

THE NATURE OF GENDER

Chapter 17

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GENDER REPRESENTATION IN THE NATURAL HISTORY GALLERIES AT THE MANCHESTER MUSEUM

Introduction

IT IS WIDELY RECOGNIZED that in most human societies, past and present, men have dominated women. Male, or patriarchal, domination has been expressed in a wide range of ways and across a panoply of institutions including households, classrooms, factories, offices, and museums. Of course, the question of patriarchy's universality, and the way in which gender relationships may vary across time and space, are matters of debate. However, since the late twentieth century a growing body of feminist research in science studies has suggested that the universalism to which the European Enlightenment gave birth was rooted in gender inequality. Thus, feminist critiques of science have suggested that its epistemology, its way of knowing, is gendered and that its claim to universalism masks particularism.¹ Some feminist thinkers regard science as primarily a male construct,² while others regard science and natural history in general with a sense of cynicism.³

It would be unfortunate if public institutions such as museums perpetuated a feeling of disenfranchisement among their female visitors. However, although feminist critiques of museum displays have highlighted how women have been misrepresented (if represented at all) in a range of contexts such as social history, anthropology, archaeology and art,⁴ there has been little work linking the representation of women to the representation of females of other species (and humans) in natural history exhibits.

As well as being classified taxonomically and geographically as they are displayed in most natural history galleries, animals can be categorized by sex. One of the characteristics of all vertebrates is that individuals are either male or female, both sexes being required for reproduction (although advances in reproductive technology mean this is no longer strictly true in some exceptional cases). Sexual dimorphism varies amongst species so that in some cases males and females are very different in their appearance and behaviour, while in others the sexes are indistinguishable except for their genitalia. These alternative evolutionary

strategies are linked to other aspects of species biology and behaviour, such as the distribution of parental care between the sexes. Therefore, if museum visitors are to see animal diversity properly represented, one might expect to find that female and male animals are shown proportionately in museums. However, a casual stroll through an average natural history gallery soon makes it apparent that this expectation is not fulfilled. Males are often (but by no means always) larger or more colourful than females, and both of these qualities appear to have been attractive to the hunters, collectors, and museum visitors of the nineteenth and early twentieth centuries.⁵ In this respect, it may be the case that contemporary museum collections merely reflect the aspirations and tastes of the past, which will remain incarnate in installations until such time as resources permit change. However, what I will argue here is that a closer examination of representations of female animals at one museum suggests that the reasons behind (mis)representation may not be entirely historical in that they flow from contemporary museum practice.

Natural history galleries are usually regarded as places of learning and facts, of science and biological truths. Yet a more critical look at their displays and textual information reveals that they are better described as fora for story-telling, and indeed myth-making. Haraway's view⁶ of the importance of telling and retelling stories in the history of primatology and anthropology can be applied to the visions of nature projected by museum displays. My concern is that old-fashioned and sometimes outdated theories of human evolution,⁷ the social lives of animals, and biological determinism may stand unquestioned and uncriticized in contemporary museum displays. In what follows, I report findings from a feminist investigation and critique that I conducted in November 2005 at the natural history galleries of the Manchester Museum in the UK. My object was to arrive at an understanding of the gendered stories that were told through the exhibition of animals, with particular reference to the display of female animals.

The Manchester Museum: a case study

The Manchester Museum, which forms part of the University of Manchester, plays a part in university teaching and learning and is very popular with the public, receiving over 200,000 visits in the past year. The museum houses a range of collections covering humanities and science disciplines. The zoology galleries were designed by Alfred Waterhouse (1830–1905) and constructed between 1882 and 1888. The display cases and much of the internal architecture are listed (that is, subject to conservation law), so the galleries retain their Victorian grandeur despite various updating of displays, most recently in 1991. The zoology collections of the Manchester Museum comprise over 600,000 specimens, representing a range of preservation methods and taxonomic groups. The galleries consist of the mammal gallery on the first floor, from which the visitor can look up to a suspended sperm whale skeleton and the bird gallery on the second floor. Small cases lining the balcony of the bird gallery also contain invertebrate material. Each gallery contains cases exploring the diversity of life with the mammals arranged taxonomically, the birds geographically. The majority of the specimens on display are taxidermy mounts and osteological material.

The range of mammals, birds, and other animals on display in the Manchester Museum's natural history galleries is clearly intended to inform and inspire those who visit them. For most visitors to this city centre museum, the animals on display are the closest they will ever come to many species, whether dead or alive. It could be said that there is a curatorial obligation or responsibility to explain the collections on display and to encourage visitors to reflect on the extent to which displays properly represent difference and diversity with respect to life on earth.

Many of the specimens in the zoology collections date from the museum's foundation and most are more than fifty years old. New specimens are now largely acquired opportunistically, for example when seized by HM Customs, or if found dead and donated to the museum. Given the constraints of the building and the realities of acquisition, the potential for changing and developing displays is limited to what is currently shown in the galleries and what is already in store. However, this does not mean that the mode of display, textual information, and other matters of curatorial interpretation are immutable.

Methodology

The initial stage of my study involved surveying the specimens on display in the natural history galleries at the Manchester Museum. I focused on the mammal and bird specimens, as these make up the majority of the natural history displays. The Museum's database gives the gender of some specimens on display. In addition to this information, I surveyed the galleries looking at every bird and mammal specimen, making additional gender identifications where possible. Armed with this information, I recorded the following:

- the number of female, male and juvenile specimens on display (see Appendix, Table A);
- the number of species represented by:
 - male specimens alone;
 - female specimens alone;
 - juvenile specimens alone;
 - both male and female specimens;
 - male, female, and juvenile specimens;
 - female and juvenile specimens; and
 - male and juvenile specimens (see Appendix, Table B);
- where both the male and female of a species were present, how these were positioned relative to each other, and the postures in which they were mounted (see Appendix, Tables C and D);
- the information provided in interpretative text relating to gender, and the language used when referring to female and male individuals.

In addition to compiling statistics from these observations, I also surveyed visitors' comments left on the feedback board in the mammal gallery, focusing particularly on any favourite specimens mentioned by the authors (see Appendix, Table E).

A limitation of this survey was that the sex of many of the specimens on display was indeterminate. Where species are sexually monomorphic (the males and females differing only in their genitalia rather than other external features), the lack of original collection data for some specimens can mean that gender is difficult to determine. I discounted from this study any adult specimens where sex could not be determined by simple visual observation. As a result, 18 per cent of the specimens in the mammal gallery and 43 per cent of specimens in the bird gallery were included in the quantitative analysis below.

When I discussed the findings of the survey with my colleagues, suggesting that difference and diversity had been occluded in the display, the responses were polarized. Some colleagues simply would not believe the results that I had obtained, insisting that the bias I had found was imaginary rather than real. It is interesting to compare this response with Donna Haraway's report of readers' reactions to Adrienne Zihlman's *Human Evolution Coloring Book*.⁸ Haraway's description is of a book that is at odds with the way readers see difference and diversity:

Zihlman's book scrupulously illustrates *human*, i.e. general, points with *specific*, i.e. marked bodies belonging to particular sexes, species, cultures and races. Her attention to representing something of the diversity of primates, human and non-human, creates an odd book that looks cluttered with the particular. People looking through it for the first time have sometimes complained that it is a feminist polemic filled only with females. Exactly one half the representations of the animal and human bodies where sex/gender can be distinguished are female.⁹

The dismissive reaction from some colleagues towards my own findings was particularly frustrating since the galleries are open to everyone, and my survey had primarily involved what was openly on display and thus easily verifiable. Other colleagues felt that the results, as well as the negative responses that lent them a certain poignancy, warranted more attention and acknowledgement. Working with the Museum's Head of Exhibitions and Presentation (Jeff Horsley) and Head of Natural Sciences (Henry McGhie), I decided that an appropriate response to this would be a temporary 'intervention' in the natural history galleries.

Interventions and temporary exhibitions such as the one that we devised have been used to examine gender representations in art galleries and museums in the past. For example, the Whitworth Art Gallery, also part of the University of Manchester, was the venue and subject of a temporary exhibition, *Women and Men* (December 1991–August 1992). Hyde's report¹⁰ on the exhibition suggests revealing parallels between the representation of gender in the natural history display and the art gallery.

At the Manchester Museum it was agreed with my colleagues that the intervention should take place during International Women's Week, running from 4 March to 11 March 2006. Representative cases were chosen to highlight the different forms that androcentric bias took in the galleries, with text panels provided throughout to explain the ideas behind the intervention more fully.

Results

The appendix shows the raw data for this survey. The following results pertain to the adult specimens on display in which sex could be determined, and to the juvenile specimens on display.

The number of male and female specimens on display

In most species, the ratio of male to female individuals is around 1:1. Therefore, if a museum were to seek to display a representative sample of biodiversity, one might expect it to display male and female specimens in similar proportions. The Manchester Museum's displays tell a different story. Of the specimens displayed in the mammal gallery, 71 per cent were male and 29 per cent female (Appendix A). In the bird gallery, the distribution was slightly more balanced, with 66 per cent male specimens and 34 per cent female.

A number of factors may have contributed to the gender bias that is undoubtedly present in the museum's natural history displays. Many of the early collectors favoured male specimens over female ones. Male mammal specimens were sometimes seen as more of a challenge than females, and therefore more indicative of the masculinity of the hunter. Haraway's critique of Carl Akeley's African Hall in the American Museum of Natural History¹¹ describes in depth how the collection and display of animals reflected the perceived masculinity of the

(white) men involved. Haraway¹² also touches upon the perception of the male specimen as the true exemplar of a species. There appear to be parallels here with the gendered politics of science itself. For example, Keller's discussion of gender and recruitment to scientific posts¹³ highlights the tendency for females to be described as different *from* males, implying that the male state represents the standard from which females deviate. In the museum setting, this view is manifested as females being the browner, smaller, duller, uninteresting, and unimportant variants of the males that are preferred for display. In birds, the males are often the brighter and more flamboyant of the sexes, and so may have been similarly prized by collectors.

One of the showcases in the Manchester Museum's mammal gallery is devoted to some of the animals hunted by Lord Egerton (1874–1958), the Fourth Baron Egerton of Tatton. Lord Egerton was a keen hunter and spent much time collecting in Africa, donating specimens to the Manchester Museum in the first half of the twentieth century. A sample page of Lord Egerton's notes is exhibited alongside the antelope case containing animals he collected. The notes indicate that of the twenty-two mammals hunted and recorded on this page, only four were female.

This androcentric bias was represented in the museum's International Women's Week intervention by placing a female specimen (normally kept in store) in a temporary case in the central aisle of the mammal gallery. The specimen was a female Nyala, of which there is usually only a male on display, despite the striking sexual dimorphism of this species. In the past, the male and female specimens have been displayed together, but now visitors without specialist knowledge of antelopes would have no way of realizing the intra-species diversity of Nyalas and other antelopes from the permanent displays. The female Nyala became an introduction to the intervention, illustrating for the museum visitors the untapped potential of female specimens usually hidden in the museum's stores.

Representation of species

The raw data concerning the number of male and female specimens displayed on the galleries do not in themselves tell us how well the natural history of each species on display is represented. For example, if a case displayed a group of several female specimens of the same species, then this would only inform visitors of the appearance and biology of the females of one species. In contrast, if the same number of female specimens belonged to different species, then they would provide more diverse information about the females of other species. For this reason, I also surveyed the way in which species on display in the galleries were represented by male and female specimens (Appendix B).

In the bird gallery, 44 per cent of species were represented solely by males, compared to 3 per cent represented by females alone. Just under half of bird species displayed (48 per cent) had male and female representatives. In the mammal gallery, 61 per cent of species displayed were represented by male specimens alone, while 11 per cent of species were represented by female specimens alone. Only 14 per cent of species had male and female representatives. These results suggest that museum displays perpetuate the idea that males are perceived as more worthy representatives of species than females.¹⁴

In the mammal gallery, only six species are represented by both male and female specimens. Of these, three are rather diminutive artiodactyls (even-toed ungulates, for example antelope and deer). Of the artiodactyls on display in the mammal gallery, those represented by both male and female specimens are by far the smallest. They also happen to be the species with perhaps the least sexual dimorphism of those sharing a display case, and so the species where displaying both male and female specimens is the least visually striking. For example,



Figure 17.1 The antelope case, with male specimens concealed, Manchester Museum. Courtesy of Bryony Bond

in the antelope case, the only female specimen is a Kirk's Dik-Dik, one of the smallest antelope species,¹⁵ and she is accompanied by a male specimen. There is little sexual dimorphism in this species, in contrast with some of the larger antelope species displayed, such as the Nyala,¹⁶ of which only a male of this species is normally on display (a female Nyala is kept in store, and was revealed as part of the temporary intervention). It seems that, in some cases, females are displayed where they somewhat conveniently take up little space rather than where they would be most informative. Not only are females under-represented in the gallery displays in terms of numbers, but they are apparently regarded as less fit to represent their species than the males.

The gallery intervention responded to the dominance of male representatives of species in the antelope case. We covered all the male specimens in the case with white sheets, thus concealing them from view for the duration of the intervention, leaving only the tiny female Kirk's Dik-Dik on show. Text accompanying this portion of the gallery intervention explained the reasoning behind changes in the display case and commented on the female specimens permanently concealed from museum visitors in the stores, and the inadequate representation of females with respect to information and number of specimens. In the United States and elsewhere, a similar intervention technique has been deployed as part of 'A Day Without Art', to encourage AIDS awareness.¹⁷ The Day was first observed in 1989 as part of World AIDS Day and is now an international event. In 1998, statues in the Franklin D. Murphy Sculpture Garden at the UCLA campus were covered in black fabric to raise awareness of the effects of HIV and AIDS, and to commemorate AIDS-related deaths in the artistic community. This kind of method is valuable because it jolts the expectations of viewers, inviting them to think and talk about the subject in ways that might be overlooked in the course of normal, day-to-day communication.

Posture and position of male and female bird specimens

In contrast to the mammal gallery, the relatively large number of species represented by both male and female specimens in the bird gallery allows a closer examination of how these are displayed. Where male and female specimens of the same species were displayed together in the bird gallery, the relative postures and positions were noted.

Of the pairs of specimens displayed at different heights, in 74 per cent of these cases the male is the higher specimen (Appendix C). Where it could be determined that one of the pair was mounted in a more erect or dominant posture, in 82 per cent of cases this was the male specimen (Appendix D). In one pair of specimens, the male is both higher and in a more erect posture than the female. In most examples, the positioning of the male above the female does not inform the visitor about the behaviour of each species. In fact, in two of the more informative mounts, the male is placed lower than the female in its display posture. In some cases, the position and posture of females have been dictated by the taxidermist whose role in these matters is, of course, crucial. Taxidermists' representations of natural history may be affected by personal views of politics and society.¹⁸ In older mounts, it may well be that taxidermists (consciously or subconsciously) reflected patriarchal norms in their mounts and compositions.¹⁹ It is not an easy matter to remedy the social biases of past technicians and experts in modern displays. However, the fact that individual specimens may still be positioned according to the same pattern more recently suggests that bias is not entirely a residue of past views of gender.

The gallery intervention highlighted biases in the posture and position of male and female bird specimens by placing white vinyl circles on the glass of bird display cases in front of suitable examples. This served to draw attention to display patterns that were entrenched in the displays and which might otherwise remain unnoticed and unchallenged by museum visitors.

Interpretative text and graphics

While the ratios of male and female specimens and the choices made in their display may be influenced by historical constraints, recent updates to the galleries such as textual interpretation are not, we might suppose, subject to the stereotypes and prejudices of the past. However, I found that, rather than correcting the biases of inherited displays of specimens, the interpretation used in the galleries has reinforced (albeit, perhaps, subconsciously) androcentrism. The language used throughout the natural history galleries follows the story-telling model of the patriarchal imagery of science criticized by Keller,²⁰ presenting stereotypical male and female roles, and lending a disturbing vein of biological determinism to a visitor's day out.

The general information about mammal biology provided at the entrance to the mammal gallery includes statements such as 'mammals give birth' and 'mammals have placentas', whereas these characteristics are exclusive to females. Conversely, the statement that 'females breed' suggests that reproduction does not involve males, which is also untrue. In the label text for separate species, the roles of males as hunters, fighters, and protectors of females as the bearer of offspring are emphasized throughout the mammal gallery.²¹ Statements such as 'The more powerful males have harems' and 'Males with a territory have harems of about 50 females' imply that males have ownership of females, rather than that females have the potential to make decisions in the courtship process.²² The text is written as if it is authoritative fact, rather than the partial story it surely is. Fedigan²³ has noted how the language of science has often been used to categorize females as resources, thus silencing the agency of females in primate societies. Despite such work and more recent research suggesting the

centrality of females in the societies of some species, the patriarchal paradigm still dominates the displays of the Manchester Museum's natural history galleries.

The language used in the bird gallery seems in general to represent the important roles of both males and females better. The word 'parent' is used often in text, perhaps due to the different strategies of offspring care found in birds. However, the information on eggs does not refer to females being the egg-layers. The words 'female' and 'mother' are more or less interchangeable in the mammal gallery text. While the word 'mother' is used frequently throughout the bird and mammal galleries, the word 'father' is never used in either gallery. If it is acceptable to use the word 'mother' in relation to non-human animals, why is the word 'father' omitted? The fathering role of the males of some species is acknowledged by the use of the term 'parent' in the bird gallery, and yet they are never labelled as 'fathers' here. This curious use of language perpetuates, perhaps unintentionally, the idea that the role of females (including women) is to reproduce, while males (including men) are capable of this and everything else.²⁴

While most specimens in the natural history galleries are presented as mere samples of their own species rather than as once living individuals, the mammal gallery contains a number of specimens that have a particularly strong identity, some of which are very popular with visitors. It is interesting to compare the interpretation of iconic specimens of different sexes. The text for Maharajah (a male Asian elephant) and Old Billy (a male horse) refers to 'him' and 'his', whereas Mr Potter's Cow (a female) is referred to simply as 'the cow' or 'the specimen'. Her sex is not referred to in the text, and she is thus represented as an object rather than a once living, sexed individual. This is particularly inappropriate since the remains of Maharajah and Old Billy are skeletal, whereas Mr Potter's Cow is a taxidermy specimen and is therefore more lifelike to her audience. The fact that Mr Potter's Cow is named through her (male) owner is similarly rather telling. In her exhibition *Beloved and Forsaken* (15 May 2004–12 September 2004), the artist Spring Hurlbut was moved to name Mr Potter's Cow 'Lady', thus reclaiming her individual and gendered identity.

The section of the mammal gallery that uses the most graphics and artistic reconstructions includes the displays covering human biology and evolution. Given that these media are not constrained by historical biases in collecting, one might imagine that women and men could be equally represented here. However, only 13 per cent of pictures of humans on the gallery (excluding anatomical diagrams) are of women or girls.²⁵ The human evolution display includes large graphical representations of early human species, all of which are of men. The artistic reconstruction of *Homo erectus* consists of three men holding spears by a fire, with a faceless woman sitting by the cave wall in the background. The picture of *Homo sapiens neanderthalensis* comprises two women with children and five men back from the hunt. This 'man the hunter' view of human evolution is an inherited story²⁶ which has been widely challenged by female primatologists and anthropologists,²⁷ yet it remains authoritatively in place as fact in the museum's gallery. The representation of modern human women is similarly skewed. The various sketches of people dotted throughout the gallery are mostly male (the only exception is a young girl riding a Shetland pony). The anatomical drawings of humans are all male, with the exception of those of female reproductive anatomy. Therefore, the only way in which adult female *Homo sapiens sapiens* (modern day women) are represented in the gallery is in the disembodied models and diagrams of uteri and mammary glands. The idea of the female body being organized around the uterus and reproduction as the fundamental role of females is regarded by Haraway²⁸ as part of the symbolism used in science and politics to maintain power over women's bodies. An alternative story displaying the multiple roles that women have played in human evolution and in modern human society could easily be told, yet the patriarchal tone of the museum's displays remains unchallenged. The relative abundance of anatomical models of female reproductive parts in the Manchester Museum

may reflect the interests of scientists many years ago, yet the way this is manifested in today's displays means that a museum visitor can gaze on the anatomy of women more readily than that of men. Similarly, the recently redeveloped galleries at the Hunterian Museum, part of the Royal College of Surgeons in London, display several examples of female 'generative organs' yet very few male genitalia (these are presented in the context of disease rather than as reproductive organs). This presumably represents the personal interests of John Hunter, but the resulting museum displays allow women to be viewed as objects and specimens more readily than men.

These issues were illustrated in the gallery intervention by using white vinyl to place enlarged copies of label text in front of the exhibits, where they could not be ignored. The phrase 'Males compete for females, and the successful ones are often two cooperating males that are probably related' was placed in front of the male lion, and the phrases 'Both sexes hold territories which they mark by scent and by scratching trees. The males' territories are large and often include the territories of several tigresses' was placed in front of the male tiger, bringing attention to the value-laden words used throughout the galleries.

Discussion

The representation of gender in natural history displays may seem unproblematic to some museum practitioners, as they primarily concern non-human animals. However, by presenting the natural history of other species through the apparent realities of science and taxidermy, it is possible that the aspects of biology which humans share with them may be misrepresented. Biological determinism has been used in the past to justify social inequality between men and women.²⁹ As the personal views of scientists from many disciplines can affect their research,³⁰ so can taxidermy displays reflect the personal views of their makers, rather than representing a balanced view of nature. The displays housed in the Manchester Museum are not exceptional in their androcentric biases. Indeed, the displays are representative of a bias apparent in many natural history galleries. It would be a simple matter for a museum to contextualize the historic reasons behind biases found in such displays in interpretative text, but instead patriarchal messages retain the unchallenged tone of authority. The apparently factual lessons taught by natural history displays such as those of the Manchester Museum are simply stories inherited from science past, partial interpretations of work produced and challenged decades ago. And yet, as Haraway notes, 'one story is not as good as another'.³¹

The historical legacy of gender imbalance in the museum's collection does not entirely explain the bias shown in the display galleries today. The positioning of male specimens above females and the dominance of males in the interpretative text (both in quantity and language used) are both biases that could have been addressed in more recent times and in the light of scientific change. It appears, then, that there is a bias towards male animals in contemporary display techniques and decisions. For instance, why has work by female scientists proposing alternatives to the 'man the hunter' view of human evolution been excluded from the museum's display on human evolution? In considering past decisions that have shaped the current guise of the natural history galleries in the Manchester Museum, it is worthy of note that the museum has had only two female zoology curators in its lengthy history (there have been no female palaeontology or entomology curators). As more women enter the museum profession, one may hope to see a more balanced depiction of gender in museum displays.³² Happily, women make up 57 per cent of the staff at the Manchester Museum (as of September 2007). However, there are no female science curators on the current staff (although three out of five curatorial assistants working with science collections are female). Perhaps more

significantly, there are no female staff members on the management or leadership teams of the museum.

These matters led me to think of the gallery intervention as a way of encouraging visitors to reflect, not only what counts as knowledge, but also on *who* makes it count. Thus, a small text panel was placed with the models of female reproductive anatomy in the Mammal Biology display case. This explained the gender balance and staff structure of the museum, standing as a quiet (and apparently unnoticed) protest voicing the disenfranchisement felt by some female staff following a reorganization at the museum which, it was felt, had favoured men. Hubbard³³ maintains that science plays a role in underwriting the existing distribution of power in society and that it expresses the interests of those who are politically dominant. It seems reasonable to suggest that there might be a link between the understanding of the androcentrism found in the natural history galleries of the Manchester Museum and the gendered hierarchy of the museum's staff. It has been suggested that the gender balance of scientists in different fields can be linked to the kinds of stories they tell.³⁴ It seems from other research that museum displays are not immune to such bias.³⁵

It is often assumed that museum visitors are attracted to exhibits displaying large, impressive specimens and this could be a partial explanation for the choices that curators have made in displaying specimens. The popularity of the Manchester Museum's recently acquired *Tyrannosaurus Rex* cast is a case in point. The species itself has been 'gendered' with a male name, reflecting its 'kingly' stature. However, it is thought that the females of this species may have been larger than the males. The cast in the Manchester Museum is nicknamed 'Stan' after its discoverer, Stan Sacrison. It is not certain that this specimen was male, but, nevertheless, it now has a male identity. The fact that a (partially) real, small, herbivorous dinosaur (*Tenontosaurus tilletti*) was replaced in the Prehistoric Life gallery by 'Stan', a cast of a carnivore, is also noteworthy when we hold in mind the link that has been made by some feminist writers between meat-eating and masculinity.³⁶

A survey of 2,000 visitor comments collected from a feedback board in the mammal gallery revealed the favourite specimens in the mammal gallery (Appendix E). While large and fearsome specimens are popular, there is nevertheless a refreshing appreciation for more diminutive and herbivorous species. A problem with surveying visitor comments such as these to inform display choices is that they may be shaped by the museum installations themselves. Larger specimens are often displayed centrally or on plinths out of necessity, whereas smaller (browner, female) specimens are more easily tucked into cases and behind pillars. This may mean that when visitors are asked what their favourite specimens are, they are more likely to have noticed the bigger (colourful, male) specimens, and so these are regarded as the most popular. If museums base decisions on which specimens to display on these results, there is little chance for the less obvious choices to be included. It would be interesting to replace a large, popular specimen, such as the male lion, with a cleverly spotlighted pygmy shrew on a fine plinth, to observe whether visitor responses showed more preference for smaller specimens as a result.

The imbalance in the number of male and female specimens in the natural history galleries misrepresents the diversity of life. A museum will never, of course, be able to display a male, female, and juvenile of each species, in some kind of pseudo-Ark. However, it should be made clear that not all Peafowl have iridescent fan-tails (only males do), and not all Red-necked Phalaropes have bright red necks (only females do), simply to avoid misinformation. Similarly, it could also be made clear that although male lions may look fearsome when mounted with a snarl, the females do most of the hunting, as well as raising the cubs. Females could be represented as having the choice of males to mate, rather than being the possessions of males, mere venues for the fertilization process. Fedigan³⁷ has discussed the importance of gender symbolism in scientific terminology, giving examples of how language use has affected

the routes of scientific inquiry followed. While it may often be the case that males of other species dominate females, it is important that this is not carelessly assumed, and that value-laden descriptions are avoided where the facts are unclear. The texts accompanying exhibits are stories with alternatives, and therefore should not be presented as authoritative truths, framed as proof that a patriarchal society is natural, and therefore inevitable and morally right.

There are a number of possible reasons for the androcentrism found in the natural history galleries at the Manchester Museum and, while it may be impossible to untangle these various factors, in some ways this is unimportant. What is of prime importance is to recognize the bias that exists in the galleries as they are today and to consider how this may affect visitors' experiences of the museum, both in terms of learning about natural history and learning about our society. The temporary intervention on the natural history galleries served to disrupt the expectations of museum visitors and staff and proved controversial within the institution. The intervention stayed in the gallery for five weeks, four weeks longer than originally planned, but its effects have lasted beyond that. On an institutional level, the intervention has provided and has been used as a model of how relatively low-cost changes can be made to permanent galleries in a way that could be used to update displays instantly to adapt to current affairs and local issues. For example, a temporary intervention using similar practices, a *Revealing Histories* trail highlighting links between objects on permanent display with the transatlantic slave trade, was staged throughout the Manchester Museum galleries to mark the 2007 bicentenary of the abolition of the transatlantic slave trade. White vinyl text overlaid displays to draw attention to issues that might otherwise be overlooked by visitors.

Since dismantling the temporary intervention, the *status quo* has reasserted itself, and the gender inequalities found in the permanent displays of the natural history galleries probably remain unnoticed by most visitors (and indeed most museum staff). This makes them all the more concerning. Not only are visitors being presented with a skewed and therefore unscientific view of the natural world,³⁸ but they are being presented with stereotypical and inaccurate messages, both subliminal and obvious, about the roles of females of our own species and others. As museum exhibits, these messages are spoken with the authoritative voice of Science³⁹ and so visitors to the museum are likely to accept them without challenge.⁴⁰

Different people hold wide-ranging views about the relation of humans to other animals. But all women share at least one characteristic with other female animals, and that is their sex. Other species presented in museums may play a part in shaping our identities,⁴¹ and it is possible for women to relate more closely with female non-human animals than with some male humans.⁴² Gender is an important part of a human's identity, perhaps the first thing that might be used to describe someone. Yet a woman shares her sex with Mr Potter's Cow, but not with her male colleagues, or her father. Children make up a large proportion of the Manchester Museum's visitors. If they are presented with a depiction of animals, including humans, as either small, child-bearing females or large, tough males, then the effects that this may have on their perception of gender in society are worthy of concern. The museum displays are replete with patriarchal imagery mixed with biological determinism, a heady mix for impressionable young museum visitors. Not only does the museum have a responsibility to explain the extent to which its displays represent actual biodiversity, but it should also be aware of the potentially political nature of biology and the way it is communicated.⁴³

Given that 'we become what biology tells us is the truth about life',⁴⁴ I hope that in the Manchester Museum at least, the self-perpetuating cycle of gender stereotyping in science may have been halted for a moment by the International Women's Week gallery intervention.

Conclusions

Just as outdated anthropology displays have been criticized as representing other cultures from a colonialist perspective, so natural history galleries can be revealed to show androcentric biases through their patriarchal stories masquerading as biological truths. The case study of the Manchester Museum reveals patterns which are followed in museums elsewhere, both in Victorian displays and modern gallery redevelopments. The distance of history may be used as an excuse for perpetuating gender myths, but, unless this historical context is made clear within a museum's exhibits, it is likely that museum visitors will interpret displays at face value. Temporary interventions can be an effective way of disrupting museum visitors' expectations of natural history and can raise awareness of the need to question gender-based assumptions when choosing specimens and interpretative methods in exhibition design.

Appendix

Table A *Specimen number*

	<i>Female</i>	<i>Male</i>	<i>Juvenile</i>
Mammal	16	39	7
Bird	88	168	45

Table B *Species representation*

	<i>Female only</i>	<i>Male only</i>	<i>Male & female</i>	<i>Male, female & juvenile</i>	<i>Female & juvenile</i>	<i>Male & Juvenile</i>	<i>Juvenile only</i>
Mammal	5	27	6	2	1	1	2
Bird	5	68	75	4	1	1	2

Table C *Position of bird specimens*

<i>Male higher</i>	<i>Female higher</i>	<i>Equal height</i>
32	11	19

Table D *Posture of bird specimens*

<i>Male dominant</i>	<i>Female dominant</i>	<i>Equal posture</i>
18	4	40

Table E *Favourite specimens*

Polar bear	30
Tiger	20
Primates	21
Elephant	18
Lion	11
Rabbits	10
Sperm whale	9
Deer	9
Fox	2

Mice	2
Kangaroo	2
Bats	2
Walrus	2
Armadillos	2
Others	23 x 1

Notes

- 1 E. F. Keller, 'Making a Difference: Feminist Movement and Feminist Critiques of Science', in A. H. Creager, E. Lunbeck, and L. Schiebinger (eds), *Feminism in Twentieth-Century Science, Technology and Medicine*, Chicago: University of Chicago Press, 2001, pp. 101–2; N. Tuana, 'The Weaker Seed: The Sexist Bias of Reproductive Theory', in N. Tuana (ed.) *Feminism and Science*, Bloomington: Indiana University Press, 1989, p. 169.
- 2 L. Birke, *Feminism, Animals and Science: The Naming of the Shrew*, Buckingham: Open University Press, 1994, p. 6; S. V. Rosser, 'Feminist Scholarship in the Sciences: Where Are We Now and When Can We Expect a Theoretical Breakthrough?', in Tuana (ed.), *Feminism and Science*, p. 3.
- 3 N. Tuana, 'Preface', in Tuana (ed.), *Feminism and Science*, vii.
- 4 For example, G. Porter, 'Seeing Through Solidity: A Feminist Perspective on Museums', in S. MacDonald and G. Fyfe (eds), *Theorizing Museums*, Oxford: Blackwell, 1996, pp. 105–26; E. S. Jones, and S. Pay, 'The Legacy of Eve', in P. W. Gathercole and D. Lowenthal (eds), *The Politics of the Past*, London: Unwin Hyman, 1990, pp. 160–71; C. Duncan, 'The MOMA's Hot Mamas', *Art Journal* (Summer 1989): 171–8.
- 5 D. Haraway, 'Teddy Bear Patriarchy: Taxidermy in the Garden of Eden, New York City, 1908–36', *Social Text* 11 (1984): 36.
- 6 D. Haraway, *Primate Visions: Gender, Race and Nature in the World of Modern Science*, London: Verso, 1989, pp. 289, 377.
- 7 N. M. Tanner, 'Becoming Human: Our Links With Our Past', in T. Ingold (ed.), *What is an Animal?* London: Unwin Hyman, 1988, pp. 127–40; L. M. Fedigan, 'The Changing Role of Women in Models of Human Evolution', in G. Kirkup and L. S. Keller (eds), *Inventing Women: Science, Technology and Gender*, Cambridge: Polity Press, 1992, pp. 103–22.
- 8 A. Zihlman, *The Human Evolution Coloring Book*, New York: Barnes and Noble, 1982.
- 9 Haraway, *Primate Visions*, p. 284.
- 10 S. Hyde, *Exhibiting Gender*, Manchester: Manchester University Press, 1997.
- 11 Haraway, 'Teddy Bear Patriarchy'.
- 12 Ibid. p. 37.
- 13 E. F. Keller, 'How Gender Matters, or, Why It's So Hard for Us to Count Past Two', in G. Kirkup and L. S. Keller (eds), *Inventing Women*, p. 43.
- 14 Haraway, 'Teddy Bear Patriarchy', p. 3.
- 15 J. Kingdon, *The Kingdon Pocket Guide to African Mammals*, London: A. & C. Black, 2004, p. 232.
- 16 Ibid., p. 214.
- 17 T. Tang, 'Day of Mourning', *The Daily Bruin*, 1 December 1998, <<http://www.dailybruin.com/articles/1998/12/1/day-of-mourning/>>, accessed September 2007.
- 18 C. Grasseni, 'Taxidermy as Rhetoric of Self-Making: Charles Waterton (1782–1865), Wandering Naturalist', *Studies in History and Philosophy of Biological and Biomedical Sciences*, 29 (1998), 287.
- 19 S. L. Star, 'Craft vs. Commodity, Mess vs. Transcendence: How the Right Tool Became the Wrong One in the Case of Taxidermy and Natural History', in A. E. Clarke and J. H. Fujimura (eds), *The Right Tools for the Job: At Work in Twentieth-Century Life Sciences*, Princeton: Princeton University Press, 1992, pp. 258, 274. This touches upon the importance of changing societal and scientific views in the type of taxidermy produced through history. This forms a parallel with the changing representations of women in art through history (see S. Hyde, *Exhibiting Gender*, Manchester: Manchester University Press, 1997). Artworks such as *Mr and Mrs Andrews* by Thomas Gainsborough (c.1750), for example, reflect a disarming similarity to the postures given to male and female pairs in museum displays.
- 20 Keller, 'How Gender Matters', p. 48.

- 21 Compare with Porter, 'Seeing Through Solidity', p. 107.
- 22 Haraway, *Primate Visions*, p. 338.
- 23 Ibid., p. 320.
- 24 Ibid., p. 282.
- 25 There are parallels here with the finding of Hyde's *Women and Men* intervention, in which she noted that works in the Whitworth Art Gallery's drawing collection were produced by men and women at a ratio of 32:1 (Hyde, *Exhibiting Gender*, p. 7).
- 26 Haraway, *Primate Visions*, p. 317.
- 27 For example, Tanner, 'Becoming Human', and Fedigan, 'The Changing Role of Women'.
- 28 Haraway, *Primate Visions*, p. 352.
- 29 H. H. Lambert, 'Biology and Equality: A Perspective on Sex Differences', in S. Harding and J. F. O'Barr (eds), *Sex and Scientific Enquiry*, Chicago: University of Chicago Press, 1987, p. 125.
- 30 Tuana, 'The Weaker Seed', p. 147.
- 31 Haraway, *Primate Visions*, p. 331.
- 32 Compare with Hyde, *Exhibiting Gender*, pp. 15–16.
- 33 R. Hubbard, 'Science, Facts, and Feminism', in Tuana (ed.), *Feminism and Science*, pp. 128.
- 34 Fedigan, 'The Changing Role of Women', p. 111.
- 35 For example, S. L. Star and J. R. Griesemer, 'Institutional Ecology, "Translations", and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907–39', *Social Studies of Science* 19 (1989), 389–90.
- 36 For example, Birke, *Feminism, Animals, and Science*, p. 21.
- 37 L. M. Fedigan, 'The Paradox of Feminist Primatology: The Goddess's Discipline?', in Creager, Lunbeck, and Schiebinger (eds), *Feminism in Twentieth-Century Science*, pp. 55–8.
- 38 E. Potter, 'Modeling the Gender Politics in Science', in Tuana (ed.), *Feminism and Science*, p. 133.
- 39 J. Genova, 'Women and the Mismeasure of Thought', in Tuana (ed.), *Feminism and Science*, p. 212.
- 40 Hubbard, 'Science, Facts, and Feminism', p. 129.
- 41 Compare with Duncan, 'The MOMA's Hot Mamas', p. 172, and Porter, 'Seeing Through Solidity', p. 109.
- 42 Haraway, *Primate Visions*, pp. 292, 317.
- 43 Hubbard, 'Science, Facts, and Feminism', p. 129.
- 44 The Biology and Gender Study Group, 'The Importance of Feminist Critique for Contemporary Cell Biology', in Tuana (ed.), *Feminism and Science*, p. 184.