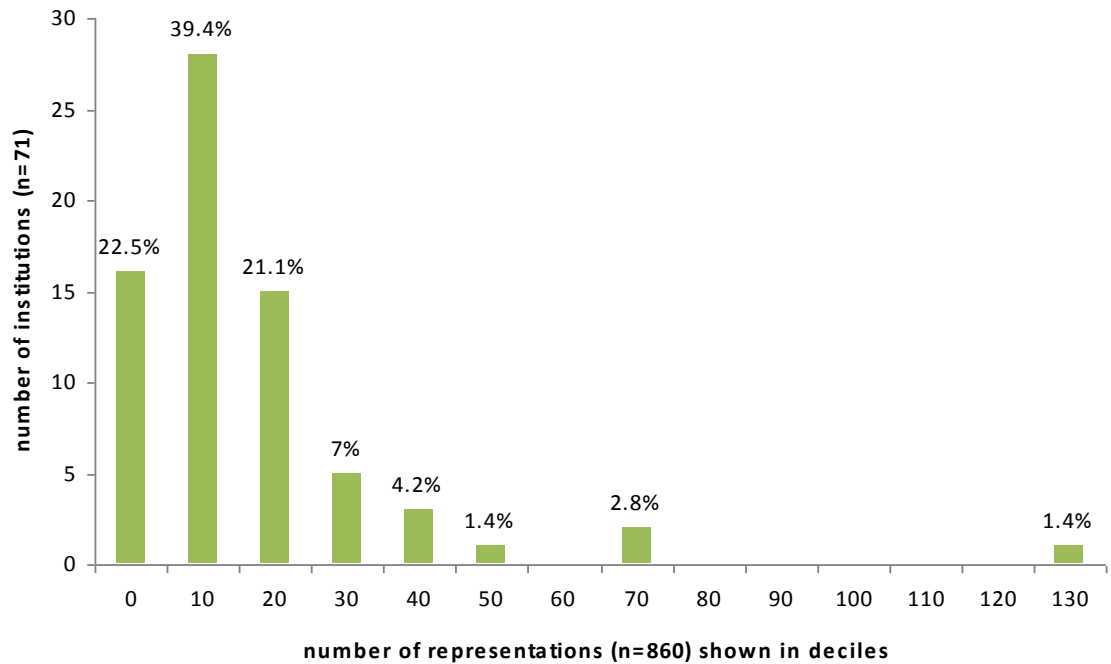
The individual number of representations recorded at each institution ranged from 0 to 122 (Figure 3.19):

- of the 71 institutions, 22.5% of the them had no hominin representations;
- 39.4% of the institutions had between 1 and 10 representations;
- 21.1% had between 11 and 20 representations;
- 7% between 21 and 30;
- 4.2% between 31 and 40;
- 1.4% between 41 and 50;
- with only 2.8% of institutions having between 61 and 70; and
- 1.4% (Madame Tussauds) having between 121 and 130.

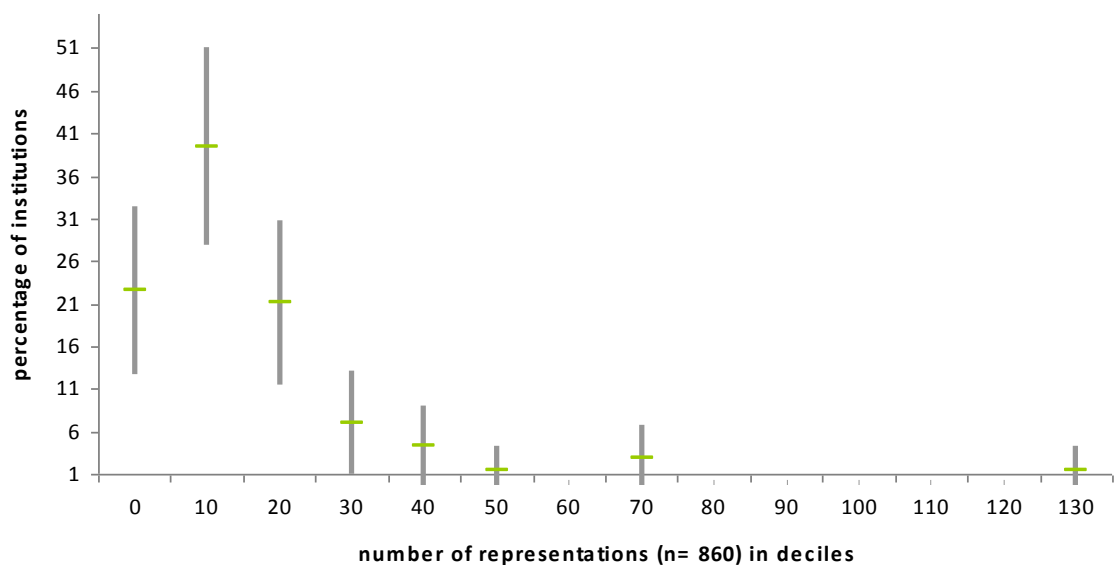
The confidence interval was then determined using the following equation to find the error of the percentages (Ep)

$$E_p = 100 \cdot \sqrt{\frac{p(1-p)}{n}}$$

where E stands for error, p for percent and n is the number of institutions (Figure 3.20).



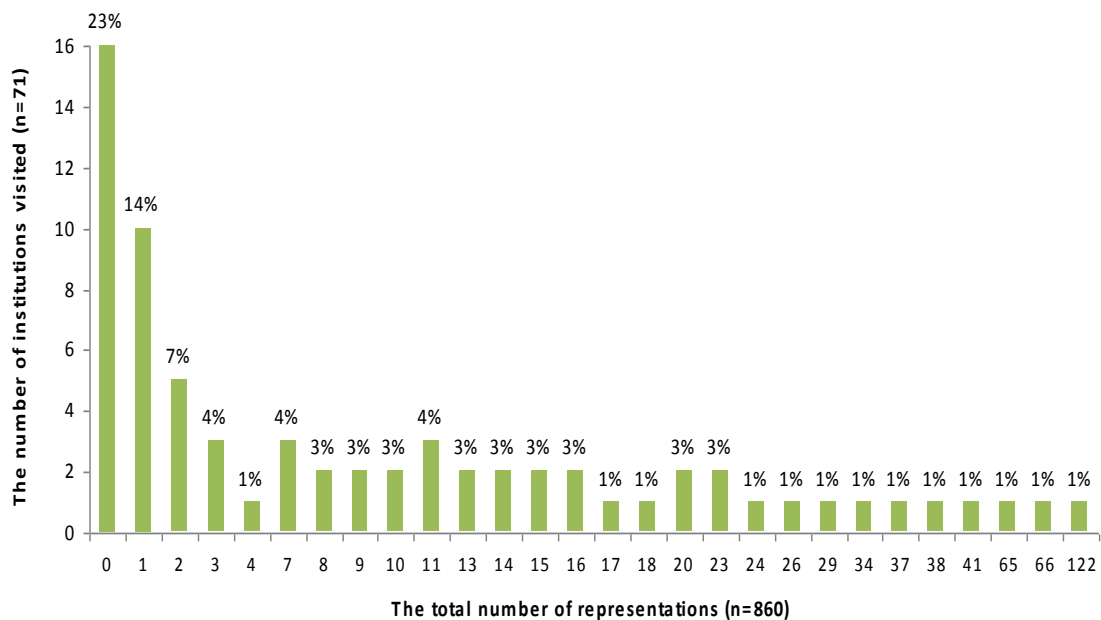
**FIGURE 3.19** The total number of hominin representations shown in deciles viewed per number of institutions visited and shown as a percentage of total number of institutions visited.



**FIGURE 3.20** Showing the confidence interval in relation to the percentage of representations found in the visited institutions. The black mark represents the percentage of representations found in institutions. The grey rectangle represents the individual error of each score.

A further breakdown of the individual numbers of representations shows that (Figure 3.21):

- 23% of the institutions visited had no representations;
- 14% of institutions have one representation;
- 7% of institutions have two representations;
- institutions with three, seven and eleven representations each accounted for 4% of the sample;
- while institutions with 8–10, 13–16, 20 and 23 each accounted for 3%;
- and
- the following numbers of representations were each found in one institution, 4, 17, 18, 24, 26, 29, 34, 37, 38, 41, 65, 66 and 122.



**FIGURE 3.21** The total number of representations (n=860) by the number of institutions (n=71) they were viewed in with the number of institutions shown as a percentage.



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## NUMBER OF DISPLAYED REPRESENTATIONS

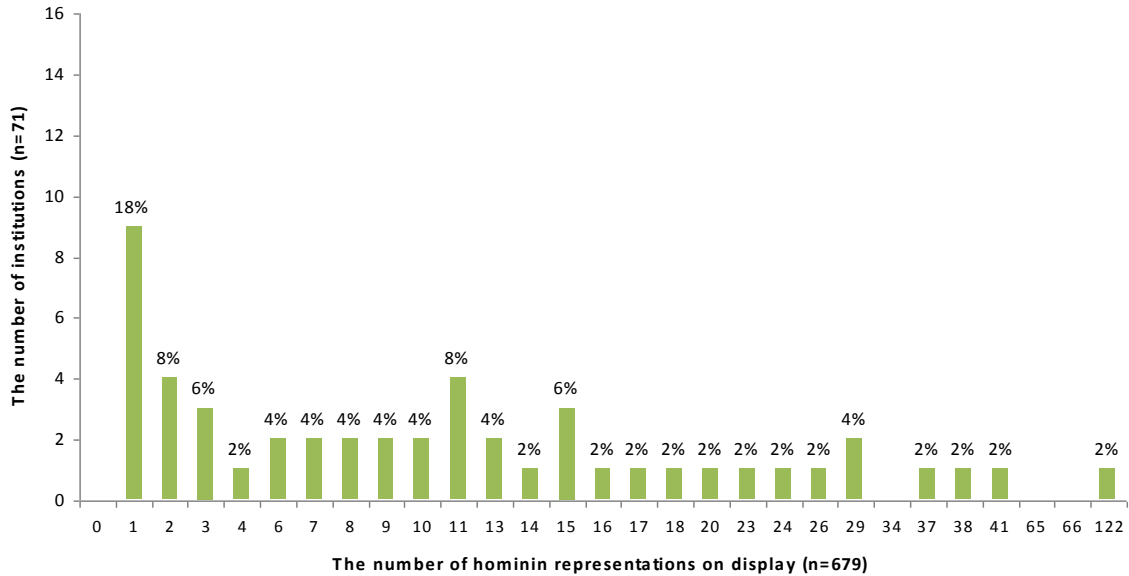
The number of representations can then be looked at in relation to only those institutions that have representations on display. The number of representations that were on public display was 679. These representations were displayed in 50 of the institutions visited. This meant that 70.4% of institutions visited had representations on display (Figure 3.22):

- 54% (n=27) of institutions had between 1 and 10 representations, 9 having only one representation;
- 28% (n=14) had between 11 and 20;
- 10% (n=5) had between 21 and 30;
- 4% (n=2) had between 31 and 40;
- 2% (n=1) had between 41 and 50;
- the 2 institutions that had representations between 61 and 70 dropped from 65 and 66 to only three and six representations respectively on display; and
- Madame Tussauds, London (n=122), represented only 2% of institutions with hominin representations on display.

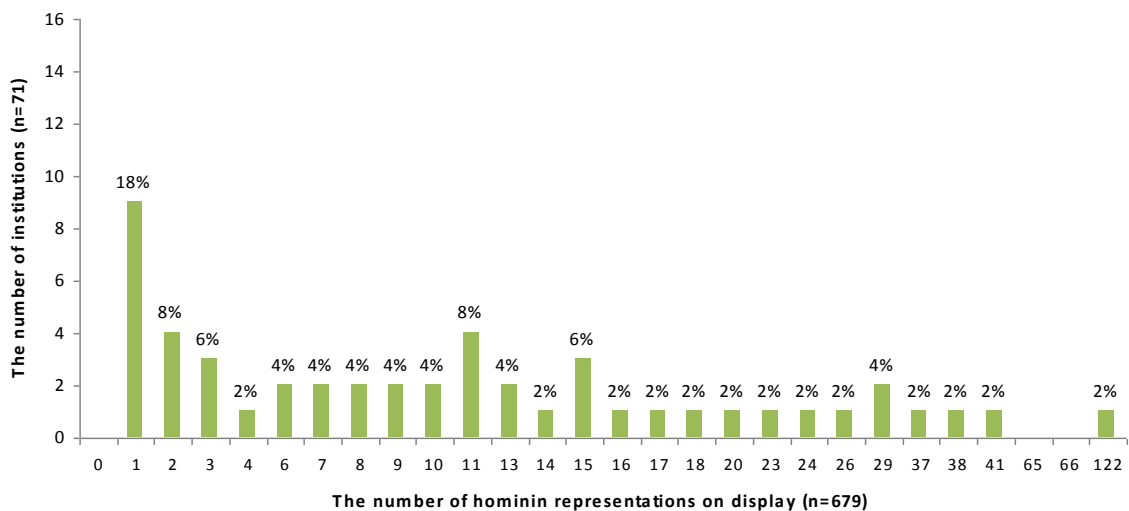
The breakdown of the numbers of representations on display into categories (Figure 3.23) showed that:

- 18% of institutions had only one representation on display;
- 8% of institutions had two representations on display and a further 8% had eleven representations on display;
- three and 15 representations were both found in 6% of the institutions;
- 6–10, 13 and 29 representations were each on display in two institutions;
- while the rest of the number categories, four, 14, 16–18, 20, 23, 24, 26, 37, 38, 41 and 122 were only on display at single institutions; and

- the number categories of 0, 34, 65 and 66 were affected by separating representations into display and storage as these categories were no longer applicable to the display sample.



**FIGURE 3.22** The number of hominin representations that were on display (n=679), shown in deciles per number of institutions visited that had representations on display (n=50) and shown as a percentage of those institutions.



**FIGURE 3.23** The number of hominin representations on display (n= 679) by the number of institutions they were displayed in (n=50), with the number of institutions shown as a percentage

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These museums had large ethnographic collections that consisted of casts and educational sculptures that were part of research collections. Not all museums offered visits to their storage facilities, although, those that did, did give an indication of the numbers of representations that are contained in ethnographic type collections. Also some ethnographic collections were not fully recorded due to the way in which the individual pieces were stored as this limited access.

## INSTITUTIONS

A range of institutions were visited for this research and they consisted of: museums, visitor attractions and associated institutions. The associated institutions consisted of displays in a library and a business, a university research collection, artist's studios and a figure in storage awaiting a purpose built museum. The total number of institutions visited was 71, 82% of these were museums, 10% were visitor attractions and 8% were the associated institutions (Table 3.15):

- 55 of these institutions had representations, the breakdown of which is 45 were museums, five were visitor attractions and five were associated institutions; and
- of these 55 institutions only 43 had representations on display to the public, 86% of which were museums, 10% were visitor attractions and the associated institutions accounted for the remaining 4% of institutions.

Differing numbers of representations were found in the three institution types (Table 3.16):

- of the total number of representations, 77% were found in museums, 20% in visitor attractions and 3% in associated institutions;

- the number of representations in museums dropped from 665 in total to 502 on display;
- the number of representations in visitor attractions remained the same;
- in associated institutions the number was reduced from 22 in total to only 4 on display;
- visitor attractions accounted for only 10% of the institutions visited (Table 3.15) and they had 26% of the representations on display; and
- of the associated institutions, 4% had representations on display but these consisted of only 1% of the displayed representations.

**TABLE 3.15** The three types of institutions visited, the numbers as a percentage and the number of representations found in each type of institutions and shown as a percentage of the total number of representations found.

Institution type	All institutions visited		Number of Institutions with representations		Number of institutions with representations on display	
	(n=)	%	(n=)	%	(n=)	%
Museums	58	82	45	82	43	86
Visitor attractions	7	10	5	9	5	10
Associated institutions	6	8	5	9	2	4
<b>Total</b>	<b>71</b>	<b>100</b>	<b>55</b>	<b>100</b>	<b>50</b>	<b>100</b>

**TABLE 3.16** The three types of institutions visited that had hominin representations on display to the general public, showing the number of each institution type and as a percent along with the number of representations on display per institution type and shown as an overall percentage

Institution type	Total number of representations found (n=)	% of total number of representations found	Representations on display (n=)	% of representations on display
Museum	665	77	502	74
Visitor attraction	173	20	173	26
Associated institution	22	3	4	1
<b>Total</b>	<b>860</b>	<b>100</b>	<b>679</b>	<b>100.0</b>

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Although the institutions were not the focus of this study, some interesting factors were recognized. The museums identified in the literature as having what are termed here as hominin representations, are natural history museums or specialise in ethnology, specific ethnic groups or cultures. However, not all museums of these types have representations. The Ethnology Museum, Lisbon, Portugal, and the Oxford University Museum of Natural History, Oxford did not have hominin representations. The Oxford University Museum of Natural History did have reconstructions of dinosaurs and two-dimensional representations of humans. This study has shown that it cannot be predicted what type of museum or visitor attraction for that matter, will have representations on display.

Museums generally have a large number of artefacts and objects in storage while only having a few selected items on display. This is also true for the hominin representations at those museums that gave access to their storage facilities. The three museums that had largest numbers of representations in storage were:

- the Naturhistorisches Museum, Vienna with 91% of their total number of representations in storage;
- the Australian Museum, Sydney, Australia, with 95% of their total number of representations in storage; and
- the South Australian Museum, Adelaide, Australia, which had 100% of their representations in storage, although, not all of those representations were recorded.

The majority of these representations were ethnographic casts. It would be expected that many of the world's older museums with a history of ethnographic research would have these types of collections.

The display of representations in museums depends on the views of the curators. Some do not like to use them, for example the Victorian Police Museum, Melbourne had several representations on display which had been removed prior

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to the data collection visit and their sample was limited to a standard mannequin, a death mask and three costume dummies.

Staff at the museums, are not always knowledgeable about the number of representations displayed at their museums. The Chinese Museum, Melbourne was approached (by telephone) to determine if they had any representations (this was asked in terms of mannequins, diorama figures or any type of human figure on display). The reply was that the only type that they had was a copy of a Terracotta Warrior. The museum was visited during the Melbourne research trip for curiosity's sake. There were three representations were on display in addition to the Terracotta Warrior, two were standard mannequins from China while the third was a cast of a Chinese man and all three of these representations were in complete context. Other museums will report that they have a particular number of representations and when visited additional ones will be viewed that had been forgotten about or overlooked by staff. This is understandable in larger museums where the staff are only responsible for particular sections of the museum or when representations are placed in a biplane for example and hung from the ceiling. The unique nature of the hominin representation may also account for this. They are not technically artefacts, although they are associated with them. As a presentation technique they are interpretive and the information they contain is often more than intended due to the way we interact as a species to each other. Interestingly, several of the museums were visited due to recommendations of previous visitors who remembered that representations were on display or were in specific exhibitions.

This study differs from many in that museum research is often carried out in relation to specific collections and hominin representations are part of the display not part of the collection. These representations are not necessarily seen as artefacts, museum objects or even as important parts of a display. Although, the facial reconstructions are an exception to this and are seen as objects in their own right, often having entire exhibits or exhibitions built around them.

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The results of this study have shown that size of the museum does not indicate how many representations they will have. In this we can compare national museums, the Louvre, Paris (n=0), the British museum (n=1), Cardiff National Museum, Cardiff (n=2), Australian National Maritime Museum, Sydney, Australia (n=11), Magyar Természettudományi Múzeum, Budapest (n=38), Naturhistorisches Museum, Vienna (n=66) and the Australian Museum, Sydney, Australia (n=65). Smaller specific interest museums were more likely to have representations and so were visitor attractions.

As stated previously this section of the study was not to determine overall numbers of representations in all museums, nor is it necessarily representative of numbers in particular countries. The representations were looked at numerically as a way to compare them to each other and across the institutions.

## ADDITIONAL OBSERVATIONS

### Representation Types

Several different types of three-dimensional, life-sized hominin representations were found during the institution visits. These were identified using two qualities, the intended use of the representation and by the head type based on the method of manufacture. These representation types were; facial reconstructions, facial reconstructions on a body, casts, educational sculptures, museum mannequins, standard mannequins, portrait figures, medical models, costume dummies and a miscellaneous group which contained art models and representations that were cobbled together from various materials and parts of other representation types. These categories were problematic for several reasons. The representations labelled as costume dummies and medical models did not necessarily have a head so identification was made solely by the intention of the representation. Background information was not available for all the

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representations viewed and photographed, this meant that some characteristics for the categories were based on visually defined clues. An example of this is the standard mannequin type with the stylised body and face shape and the body positioning or stance of the mannequin.

### *Facial reconstructions*

In this sample of 860, 22.5% of the representations consisted of facial reconstructions, 10.8% of which were on a full body.

## IDENTIFIABLE MANUFACTURING METHODS

Facial reconstructions differed from the other representation types in that an explanation of how they were made was generally associated with the representation in some way, such as a film, a series of photographs (a photoboard) or écorché heads showing the method of manufacture (see Figure 3.3a). This information gives the visitor the impression that this representation form is considered to be scientific. The labelling of the facial reconstruction may also state that the methods used to make the face were scientific as with Asru at the Manchester Museum, Manchester. The resultant face is considered to be a portrait of the individual in question. As these are the only hominin representations that have this associated information it can be inferred that of all the representation types found in museums, facial reconstructions are considered to be the most scientific.

This does, however, depend on what the curators think of reconstructions as well. Many curators like facial reconstructions as they are a popular exhibit which will bring visitors to the museums. There are also instances where particular facial reconstructions were made for television shows and documentaries and were then donated to a museum (Spitalfields Woman at the Museum of London, London) or bought by a museum (Ötzi at the Naturhistorisches Museum, Vienna). One curator at the National Antiquities Museum at Lieden, Netherlands, did not like



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to use facial reconstructions as he did not consider them to be scientific, although, there were two on display within that museum.

The forensic use of facial reconstructions gives additional legitimacy to these archaeological facial reconstructions which is reinforced with the use of *écorché* faces illustrating the anatomical basis of the reconstruction method. These factors give the visitor the impression that these reconstructions are accurate and true likenesses. This suggestion that they are a portrait of the individual seems to be taken as a fact by many rather than a just a possibility. There is rarely any indication that facial reconstructions are not accurate portraits and that there are many features that can not be scientifically determined from the skull. With historical facial reconstructions there is the possibility that portraits of the individuals in question exist and can be used for comparison purposes. At the 'Secrets, Fates, Mummies: Stories from the Dominicans' Crypt of Vác' at the Magyar Természettudományi Múzeum, Budapest, Hungary, a portrait of Antal Simon is displayed so that the visitor can compare it to his facial reconstruction. At the British museum the facial reconstruction of the Etruscan woman Seianti is placed near the sculpture on her sarcophagus allowing the visitor to compare their faces. The original facial reconstruction of Seianti was also viewed as it was in storage at the Manchester Museum, Manchester, England. The one at the British museum is the result of a revised determination of age at death (Figure 3.24). The use of the term reconstruction also gives the impression that these faces are actual reconstructions of what the individual looked like.

## FINISHING TECHNIQUES

A variety of finishing techniques were present in the facial reconstructions. One of the finishing techniques is to indicate the lack of information known about the individual. This is done by making the finished product in a plain colour, such as white, terracotta or bronze (Figure 3.25). This is supposed to indicate that the skin, eye and hair colour of the individual is unknown. However, some museum



**FIGURE 3.24** In some cases comparisons can be made between facial reconstructions and portraits of the individual, here are two different versions of Seianti's face to compare with her sarcophagus and another sarcophagus from the same culture. (a) the facial reconstruction of Seianti that is on display in the British Museum, London. This is the second facial reconstruction done as the age of Seianti at her death changed due to new information (b) is the sculpted face of Seianti on her sarcophagus that is on display near her facial reconstruction, in the British Museum, London (c) is a facial reconstruction of Seianti as an old woman that is in storage at the Manchester Museum, Manchester; and (d) for comparison purposes the sculpted face on another Etruscan sarcophagus which is on display at the Leiden Museum, Leiden. This shows that while there are cultural similarities, there are differences in the two faces on the sarcophagi.



**FIGURE 3.25** Three examples of the plain finishes found in facial reconstructions: (a) a white Antal Fischer, Magyar Természettudományi Múzeum, Budapest; (b) a terracotta Shepperton Woman, Museum of London, London; and (c) and a bronze Asru at the Manchester Museum, Manchester.

visitors were heard to say that the person had very odd coloured skin. This comment shows that inferred information is not always understood by the visitor. These do not appear to be common finishing techniques amongst the other representation types as a more realistic type finish seems to be preferred. The facial reconstructions on full bodies were rarely (2%) found to have the basic type of finish, it is more common for them to have a more realistic finish and the more recently manufactured ones are of the superrealistic type (Chapter 2 Page 13).

Facial reconstructions are also in a range of media and may be in wax, plaster, silicon or resin. Wax, while giving a life-like and realistic finish that allows individual hairs to be inserted into the head, is not necessarily a good medium as it melts in high temperatures (Figure 3.26). Janus normally on display at the Universiteitsmuseum, Groningen, Netherlands, had been removed and placed in storage to prevent him from melting due to the high summer temperatures being experienced during the 2006 visit as the museum did not have air-conditioning. At the Geology Museum in Lisbon, Portugal, the facial reconstruction was



**FIGURE 3.26** Two examples of wax facial reconstructions. While giving a life-like appearance they are affected by high temperatures. (a) is the exhibition space of Janus with a notice explaining his removal from the gallery at the Universiteitsmuseum, Groningen, Netherlands; (b) Janus removed from storage for photographs; (c) the facial reconstruction of a Mesolithic man on display at the Geology Museum in Lisbon, Portugal; and (d) a close-up of the individual's face showing how the wax is melting due to the ambient heat in the museum.

melting due to the high temperatures experienced in the gallery it was being displayed in. The wax faces also tend to age (J. Prag 2006: pers. comm.).

While most of the facial reconstructions were either busts or on full bodies, there were some that were only heads with no neck at all. These looked quite odd and

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two of them were suspended from the back of their display case and were quite disturbing. The addition of a neck gives the head anatomical context and is more familiar to the viewer as they are similar to the busts and sculpted heads that are commonly seen in art galleries and museums.

## FACIAL RECONSTRUCTIONS OF SPECIFIC INDIVIDUALS

With this representation type, the artist is often known and additional information on the facial reconstruction may be available in books, journal articles, documentaries and even on artist's websites. The intention of these representation types is to show what a specific individual looked like, so they are often associated in museum displays with skeletal or mummified remains. Archaeological and historical information is more common with this representation type and a story about the individual may be created from the known or inferred information. Because of this, the reconstruction may be 'named' in the sense that the actual name of the individual was known or that they have been given a nickname, a few examples of these are:

- Ferenc Wurth, Antal Simon and Antal Fischer at the Magyar Természettudományi Múzeum, Budapest (actual names);
- Yde Girl Drents Museum, Assen, Netherlands (nickname);
- Trintje (nickname) and Sensaos–Sensaos (actual name), National Antiquities Museum, Leiden, Netherlands;
- Camilla at the Colchester Castle Museum, Colchester, England (nickname);
- Seianti at the British Museum, London (actual name);
- Asru at the Manchester Museum, Manchester, England (actual name);
- Marcus van Eindhoven, Eindhoven, Netherlands (nickname); and
- Harry at the Museum of Tropical Queensland, Townsville, Australia (nickname).

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Those with actual names are from named burials, for example Sensaos–Sensaos and Asru were Egyptian mummies, Seianti was interred in an Etruscan sarcophagus while Ferenc Wurth, Antal Simon and Antal Fischer were from Christian burials. These last examples along with the other mummies in their exhibit were also the only Christian mummies viewed in any of the museums. The mummification process was unintended and came about due to the wood chips placed in their coffins.

The naming of full bodied reconstructions is less prevalent, but that may be because the majority of them are of other hominin species and do not have those historical links. The naming of facial reconstructions evokes emotions and cognitive preconceptions. These allow us to fill in the blanks as it were and personalise the representation. It makes them seem more familiar to us and allows us to empathize with them. This may explain why they are such popular exhibits.

## FAMOUS FACIAL RECONSTRUCTIONS

Some representations are famous in their own right, well-known and loved by their public. A full-body reconstruction nicknamed ‘Marcus van Eindhoven’ is so well known in his home town of Eindhoven in the Netherlands, that even when placed in the town’s square he is recognised by name by members of the public (Figure 3.27). He has appeared in the local paper, has had books written about him and been exhibited in both local and national museum exhibits (Arts 2003).

Yde Girl, a facial reconstruction of a Dutch bog body generally on display at the Drents Museum, Assen, the Netherlands, is also famous. She is the star of a movie, several children’s books, pop songs and a radio play (van der Sanden 2005). She has also toured around the world as a part of the ‘Bog Bodies’ travelling exhibit (Bergen *et al.* 2002). Yde Girl is popular with her public and has brought 5000–6000 more visitors to the museum due to her display. This popularity meant that while she was touring with the ‘Bog Bodies’ exhibition a



**FIGURE 3.27** The full bodied facial reconstruction of Marcus van Eindhoven in the Eindhoven town square, Netherlands, was recognised by name when placed in this unexpected context.

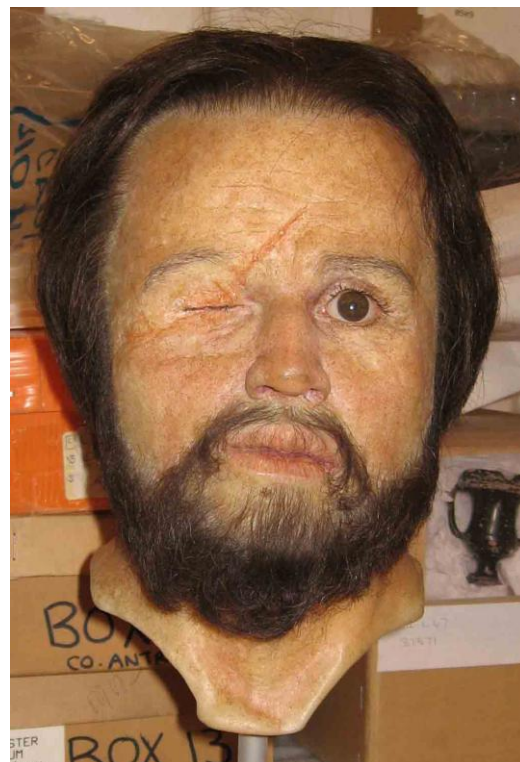
new facial reconstruction of her was put on display at the Drents Museum. This second reconstruction differs from the first as the colouring and hairstyle differs slightly<sup>4</sup>. Others representations are remembered by museum visitors long after other memories of the museum visit have faded. Several of the facial reconstructions were remembered by other museum staff and they suggested that they also be included in this study, for example, Janus at the Universiteitsmuseum, Groningen and the ‘Secrets, Fates, Mummies; Stories from the Dominicans’ Crypt of Vác’ temporary exhibition at the Magyar Természettudományi Múzeum, Budapest (the facial reconstructions of Ferenc Wurth, Antal Simon and Antal Fischer).

<sup>4</sup> A photograph of the original Yde Girl is in the book ‘Making Faces’ by Richard Neave and John Prag (1997) see plate XII and Chapter 8 of that book for more information about her.

There were also examples of facial reconstructions being used as advertising for specific displays. The Archaeology Museum in Frankfurt was visited as the advertising of their touring exhibition of Ötzi prominently displayed the facial reconstruction of Ötzi. The advertising of the exhibition at Leira Castle Museum, Leira also showed the representations of a Neandertal and Australopithicine featured in the exhibition. Other examples of advertising were items available in some of the museum's shops such as postcards of 'Herr N' at the Neanderthal Museum, Mettmann and magnets of 'Yde Girl' at the Drents Museum, Assen.

## TEAM EFFORT

Because of the archaeological, historical and occasionally forensic information <sup>5</sup> that is often associated with this representation type, the creation of the face may be due to a team of scientists, researchers and artists. The face of 'Philip' is due to a range of people that were involved in the research behind the making of his face (Figure 3.28). In this particular case, the injuries to the skeletal remains and the associated historical references meant that the team involved consisted of such people as geneticists, archery specialists, makeup artists, historians, anatomists, surgeons as well as the facial reconstruction artist Richard Neave (J. Prag 2006: pers. comm.). The skeletal remains were identified as belonging to King Phillip II of Macedon the father of Alexander the Great (Prag 1990; Prag and Neave 1997).



**FIGURE 3.28** Due to the unique skeletal features, a team of scientists and artists were needed in order to create the wax facial reconstruction of King Philip II of Macedon in storage at the Manchester Museum, Manchester

<sup>5</sup> Forensic facial reconstruction is also more accurately known as facial approximation.



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## DISPLAY DECISIONS

The facial reconstructions on the whole have open eyes, although, in this sample there are six that have both eyes closed and one that has one eye closed. The six with closed eyes are:

- ‘Mrs Getty’ at the Corinium Museum, Cirencester, England (Figure 3.29a);
- ‘Trinjte’ at the National Antiquities Museum, Leiden, Netherlands (Figure 3.29b and c);
- ‘Harry’ at the Museum of Tropical Queensland, Townsville, Australia (Figure 3.29d);
- an animatronic Viking on the toilet at the Jorvik Viking Centre, York, England (Figure 3.29f); and
- two Neandertals in a travelling exhibit on display at the Drents Museum, Assen, Netherlands (Figure 3.29g and h).

Mrs Getty is positioned in her coffin, mimicking the position that her remains were in when uncovered by archaeologists. Her face lacks realism<sup>6</sup>, this however, could be due to changes that were made to the representation in order for her to be placed on display. The artist (Caroline Wilkinson) made the head to be displayed upright with open eyes and adjustments were made to the head (i.e., eye were closed) to give the appearance of death. These adjustments were not made by the original artist. As there are gravitational differences between a vertical face and a horizontal face, with the movement of the soft tissues these adjustments could account for the lack of realism in Mrs Getty’s face. Trinjte is also shown as she had been positioned in her grave; her more realistic look is attributed to the artist’s intention in displaying her in this way. Harry also has closed eyes and the final monochromatic product gives the impression of a death mask. Whereas, the animatronic Viking with his eyes closed is in the process of

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<sup>6</sup> Realism is used in this sense to convey that the representation did not look like an actual person within the display.

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emptying his bowels, his movements and surroundings in conjunction with the accompanying smells and sounds all reinforce his pain (Video 3.1 also Figure 3.29e). The two Neandertals were part of a travelling exhibition that was on display at the Drents Museum, Assen, Netherlands in 2006. One Neandertal was portrayed as being deceased and had been placed in a box-like section displayed in the floor of the exhibit. Her section of the exhibition was complete with mourners and flowers surrounding her in her 'grave'. The second Neandertal, also part of the same exhibit also appeared to be dead and had a Shaman-like figure standing over her. The facial reconstruction that has one eye closed is that of 'Phillip of Macedon'<sup>7</sup> previously discussed on the previous page and seen in Figure 3.28. His eye is closed due to the healed wound that was discernable from his skull (see Musgrave *et al.* 1984; Prag 1990; Prag and Neave 1997)<sup>8</sup>.

The only animatronic human representations were of the Vikings at the Jorvik Viking Centre in York, England. These consisted of four males and one female; an example of which was the Viking with the closed eyes given in the previous paragraph (see also Figure 3.29e and Video 3.1).

While the majority of facial reconstructions were behind a barrier of some form, this did not prevent some people from getting their photographs taken with the representations. Herr N, a full-body facial reconstruction of a Neandertal at the Neanderthal Museum, Mettmann, Germany, was a popular exhibit for people to have their photograph taken with even though he was surrounded by rocks (Figure 3.30). At the Hessisches Landes-Museum, Darmstadt, Germany, the museum has provided a sign that was a montage of all the facial reconstructions in their evolution display. This sign is designed and placed in such a way that it invites people to have their photographs taken (Figure 3.31). These were not the only representations that people had their photographs taken with and this will

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<sup>7</sup> Note that this face of 'Philip' is the second version as additional historical information was found after the initial facial reconstruction was completed, see Prag (1990) for more details.

<sup>8</sup> For more information see Lascaratos and colleagues (2004) for an alternative interpretation and Riginos (1994) for discussion on the historical texts that refer to Philip II and his wound.

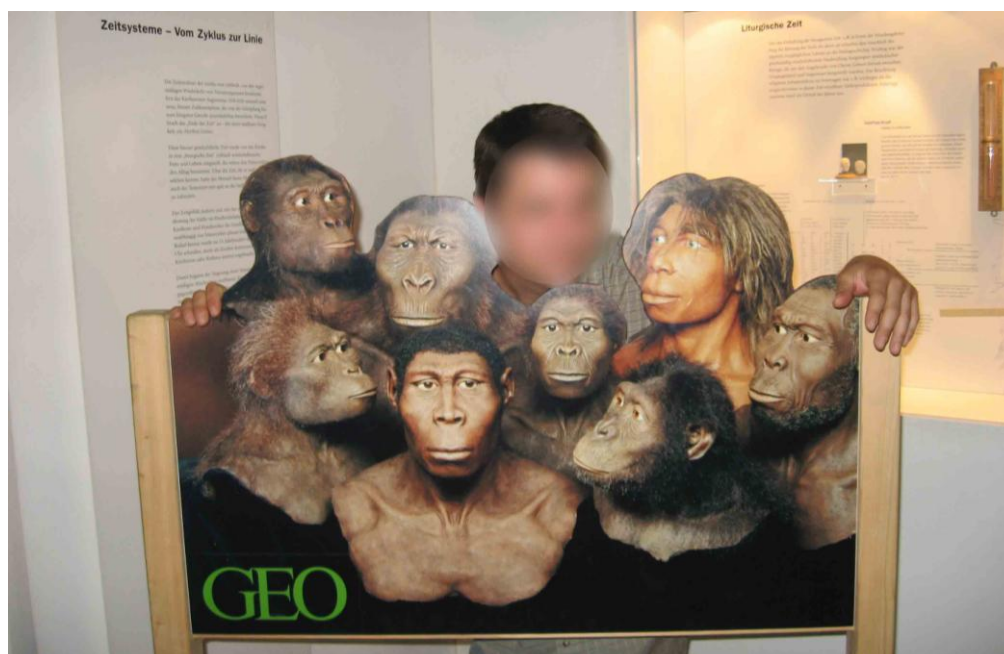
be discussed in the other representation types where relevant as museum mannequins and portrait figures were also popular for this behaviour.



**FIGURE 3.29** Facial reconstructions with their eyes closed are rare. The six examples observed in this study were: (a) Mrs Getty on display in a reconstruction of her wooden coffin at the Corinium Museum, Cirencester, England; (b) a close-up of Trintje at the National Antiquities Museum, Leiden, Netherlands; (c) Trintje in her display context; (d) Harry and a cast of his skull in his display context at the Museum of Tropical Queensland, Townsville, Australia; (e) a video still of a Viking on the toilet at Jorvik Viking Centre, York, England; and (f) and (g) are Neandertals from a travelling exhibit on display at the Drents Museum, Assen, Netherlands.



**FIGURE 3.30** Hominin representations are popular and offer a unique photographic opportunity. While not all facial reconstructions were placed in such a way that photographs with them were possible, children at the Neanderthal Museum at Mettmann, Germany, still found a way of being photographed in front of Herr N that was on display in 2006. Faces of the visitors have been obscured to ensure anonymity.



**FIGURE 3.31** Another example of having a photograph taken with hominin representations, in this case it is a type of family photograph as the man is posing with a montage of the facial reconstructions that were on display at the Hessisches Landes-Museum, Darmstadt, Germany. The face of the visitor has been obscured to ensure anonymity.

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Asru was a popular facial reconstruction with primary school children. A school group was observed in Asru's exhibit during the research visit in 2006. Asru had been positioned at child height and was made of a medium that would stand up to being touched by visitors. These details meant that interaction was allowed between her facial reconstruction and the children who viewed her. This interaction occurred with school children talking to her and they were also observed feeling her face, touching her eyes and even putting their fingers up her nose.

### *Casts*

Casts made up 18.6% of the sample and some examples of this representation type were easier to identify than others. These were the ones that had their eyes closed such as the death masks and the ethnographic mask collections. This is due to the manufacturing process as the only time that the eyes can be open during casting is after the subject has died. These may also be identified on the accompanying labels such as the label at the display in the Victorian State Library, Melbourne, Australia, in 2008 stating "Death mask of Ned Kelly c. 1880". Another example of a cast displayed with closed eyes was a Chinese immigrant at the Chinese Museum in Melbourne, Australia. He was on display in a complete context which was disconcerting as he was standing next to ship and the narrated audio gave the impression of him speaking, yet his eyes were closed (Figure 3.4d on page 54). The face of this representation was cast from man who was the narrator of the audio soundtrack. Although, the face was a cast it had been attached to a standard mannequin that originally had European facial features as they were unable to get a Chinese mannequin at the time (M. Wang 2010: pers. comm.).

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## WHEN DOES A CAST BECOME A SCULPTURE AND A SCULPTURE, A CAST?

As it is not always appropriate for the eyes to be closed, sculpting the eye area is required to make the eyes appear open and naturalistic. This can give the eyes an odd appearance as the final product is dependent upon the caster's skill in adjusting these types of details. So some casts may have a reasonable amount of sculpting done to them and it is when these changes impact on the final product that they are then considered to be sculptures rather than casts. This is however, is subject to distinction as to when a cast becomes a sculpture and a sculpture is more of a cast. Using the term cast, does give the impression that the representation is a copy of an actual person rather than an artist's impression of what that person looked like. One example is that of the Bushman on display at the Haus Der Natur in Salzburg, Austria (Figure 3.32 also 3.4e on Page 65). The Bushman is in an odd stance which is not a natural position or body stance. The eye area also has an odd appearance which may be due to firstly the sculpting required to make the eyes open and secondly the anatomical differences between Bushman and European eyelids. The upper eyelids of the Bushman should have epicanthic folds.

## EVIDENCE OF HUMAN VARIATION

It would be of interest to look at the poses of the casts and other representation types to determine if some representation types are in naturalistic stances more often than the other representations. This might also mean that casts are less likely to have facial expressions as these would be more difficult to maintain during the casting process. However, casts may be more likely to have individual features or flaws such as moles, warts or scars than other representation types. As these casts are essentially copies of actual people it would be expected that they would show more human variation than any of the other representations

types. The literature also indicates that they would be of a range of ethnic groups, also contributing to the range of human variation. All of these points can be looked at in later chapters.



**FIGURE 3.32** The cast of a Bushman on display at the Haus Der Natur, Salzburg, Austria: (a) the Bushman in his display context; and (b) a close-up of his face. Note the unnatural stance and the lack of epicanthic folds on the eyelids.

## NAMING OF INDIVIDUALS

Facial reconstructions are not the only representation type that has named individuals. Some of the casts are of 'named' or identifiable individuals, this is standard practice for death masks as the perceived value is in who the cast is of, rather than it being simply a human representation or a general example of a person. This is also true for portrait figures as the representation is identifiable as a specific person and is expected to be a portrait of the individual or a copy of them at a fixed moment in time i.e., immediately after their death in the case of death masks. With these types of representations it is not expected that the makers will add additional information or change the information. For example,

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the skin colour will not be darkened or lightened, the hair colour will not be changed, the eye colour will remain the correct colour. In other words you do not go to Madame Tussauds to see an African–American Angelina Jolie or an Asian Brad Pitt.

The naming of individuals such as those in the cast or portrait figure type has different connotations to the naming of facial reconstructions. The naming of these other representation types is conferring a perceived importance onto the representation due to value of that individual's name. The name then becomes more of a product and the more famous the individual the higher the perceived value of the name. Whereas, with the facial reconstructions, the name is used to create empathy between the representation and the viewer, while the value is in the representation rather than the name.

The casts, while of specific individuals are essentially able to be separated into 'named' individuals (the death masks or ethnographic casts) or examples of specific types such as a people or a culture. The literature indicates that when these casts are of a reasonable age, external changes may have been made to them especially in skin colour, hair styles, clothing as well as context. Casts may be older than a lot of other representation types and the changes made to them may be due to changes in their display or during their repair.

### *Educational sculptures*

There is a difference between art and science educational sculptures and that is the message that is conveyed by the piece and the intention behind its manufacture. Educational sculptures make up 12% of this sample. Art sculptures such as Roman or Greek sculptures are generally carved out of stone or wood or are cast in bronze. They are not always life–sized and the anatomical proportions may also be inaccurate or unrealistic. The subject of art sculptures may also have a mythological basis. The more modern realistic or superrealistic



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sculptures may be life-sized and may reflect a moment in that person's life such as the example previously shown in Figure 3.5a. These are memorable to people and the example of Duane Hanson's work from the Art Gallery of South Australia (Page 67) was recommended to the author by several people.

## SCULPTURES OR CASTS?

Some educational sculptures also have similarities to casts, as the manufacturing process may involve casting part of or all of an individual to create the basis of the sculpture. They do differ from casts, in that they are generally labelled as sculptures or the name of the sculptor is supplied to the visitor. This differentiates them from the more anonymous casts that are not labelled in this manner. This labelling process does in one sense treat the educational sculpture as an art form by identifying them as sculptures or giving recognition to the artist thereby giving a false preconception about the representation, causing it to be viewed in a biased manner.

This overlap between sculptures and casts raises an issue of accuracy, that is, are casts (as a copy of an actual person) a more factual or accurate a portrayal/representation of a human than a sculpture? Conversely are the sculptures that use the casting of a person as a basis of the sculpture more visually factual than sculptures that do not? How do casts and sculptures then compare with the more 'scientific' facial reconstructions? Are we in fact able to determine how 'accurate' or how lifelike these representations are? How accurate does a human body need to be to be identifiable as human? These questions have implications when we consider the other taxa that are found in museums. If we consider the human representations to be factual then we also consider the other hominin representations to be just as factual and anatomically correct.

Educational sculptures can be popular with museum visitors. The Everybody Family at the Melbourne Museum, Melbourne, Australia, are an example of how

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popular educational sculptures can be. They were originally on display at the Melbourne Children's Museum, Melbourne, Australia, (1985 to 1997) which has since closed down. Due to popular demand they were then exhibited at the Melbourne Museum. When on display at the Children's Museum, visitors often took photos of their family standing or sitting next to someone in the Everybody Family and they still try to do this with the present display. The problem that the museum has, is that the gallery which houses the Everybody Family is restricted and photographs are not allowed due to the sensitive nature of the background photographic display. The background seen in the photographs of the Everybody Family have been blurred and are the only photographs in this study that have had changes made to them other than cropping or blurring the faces of visitors to ensure anonymity. The Everybody Family is a series of sculptures showing a family, although it is not as inclusive as the name suggests as they are all of European origin. The series consists of an adult female in a wheelchair, a pregnant woman, children of different ages, a father and grandparents, all of which are nude. The sculptor of the 'Family' is well known and also has works in the National Gallery of Victoria, Australia.

### *Museum Mannequins*

Museum mannequins are available commercially rather than from a specific artist and represent 11% of the sample. These representations are generally made to a specific order; a specific posture or position, such as the 'victim' at the Queensland Police Museum, Brisbane, Australia, or a specific 'type' like the Saxons at the Dover Museum, Dover, England (Figure 3.33). These often show that the visitors have interacted with them in some way. At the Colchester Castle Museum, Colchester, England, they have a man in the stocks on display. He shows an area of worn patina (or paint) on his nose where people have touched it. The Bronze Age Hut at the Dover Museum, Dover, England, has three museum mannequins within it, a family consisting of a man, a woman and a child. The woman is kneeling down simulating grinding seeds and her hair

continually needs to be adjusted due to visitors touching it. The child is positioned asleep on the floor of the hut and was not always noticed. Visitors were seen to touch the mannequins cheeks and hair, wave their hands in front of their faces (to attract their attention or to see if they are real?) and to talk to them. The other museum mannequin that has closed eyes is at the Queensland Police Museum, Brisbane, Australia. This mannequin is in a murder scene exhibit and is the murder victim.



**FIGURE 3.33** An example of the specific poses which may be required of museum mannequins: (a) is a victim in a crime scene exhibit at the Queensland Police Museum, Brisbane, Australia; and (b) is of a Saxon warrior positioned to fit within a particular display space, making use of the barrier around the exhibit.

## MOUNTED MUSEUM MANNEQUINS

There were three museum mannequins that were seated on horses, in sculptural terms these are called equestrian statues. These were the only representation type to be combined with horses in the entire sample. One was a mounted Roman soldier at the Corinium Museum, Cirencester, England, and the other two

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were at the Waltzing Matilda Centre, Winton, Queensland (Australia): one of which was a Light Horse soldier<sup>9</sup>, while the other was a Squatter<sup>10</sup> from the song 'Waltzing Matilda' (Figure 3.34). Both soldiers are quite realistic while the Squatter is more anonymous, this difference is due to the different types of detail added to the representations.

## TALKING FACES

One museum mannequin at the Australian Stockman's Hall of Fame and Outback Heritage Centre, Longreach, Queensland (Australia), had a video of an actor's face projected onto the mannequin's face (Video 3.2 and Figure 3.35). When the video is not working the mannequin's face is featureless. The projected face onto the blank mannequin's face, gives the impression is that the mannequin is talking to the visitors.

## DIFFERENT PERCEPTIONS

Different people perceive hominin representations in different ways. This was illustrated with an Iron Age Warrior on display at the Dover Museum in Dover, England (Figure 3.36). There was a little girl, a toddler, who saw the Iron Age Warrior and the Roman and was initially too scared to enter the gallery that they were in. It took her father some time to coax her into the gallery. When she made it into the gallery she walked around it and kept coming back to these two figures and pointing at them, especially the Iron Age Warrior and saying a lot in baby talk, still showing some agitation. As she walked around the gallery with her father she kept an eye on them as if she thought they would come and get her. She was not as threatened by the other figures in the same gallery. Her reaction

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<sup>9</sup> The Australian Light Horse Regiments fought in both the Boer War and World War One and are well known in Australia for their bravery in battle.

<sup>10</sup> A Squatter in Australia at the time of the song 'Waltzing Matilda' meant a prosperous landowner.

shows that age and prior knowledge play a part in how we perceive the representations.



**FIGURE 3.34** The Equestrian Museum Mannequins in this sample: (a) the Squatter from the Waltzing Matilda Song at the Waltzing Matilda Centre, Winton, Queensland (Australia); (b) a mounted Roman Soldier at the Corinium Museum, Cirencester, England; and (c) a Light Horseman at the Waltzing Matilda Centre, Winton, Queensland (Australia).



FIGURE 3.35 A video still of the Stockman from the Australian Stockman's Hall of Fame and Outback Heritage Centre, Longreach, Queensland (Australia), showing the face of an actor projected onto the museum mannequin's face.

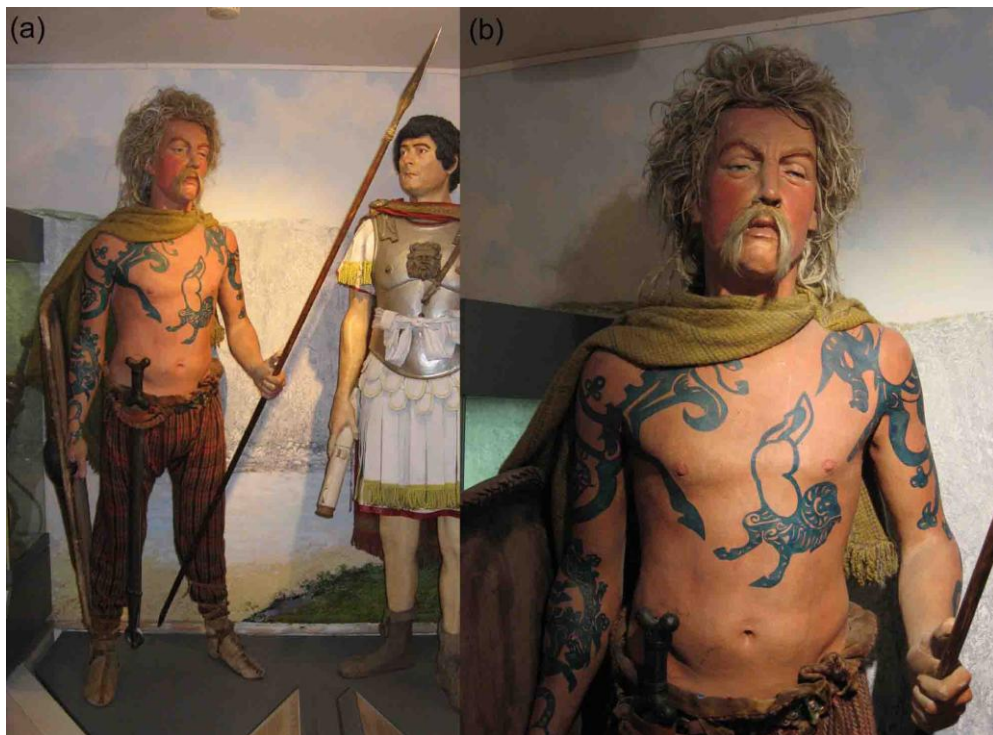


FIGURE 3.36 An Iron Age Warrior at the Dover Museum, Dover, England, which scared a little girl entering the gallery. Her perception of him was that he was real and a threat.

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The more knowledge that we have the easier it is for us to understand that these representations are just that. However, it does not stop us from perceiving representations as real if they are seen in a quick glance or with peripheral vision. An example of this is turning quickly and bumping into a mannequin in a store and apologising to it before realising that it is a mannequin and not another person. This is known as the phenomenon of displacement (Brooks and Kemp 2007). Essentially the brain fills in details that are not there.

### *Standard Mannequins*

Standard mannequins accounted for 10% of the sample. Three of these mannequins were actually used commercially as shop mannequins rather than in a museum display. They were in the shop section of the Victorian Police Museum. These were the only representations that were viewed in any of the museum shops. This meant that standard mannequins were actually being used in the way in which they were originally intended. These have been included in the sample but will be excluded from further study as they were not on display within a museum setting but rather in a shop setting in order to sell a product.

## IDEALISED BODY SHAPE

Standard mannequins tend to look longer and leaner than the 'average' person. This is commonly noted by curators as when the mannequins are used to exhibit clothes it is often hard to make the clothes/costumes fit (L. Jones 2009: pers. comm.; K. Palmer 2009: pers. comm.). This is because the clothes were made for actual people who exhibit a range of human variation in size and shape rather than the elongated shape favoured by fashion designers. An example of this difference between reality and standardised mannequins comes from the Melbourne Museum. Curators had difficulty in organising standard mannequins to fit particular clothes that had been chosen for display in a new exhibition.

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Three adult male costumes from different eras were selected to be displayed, however, due to the sizing of the clothes only one adult male mannequin was able to be used. The other mannequins of appropriate sizes were ones that equate today, to boys who are 10 and 12 years of age. This meant that the costumes fitted in some places such as the hips but not in others (e.g., the shoulders). The height of the mannequins was also an issue in relation to the length of the clothes. An anonymous look to the mannequins was preferred so the standard heads/faces were replaced with head blanks<sup>11</sup>. As these mannequins were to be used to represent adult males, the messages transmitted to the visitor via ill-fitting clothes and a lack of height in the mannequins may not be what was intended by the museum. The overall look of these standard mannequins is often at odds with the clothes that they are wearing or displaying, particularly if the mannequin is from an era different from that of the clothes.

### CONFLICTING STYLES AND POSES

Standard mannequins often reflect fashionable poses, makeup and hairstyles from their year of manufacture and these do not blend well into other eras and fashions. During the 1980s a particular pose where one shoulder was positioned higher than the other was common for fashion models and mannequins. At the Australian Tennis Museum in Sydney, there are two mannequins in this particular pose displaying tennis outfits from 1910 and 1885 (Figure 3.37). This pose as well as the makeup on the mannequins, conflicts with the outfits they are wearing. Makeup, for example, from the turn of the twentieth century was used to augment a woman's natural beauty and therefore should not have been noticeable (Corson 1975) which differs from the visual impression left by the mannequins in this example. As these types of mannequins are often posed to show garments to advantage, when they are placed in other positions they can look awkward (Figure 3.38). One mannequin from the Museon, Den Haag, in the

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<sup>11</sup> A blank is the term for a faceless head, these may also be known as football heads (Mei+Picchi 2010).



Netherlands, is lounging on a Roman couch with limbs in unrealistic positions. At the Cairns Museum, Cairns, they have a mannequin posing as a ‘Kanaka’<sup>12</sup>. She has no feet but is positioned at adult height and her hands are in odd positions.

The feet of mannequins are also difficult to put actual shoes on them due to their size or shape. Shoes may be painted on or placed beside the mannequin if they are unable to be fitted. In many cases the mannequins are not wearing shoes at all. There were two mannequins at the Australian Tennis Museum, mimicking tennis poses that had been acquired from a sporting store, although, they lack the tennis racquets which they are positioned to hold (Figure 3.38i and j). The male had shoes placed between his feet while the female had bare feet.



**FIGURE 3.37** Examples of 1980s mannequins from the Australian Tennis Museum, Sydney used to display tennis outfits from earlier periods: (a) is from 1910 but the pose of the mannequin is typically 1980s; (b) is a close-up of typical 1980s makeup; and (c) is a costume from 1885 with a similar 1980s mannequin. Note the lack of shoes on these mannequins.

<sup>12</sup> South Sea Islanders known as Kanakas were brought to Australia in 1842 as plantation laborers (especially with sugar cane) who suffered appalling conditions (Grattan 1928). Those that were left were repatriated in 1906 due to the ‘White Australia’ policy.



**FIGURE 3.38** Examples of standard mannequins in awkward poses or contextual poses: (a) a Roman woman in the Museon, Den Haag; (b) a policewoman, Cairns Police Display, Cairns; (c) a female Kanuck at the Cairns Museum, Cairns, note she is lacking feet; (d), (e) and (f) Australian servicemen at the Waltzing Matilda Centre, Winton, Queensland (Australia); and (g), (h), (i), and (j) showing various standard mannequins at the Australian Tennis Museum, Sydney. The only mannequins in the contextual poses are: (i) the male mannequin on the left in the Davis Cup playing outfit (2003), with the shoes placed between his feet; and (j) the female tennis player also without shoes, both are in tennis poses but lack racquets. In the case of (i) there is a suspended tennis ball in another section of the museum but not above the male mannequin in the playing outfit.

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## POSSIBLE BIAS

The literature suggests that female standard mannequins are more common than males. Initial observation certainly suggests that this may be reflected in this sample and is a point for further consideration. The only standard mannequins that did not have European features were two Chinese mannequins at the Chinese Museum, Melbourne, and a Native Mounted Police Trooper at the Queensland Police Museum, Brisbane (Figure 3.39). The Chinese mannequins were standard Chinese fashion mannequins. The standard mannequin used to illustrate the Kanaka at the Cairns Museum, Cairns, has European features although she is a monotone black in colour.

## MAKE DO MENTALITY

The use of these mannequins, especially in Australia, is often due to them being readily available to the museum as they already have them in storage or they are easily purchased. Some of the smaller museums in Australia use these types of mannequins simply because they have been donated to the museum, thus saving the cost of buying a more suitable representation type. Curators have commented that they would prefer that these mannequins be more anonymous. However, they do not change the appearance of mannequins in order to achieve anonymity, which could be done by painting the mannequin in a plain colour, with textured paint, plaster or even covering the mannequin with material. The Queensland Police Museum mainly uses mannequins that have been donated to the museum, they have, however, replaced the hands of some of the male mannequins. These new hands are in the shape of fists in order to prevent child visitors from breaking off the mannequin's fingers. Another example is a mannequin of a child that was in storage at the Cairns Museum in Cairns, the head and torso were of a girl while the mannequin section below the waist was male. Other adaptations to this representation type are in the form of facial hair which may be painted on or stuck on.



**FIGURE 3.39** Close-ups of the faces of the standard mannequins showing non-European features (a to c) and showing the European features of this standard mannequin which has a totally monotone black finish (d). (a and b) are the two Chinese mannequins on display at the Chinese Museum, Melbourne; (c) is the Native Mounted Police Trooper on display at the Queensland Police Museum, Brisbane; and (d) is close-up of the Kanaka's face.

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## TIME AND VISITORS TAKE A TOLL

Some of these mannequins in use were in a less than ideal state, with broken fingers, visible cracks, paint that had worn off (Figure 3.40). A female mannequin at the Cairns Museum, had evidence of various types of damage (Figure 3.40a and f). Her hands were of a different colour from the rest of her and had been painted over the original hand colour, two fingers on her right hand had been broken off, where the hands joined the wrists was taped over with masking tape and there were various dents, scratches and worn or smudged areas in her make-up and body colour. Several mannequins at the Waltzing Matilda Centre, Winton, Queensland (Australia), had damage or their costumes had been interfered with. The station master had his left hand detached, sitting inside the desk in front of him. A telephonist in another section of the centre was wearing a dress that buttoned up the front and all her buttons were undone. There was also a period-dressed woman that looked as if she had been attacked (Figure 3.40b). Her eye lashes were falling off, her neck was damaged and looked as if it was a bleeding wound. Her wig was badly cut or positioned incorrectly and needed brushing. The corporal in the jumpsuit had had a finger replaced on his left hand (Figure 3.40d and 3.35f). The teacher at the Cairns Museum had damage to the paint on her face which had been worn or chipped off (Figure 3.40c). A mannequin at the Australian Tennis Museum, Sydney, had visible cracks across his 'blank' head, neck and the visible area of his torso as well as his hands (Figure 3.40d also 3.35g). The Chinese Theatre mannequins had no visible damage, they were, however, extremely dusty (Figure 3.39a and b).

## DOLLS

Two dolls were used by the Waltzing Matilda Centre, Winton, Queensland (Australia). One was highly detailed and quite realistic and was displayed in an incubator. This type of doll has been identified as a 'Baby Love' or a 'First Love' c. 1980 which is made of vinyl and smells of baby powder (P. Anderson 2010: pers.



**FIGURE 3.40** Examples of damaged standard mannequins: (a) shows a damaged mannequin at the Cairns Museum, Cairns, note the hands that have been replaced and marks on her body; (b) is a mannequin that appears to have a bleeding neckwound and a damaged wig from the Waltzing Matilda Centre, Winton, Queensland (Australia); (c) has a worn or chipped paint on her face and is on display at the Cairns Museum; (d) cracks in the head and neck of a mannequin at the Australian Tennis Museum, Sydney; (e) the replacement of a finger on the hand of a mannequin from the Waltzing Matilda Centre; and (f) is a close-up of the right hand of the mannequin in (a), showing the missing index and middle fingers, the unfinished painting on the third finger and the tape around the join at the wrist.

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comm.). The other is in a pram and is more stylized. This second doll is a common doll of vinyl/plastic and cloth also c.1980 (P. Anderson 2010:pers. comm.).

### *Portrait Figures*

Portrait figures accounted for 17% of the hominin representations in this sample. Not all of the portrait figures seen at Madame Tussauds in London, were recorded. This was due to camera issues during the visit. This was not deemed to influence the study as the focus is on representations in museums rather than visitor attractions. The recorded sample size from Madame Tussauds indicates that this visitor attraction is unique amongst the institutions visited due to the high number of representations on display. Acquiring photographs from various angles was difficult due to the high number of visitors and their interaction with the portrait figures (Figure 3.41).

There were some portrait figures positioned in such a way that they were perceived to be actual people taking photographs of particular portrait figures (Figure 3.42). This situation was also found at Ripley's Believe It or Not!, Surfers Paradise. Interaction was also common between the visitors and the portrait figures which was encouraged by Madame Tussauds itself with professional photographers set up taking photographs of the visitors with particular portrait figures (Figure 3.41b in particular). Visitors were also seen mimicking the poses of the portrait figures for personal photographs as well as touching them and holding their hands. A male visitor was also seen pretending to be one of the portrait figures in order to scare other visitors which he did successfully.

Several of the portrait figures had closed eyes, these were generally those figures that were victims of the guillotine or were shown to be dead or dying although some had partially open eyes. The only portrait figure that differed was that of 'Sleeping Beauty' who was reclining on a couch, asleep in a different gallery.



**FIGURE 3.41** Examples of visitor interaction with the portrait figures at Madame Tussauds, London: (a) an overview of the number of visitors in one gallery showing visitors posing with Marilyn Monroe in the background and Pierce Bronsnon as James Bond in the foreground, and other visitors taking photographs and milling round the figures; (b) a visitor standing between portait figures of the Windsor Princes while she gets a professional photograph taken; (c) a visitor looking to see what is under Marilyn Monroe's skirt; and (d) visitors posing with the Beatles for a photograph. Visitor's faces have been obscured to ensure anonymity.





**FIGURE 3.42** An example of the realism of the figures: (a) the photographer in the foreground is another of the Madame Tussauds portrait figures. Note how the crowd have left room between the photographer and her subject as they have assumed she is a real person and not one of the exhibits. Visitor's faces have been obscured to ensure anonymity; and (b) a close-up of the photographer's face.

### *Medical Models*

Medical models made up 3% of the sample. The general external appearance of these representations is not always an important part of this representation type. The intention of these models is to illustrate a particular medical or pathological condition or anatomical structure. The majority of these representations tend to be of a specific body area rather than the whole body. Cloth models were also observed at the Musée de l'Homme, Paris, and these were of a baby being born and included a complete baby and non-cephalic body parts of the mother which consisted of the lower abdominal and upper thigh area of the body. Medical models of pregnant women were also observed. One was a full-bodied wax model with her foetus visible due to an incision in her abdomen; this model was also at the Musée de l'Homme. The second, was a gravid uterus at the Hunterian Museum, Glasgow. As both foetuses were shown *in situ* they were not counted as separate representations.

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### *Costume Dummies*

Costume dummies comprised 4% of the sample. This representation type is used to display clothes, the intention being for the focus to be on the displayed clothes rather than the representation itself. This means that the representation is meant to be anonymous and to disappear into the background of the display. For this reason curators prefer this representation type when displaying a costume and they do not want to give extraneous details about the wearer. To assist this anonymity, the costume dummies in this sample lacked a head and were in neutral colours, often calico coloured. They come in a range of materials, and the ones in this sample consisted of wire frame, plastic or cloth covered shapes. Visitors have become attuned to the intention of these representations and it is very easy to overlook them and focus on what they display. This means that costume dummies are a very successful representation type when used for their intended purpose.

It must also be noted that museums that specialised in costumes were not visited such as the Victoria and Albert Museum, London, or the Powerhouse Museum, Sydney. As the focus of these types of museum is on the costumes rather than the wearer it was thought that the representations in them would be regarded by the visitor differently from the museums which focused on different types of exhibitions and had a range of representation types. At the History Trust Gallery in Adelaide, there was a display which featured six costume dummies and one head in a series context (Figure 3.43). Displaying costume dummies in this way ensures that the visitors focus is on the clothes and the individual wearers in this display are introduced through the display labels and associated text panels and photographs.

The addition of a head visually changes how a representation type is perceived. This is noticeable when headless costume dummies are displayed with other representation types that have a head (Figure 3.44). This addition of a head, even that of a head blank, turns the representation into a person rather than a body form.

While the bodies of this representation type may be of a more realistic size than the standard mannequins they can not always accommodate actual human variation (Figure 3.45). This may be observed in ill fitting or oddly hanging clothes or overly long sleeves. This representation type rarely has feet so shoes are placed beneath the representation or have the stand of the representation go through the shoe/boot. This differs from standard mannequins that have feet which may be unsuitable to wear the requisite footwear (see Figure 3.38g, i and j and 3.41). To obtain costume dummies of the correct silhouettes for the requisite periods, the Melbourne Museum, imported two from Japan, although in the example the arms are not long enough for the costume it is wearing (Figure 3.45c).



**FIGURE 3.43** An example of costume dummies on display in a row at the History Trust Gallery, Adelaide, note the text panels and photographs which are used to introduce the wearer of the clothes rather than using realistic figures.



**FIGURE 3.44** There is a visual difference between how we perceive costume dummies and other representation types that have a head. Our focus when looking at costume dummies is on the clothes, however, when we look at the other representations we perceive them as individuals and as such look at their posture and facial expressions and determine their sex all with a glance as this example from the Australian Tennis Museum in Sydney, shows.

### *Miscellaneous Representations*

The miscellaneous representation type was used for the small amount of representations (1.4%) that did not fit into the previously described categories. These representations consisted of life-sized art models or combination representations which were made up of available materials. The life-sized wooden art models were only found at the Museon, Den Haag. These were unisex, able to be positioned and anonymous with their lack of external information. The combination representations were generally made up of body parts from other representation types. These also included the use of hairdresser's heads as well as mannequin heads. One of the representations had a wig base for a head and a stuffed set of overalls for a body. The use of hairdresser's heads was seen at the Cairns Museum, while the representation with the wig base head was at the Waltzing Matilda Centre, both of these museums were in Queensland. The railway worker with the wig base for a head



**FIGURE 3.45** A range of costume dummies used: (a) is an example of a uniform hanging loosely on a small costume dummy, note the lack of legs; (b) shows that the jeans on this example are too long for the height of this costume dummy, both of these examples were at the History Trust Gallery, Adelaide; (c) is another example of the variation in peoples clothes found in the museum, where the sleeves are too long for the arms on this dummy at the Melbourne Museum, Melbourne; (d) and (e) are examples of how boots are able to be incorporated into the outfits worn by costume dummies, (d) is on display at the Justice and Police Museum, Sydney, and (e) was displayed at the Pitt Rivers Museum, Oxford; and (f) this example from the Qantas Founders Outback Museum, Longreach, Queensland (Australia), shows how the shoes of a costume can be placed beneath the costume dummy.

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had hair and was wearing a hat but had no visible hands, feet were implied through the use of boots, although, the legs of his overalls were too long for his legs and almost covered the right boot (Figure 3.12 on Page 77). The wig base essentially functions as a head blank. One representation at the Melbourne Museum was made up of body parts from other representations but was positioned in a biplane which was suspended from the ceiling of the museum foyer. The patchwork nature of his body was not discernable due to the distance between the biplane and the viewer.

## Context Types

Identifying the context types that these various representation types were in, was also not as easily defined as the literature suggested. Many of the context types did not fit into defined presentation technique categories, such as dioramas, life-groups and tableaux. The interchangeable use of terminology in the literature indicated that while these categories had been defined, they were not necessarily confined by those particular definitions nor were those definitions in general use. Many of these context types also showed a range of elements from these defined categories. ‘Presentation’ techniques became ‘Context’ types due to mixture of elements found in many of the exhibits viewed. Looking specifically at the representation and its context within the exhibit or the way that it was displayed, meant that four context types were identified from the sample; complete context, partial context, series and solo displays.

### *Complete Context*

Complete context exhibits are those presentation techniques, which left very little to the viewer’s imagination and include dioramas, life-groups and tableaux. This context type consisted of 18.4% of the sample. The exhibition at Jorvik Viking Centre, York, is an example of a complete context type. It is a Viking

village complete with housing, painted backdrops and scenery as well as audio effects (village sounds, conversations, animals), visual effects (simulated storm lightening, fake fire smoke and animated representations) as well as olfactory effects (cooking and toilet smells) (Video 3.3 and Figure 3.46). Not only is the Jorvik Viking village, the complete experience, it is the same experience for everyone as they travel through the village in the people mover and listen to the accompanying commentary (with a choice of languages and an additional one tailored towards children) (Video 3.4 and Figure 3.47). The only difference in visitors' experiences is the individual knowledge that each visitor already has and how they perceive and understand the experience due to this prior knowledge.



**FIGURE 3.46** This is a still from video 3.2 showing that the Jorvik Viking Centre at York, is the perfect example of a complete context with painted backgrounds, built foregrounds, animated facial reconstructions as well as audio, visual and olfactory effects.



**FIGURE 3.47** A still from Video 3.3, the visitor listens to a recorded commentary in one of several languages, as they travel through the village complex at the Jorvik Viking Centre, York. This figure shows a Pepper's Ghost exhibit in the process of changing.

Audio effects can be a very interesting addition to museum displays. They can also be distracting when they are heard out of context, that is, when the sound is overheard from other exhibits or galleries. An example of this was while viewing Tibetan dioramas at the Haus Der Natur, Salzburg (Video 3.5 and Figure 3.48). Sound effects from other galleries were clearly audible while you walked through the Tibetan display. The sounds of other visitors talking in other galleries were also clearly heard in the Tibetan gallery. These sounds influenced and distracted visitor's during their visit to the Tibetan gallery.

Another interesting example of a complete context type was on display at the Dover Museum in Dover. This exhibit consists of a reconstruction of a Bronze Age Hut that the museum visitor can walk into and 'meet' as well as touch the occupants: a man, woman and child (Figure 3.49). Evidence that the visitors touch the representations is seen in the woman's messy hair which needs to be



continually redone. Interestingly, the sleeping child is generally left alone and is not disturbed. The floor of the Bronze Age Hut differs from that of the rest of the gallery. This difference in flooring actually stops people from entering the hut even though it has been designed so that visitors can walk around it.



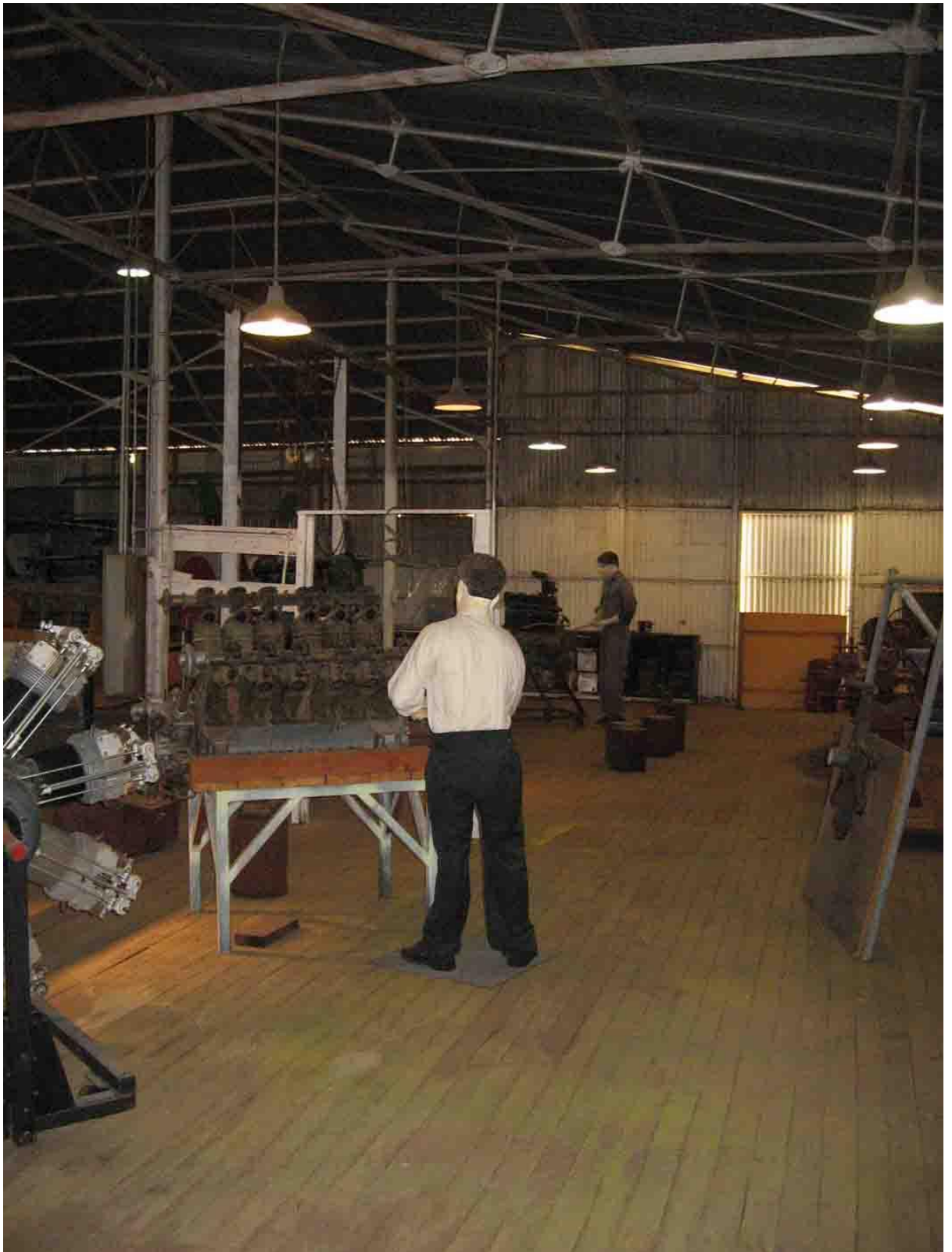
**FIGURE 3.48** A still from the video of the Tibetan dioramas at the Haus Der Natur, Salzburg. While visiting this gallery, sound effects from other galleries and sounds of other visitors echoed through the gallery influencing the visitor's experience.

Some of the complete context displays were in actual buildings rather than a purpose-built display. At the Qantas Founders Outback Museum in Longreach, Queensland (Australia), there were displays showing the workspaces and offices in the old airport hangers (Figure 3.50). By showing the workspaces in this way the visitor experiences the actual working conditions that people had to endure. The Qantas example means that visitors can understand the extreme heat in working in a large tin shed during summer or the strong winds roaring through the hanger's doors.



**FIGURE 3.49** An example of the complete context exhibit of a Bronze Age Hut at the Dover Museum, Dover. This exhibit gives the visitor a chance to work through the hut and get a close look at the exhibit.

This type of contextual display generally has full-bodied representations peopling them. The only complete context displays that differed were at Madame Tussauds in London, which also showed guillotined heads and headless bodies complete with blood (Figure 3.51).



**FIGURE 3.50** A complete context display showing how the old airport hanger in Longreach, was originally used, at the Qantas Outback Founders Museum, Longreach, Queensland (Australia).



FIGURE 3.51 A complete context display at Madame Tussauds, London, with the only examples of representations that were not complete bodies in this type of context.

### *Partial Context*

The partial context displays were those that left some of the contextual information to the viewer's imagination, displaying only specific context. These were the most common form of context type consisting of 26.7% of the sample. The addition of this contextual information meant that the visitor was influenced in some way by the information. For example, if the representation is holding objects such as musical instruments, this implies additional cultural and social information that *could not* be implied by the representation alone. Some of the representations were in a series, but the additional information included in their display meant that they were included in this category. An example of this was a display at the Australian Tennis Museum in Sydney. This display featured several standard mannequins and a costume dummy clothed in tennis outfits and

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national team dress, positioned in front of a picture of a tennis match complete with spectators.

### *Series of Representations*

A series of representations were those that presented a range of representations without the addition of context. This context type made up 20.8% of the sample. Representations presented in this way make it easy for the visitor to compare representations to each other. The hominin representations on display at the Hessisches Landes–Museum, Darmstadt, included mirrors so that the visitor could include themselves in the series. The Everybody Family at the Melbourne Museum, Melbourne, was a series of sculptures depicting a supposedly inclusive family. Although, they are all of European origin, they do show a range of ages (three generations), male and female of each generation as well as a woman in a wheelchair and a pregnant woman, all of which are nude.

## ANONYMOUS REPRESENTATIONS

Anonymity of representations displaying clothes is important to curators, which is generally achieved through the use of costume dummies. The Qantas Founders Outback Museum, Longreach, Queensland (Australia), used a series of standard mannequins (n=8) to achieve a similar result. This was done by using several copies of the same three mannequins to achieve a form of anonymity through repetition, indicating to the viewer that the mannequin itself is not important (Figure 3.52). In addition to this, the hairstyles of the mannequins suit the uniforms they are displaying and the makeup of the faces becomes incidental as the mannequins are essentially placed in a context similar to that of the original intention of a standard mannequin, that of a shop or commercial mannequin.



**FIGURE 3.52** A series of standard mannequins at the Qantas Founders Outback Museum, Longreach, Queensland (Australia), the repetition of the mannequins makes them anonymous making the uniforms the focus of the display.

### *Representations not on Display*

Only some museums gave the option of viewing their storage facilities, however, 21.2% of the sampled representations were in storage or not on public display. At the South Australian Museum storage facility, there were many casts of Indigenous Australians that were not recorded due to the difficulty in accessing them. This meant that only a portion of their stored representations were recorded. The number of ethnographic casts seen at the Australian Museum, Sydney (n=58) and the Naturhistorisches Museum, Vienna, (n=40), as well as the number seen but not recorded at the South Australian Museum indicate that many of the older museums are likely to have large ethnographic collections in storage.

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## SUMMARY DISCUSSION

It must be remembered that the representations on display were the object of this study and not the visited institutions. The aim of this section of the study was to describe what hominin representations were used in museums and to assess them in terms of their context, it was not to determine the frequency of representations world-wide.

### Hominin Representations

The original focus of this study was facial and archaeological hominin reconstructions in museums. After visiting several museums, the range of hominin representations was found to be greater than had been anticipated. This was due to the variety of exhibitions, the differing intentions of these displays and the way in which the representations themselves were used. Due to this variety the study was adapted, in order to describe the variation seen and give a foundation for further assessment of the representations.

The representation types as outlined in this study are subjective as they are dependant upon the information that was available about the representations, visual clues and the implied intention of the representation. This categorisation has, however, highlighted that the criteria required for hominin representations needs to be further defined and a better form of classification needs to be determined that is less subjective.

Of all the representation types, the archaeological facial reconstructions of the modern humans are the most effectively used within a museum. They are displayed with their associated remains and help the public to visualise what the individual may have looked like. Their method of manufacture is included in the exhibitions and this introduces facial anatomy to the visitor by illustrating how

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the faces are made<sup>13</sup>. This does give the impression of scientific fact, although, faces are unable to be finished if unknown details are not included. The closest that artists can come to illustrating that some details are unknown is to leave these details out, for example leaving the head bald and uncoloured. Unfortunately this is not always understood by the viewer.

Costume dummies and medical models are also used extremely effectively within museum exhibits. Although, all representations have a valid place within museum displays, this validity is, however, dependant upon the context in which they are displayed, the intention of the display and where the emphasis of the exhibit is placed.

## Advantages of Representations

The actual process of making a reconstruction has a twofold value:— it requires the archaeologist to face up to and even challenge the evidence, since the meaning and function of the surviving evidence has to be examined and interpreted with precision to see whether a reconstruction is plausible. Secondly, reconstructions bring the subject to life, in some cases almost literally putting the flesh on the bones. This is particularly useful for museum displays, books, guide books, lecture slides, and for exhibitions at archaeological monuments or excavations

Although, Adkins and Adkins (1989:131), were discussing all forms of reconstructions, their quote is an apt summation of the advantages in using hominin representations. The functions of hominin representations are to educate and engage the public by eliciting an emotive response and to assist the viewer in creating a contextual framework in which to understand the information contained within the museum display. They may also be used to replace skeletal remains when cultural sensitivity prevents their display or when there is a lack of authentic remains. Hominin representations are able to

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<sup>13</sup> This is only applicable when the method of manufacture is either the anatomical method or a combination of the anatomical method with the soft tissue depth measurements.



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illustrate people of specific eras as well as showing how specific technologies or buildings were used. They also help to personalise history for the visitors. As the visual messages that these representations contain can be quite powerful they are also used by teachers to illustrate information about history, paleoanthropology and other similar fields (see for example Gifford-Gonzalez 1993)

Facial reconstructions are a good way to illustrate the individuality of skeletal remains and particular finds by personalising the individual that they once represented. By extension, the facial reconstructions of the earlier hominins help the public and other scientists to visualise the similarities and differences of palaeoanthropological finds in relation to our own bodies and to other finds especially when a range of taxa are displayed together.

Standard mannequins, when used in the way they were intended, to display clothes/costumes, are a valid representation type within a museum. Anonymity of these representations can be ensured through the use of unnatural colouring, obscuring details (e.g., by wrapping material around the representation or using plaster or textured paint) or the use of several of the same or similar mannequins. In the case of mannequins from different eras and styles to the costumes displayed, it is suggested that making the mannequin anonymous is preferable to giving the viewer wrong information. In those exhibits where the details of the representation are not visible, for example a body wrapped in a death shroud, the use of a standard representation is an economically viable use of this representation type.

Grouping hominin representations together, either in a series or by having several within the exhibition or museum, enables hominin variation to be shown. In this way a range of body types with individual differences in pigmentation, personal ornamentation and occupations are able to be illustrated rather than showing one type which may be taken literally by the viewer.

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## Disadvantages with Representations

As with all things, if there are advantages there are also disadvantages. Facial reconstructions, for example, give the impression of fact rather than possibility. Visitors do not always understand the subtleties of the reconstructions, such as the use of monotone colours and a lack of detail. Two curators remarked that visitors remember the details and unfortunately it is the details that are not known (P. Semal 2006: pers. comm.; L. Cammaert 2006: pers. comm.). Not all of the reconstructions have the input of scientists as some artists do not work with them, which also limits the amount of relevant information included in the representation. Cost is also a major factor in the acquisition of facial reconstructions, which means that the museum does not always use the artists creating the most scientifically accurate but rather the ones they can afford. The displays that use three-dimensional representations can also date very easily and quickly, which may also prohibit their use by museums.

The human representations, those that are considered to be the same as us, need to convey less information than those earlier hominins. This means that stylised standard mannequins, costume dummies and the art models in the miscellaneous category are able to be used, as the viewer/visitor is more familiar with the modern human body to incorporate their own knowledge and project it on to the representation. The earlier hominin forms require more information as they are an unknown quantity to the general public. This is problematic as the amount of information presented is in reverse proportion to the actual information available.

The age and subsequent damage that occurs to older representations can detract from the exhibit and give impression of economic problems as well as a lack of professionalism. Casts and standard mannequins were the only representation types to be observed with various states of damage. While casts are often reconditioned, standard mannequins may only have superficial work done on them. This may be due to the perceived importance placed on casts whereas the damaged standard mannequins were generally those that had been donated to the museum and therefore have very little value placed upon them.

## **Points for Further Consideration**

There are several points that have been identified for further consideration.

These are:

- the finishing techniques used on the representations;
- the anatomical information contained in the earlier hominin taxa;
- how are the earlier hominin representations perceived due to the anatomical information in conjunction with the finishing techniques; and
- the biases contained in the representations.

these points will form the basis of the following chapters.

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