

Beyond the Human: Feminism and the Animal Turn
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Following Sheep, or, Natural Family Values

As feminist theory has taught us, gender difference and sexual difference are a continual work-in-progress. Our culture works hard to forge and maintain femininities and masculinities, and to create women and men. On one hand, the incessant ubiquity of this labour makes it often invisible, and accordingly natural: it seems to be just the way things are. On the other hand, the degree of energy and force expended in this project – the stridency by which our masculinities and femininities are continually announced, expressed, maintained, celebrated – suggests something desperate, strained and fragile about this whole project.

Continually revealing the labour that goes into being men or women – showing just how strenuous those efforts are, and asking who suffers as a result – is the critical task of feminist, gender and queer critique. That critical work is never done, because the work of gender and sexual differentiation is never done.

What can human-animal studies contribute to feminist and queer critique? It allows us to understand the intersections between the work of gender and sexual differentiation and the work of human-animal differentiation. Everything we do to animals, and with animals, is intimately mingled with our ideas about, and our ways of living, gender and sexual difference. And vice versa: how we think about and how we live gender and sex, including sexuality, are shaped by our perceptions of animality.¹

My examples in this paper are all going to involve sheep. That's because I'm drawing on work that I've been doing for a book on those animals for the Reaktion

Animal series. But I do believe that sheep provide especially good examples in this regard. (Of course I do!). Human perceptions and treatment of sheep are very strongly structured by the work of sexual differentiation, in some obvious and some unexpected ways.

[PPT: Ceramic Head of Ram from Uruk]

In the case of domestic sheep, of course, human histories in many parts of the world the world have been intensively involved with *Ovis aries* for longer than with any other nonhuman species, excluding the dog and the goat. That is to say, the sheep and the goat were the earliest animals domesticated by humans for farming – the evidence for domesticated sheep and goats goes back to about 9,000 BCE. For eleven millennia – in other words, for the entire span of human history, ancient and modern – we have shared our lives with sheep, and *Ovis aries* and *Homo sapiens* have reshaped each other throughout that period.

I have some things to say about domestic sheep at the end of this talk. But mainly I want to focus on wild sheep, and in particular the best-known wild species,

[PPT: Petroglyphs of bighorn sheep]

Ovis Canadensis, the bighorn of the Americas. Just in case this species' common name doesn't make immediately clear the gender politics of common human perceptions of it, the following clip will do so.

[PPT: 'The Monarch'. Show clip.]

This clip was the first or second that cropped up on Google when I searched for bighorn sheep, and it demonstrates generously the way trophy hunting – in particular the pursuit of the male animal with the largest horns, tusks or teeth – expresses and reinforces the most reactionary and primitivist forms of contemporary

Western masculinity, those that fetishize violence, competition, dominance and weaponry.

The bighorn sheep seems to provide a perfect totem animal for this disposition.

(As it turns out, a little more knowledge complicates this totemic function, as I'll demonstrate shortly.)

For now though, I don't think there's much more I need to say about the critique of hunting – a topic that has been thoroughly and persuasively pursued by feminist human-animal studies scholars such as Marti Kheel, Brian Luke, Linda Kalof, Matt Cartmill.

Instead, I'd like to turn to the way wild sheep are represented in a somewhat broader context, or rather two broader contexts: that of wildlife appreciation more generally (including ecotourism, nature documentaries, and species and habitat conservation); and that of ecological and zoological knowledge about animals (especially in evolutionary terms). Both these contexts – which have very considerable scope and authority in contemporary global culture – are at work in another little clip I found easily online.

[PPT: 'A.M. Colorado']

It's a piece of subtitled wildlife footage, put online a couple of years ago by the Colorado Division of Wildlife (the equivalent of our DoC), designed to educate the public about bighorn sheep as well as to inform tourists who may want to see and photograph them.

[PPT: Show clip from 3.50 to 7.46 (end of slow-motion clash)]

The mode of gender and sexual differentiation in operation here, although it's only marginally more subtle than in the hunting clip, is much more pervasive and taken-for-granted across the social spectrum. And that's because it relies on the naturalising force of Darwinian evolutionary theory as popularly understood. As Rosalind Coward pointed out three decades ago, popular wildlife documentaries repeat this narrative *ad nauseam*:

[PPT: Rosalind Coward quotes]

These popular programmes are on the whole fed by evolutionary theories.... [They also] set out with a whole series of preconceptions about male and female behaviour; ... about male aggression, bachelorhood, dominance, property, women's nesting instincts...

We encounter, with monotonous regularity, the "dominant" male defending his "territory"; the hierarchies between males in their access to females; the existence of harems. We hear of females (and young males) assuming submissive postures. And we hear endless examples of home-making and parental provision.

Here in the animal kingdom, a natural world of male dominance and aggression is revealed. Here are males defending their property (territory and wives). Here are females selecting their mates as "good" parents, either for their genetic endowments or their ability to provide.

Rosalind Coward, *Female Desire* (1985), pp. 210 and 212.

There is, as Coward goes on to say, a kind of 'feedback loop' at work here:

[T]here's a mutual exchange between the stories, images and ideas we use to understand nature, and those we use to understand society.

Rosalind Coward, *Female Desire* (1985), p. 213.

Writing this in 1985, Coward must have hoped that over the next thirty years this mutual exchange would become discredited; she probably imagined that by the year 2016 (say), it would all look as absurdly out-of-date as the smug patriarchal stylings of 1950s advertising appeared in the '80s. Regrettably, in regard to our most popular representations of wild nature, this is far from being the case. (I think I need say only one name by way of evidence for this assertion: Attenborough.) No less disappointingly, the grip of this crude theory of sexual selection has only strengthened its hold over the popular imagination, via the dissemination of evolutionary psychology, as an explanation for human life and behaviour. (And here the name whose mere mention proves my point is Dawkins.)

Thus, according to Cynthia Chris in *Watching Wildlife* (2006),

[PPT: Chris quote]

'[W]ildlife films posit heterosexual mate selection as not only typical but inevitable and without exception' (Chris 2006, 156).

Similarly, Roger N. Lancaster, in the first pages of his book *The Trouble with Nature: Sex in Science and Popular Culture*, writes that

[PPT: Lancaster quote]

'I began this project [hoping] to discover sophisticated new biological perspectives on sex and sexuality. What I encountered instead was the same old reductivism warmed over.... Ideas about social good (and ill), staged as media-savvy evolutionary just-so stories.' (p. xi)

So, in spite of the already rich field of feminist and queer critiques of biology, evolutionary theory and popular science – we might immediately think of Donna Haraway's *Primate Visions*, Val Plumwood's *Feminism and the Mastery of Nature*,

Barbara Noske's *Beyond Boundaries*, Marti Kheel's *Nature Ethics*, Joan Roughgarden's *The Evolutionary Rainbow* – the task is far from complete. What I want to do in the rest of this paper is indicate some of the contributions that such approaches make to the study of gender and sex on one hand, and to the study of human-animal relations on the other. And again, I'm going to do so by focussing on sheep.

So let's come back to our Colorado Bighorns.

The following are some of the authoritative claims that you saw stamped across that video footage of a flock of *Ovis Canadensis*.

PPT: 3.58: 'Bighorns live in social groups all year, but the rams and ewes typically meet only to mate'

PPT: 4.59: 'Mating season begins in November and continues into December' [this video is taken in late November – the height of the mating season]

PPT: 5.20: 'The rams assemble in bachelor groups and begin posturing to display their size and strength.'

PPT: 5.52: 'Posturing behaviour includes a variety of nudges, subtle kicks, and head tilting.'

PPT: 6.35: 'Lip curling, known as the Flehman [sic] response, enhances the reception of mating scents given off by ewes.'

PPT: 6.54: 'Mature rams battle to establish dominance.'

PPT: 7.19: 'The violent collision of rams vying for mating rights is one of nature's most remarkable sights.'

PPT: 7.29: 'The massive horns are used as weapons. The rams, which are six-feet long and weigh 250 pounds, charge into each other at speeds up to 20 mph.'

So, exactly the narrative Coward described in 1985. And like the hunter in the first clip I showed, we're really quite interested in these massive horns, aren't we?

Bowing to the inevitable, then, let's look a bit more closely into the available research on the bighorns' big horns.

[PPT: size and weight of horns]

As the most spectacular feature of *Ovis* in their natural state – growing up to 75 inches (190 cm) in length (albeit coiled) and 20 inches (50 cm) in basal circumference – horns have tended to dominate human perception of wild sheep, as the American name for the native wild sheep exemplifies. And not just in popular perception: in the standard ethological and evolutionary work on *Ovis canadensis*, Valerius Geist identifies horn size as the key to understanding the species.

[PPT: Geist quotes]

'Leadership among rams is closely related to horn size', he asserts: '[t]he larger a ram's horns the more bands follow him, the larger the bands he leads, and hence the more sheep follow him'. Accordingly he declares that 'breeding success run[s] parallel with horn size' as well.²

Our Colorado video agrees:

PPT: 10.41: 'The older males are more dominant due to their greater body mass and horn size.'

To be sure, it's hard not to be overawed by fighting between bighorns, which is a spectacular display of balletic agility combined with bone-shuddering brute force. Each animal hurls its forequarters high in the air and then, while falling, throws one horn downwards to maximise the force of the impact. Such fights seem to epitomise, then, the 'survival of the fittest' version of natural selection, which is encoded in Geist's simple formula: bigger horns = higher rank = greater success in breeding.

Yet on closer inspection this formula doesn't add up. For one thing, Geist tells us that although fighting amongst wild sheep is 'surprisingly common', actual bloodshed is rare, as are broken horns. Moreover 'most of the fighting is initiated by the subordinate and executed in a manner harmless to the dominant', that is, the animal with the smaller horns starts the fight. And both antagonists avoid aiming for body parts on which they could inflict real damage (as they would when fighting a predator, for instance). Rather they aim invariably for the shields provided by each other's horns.

As it happens, our video actually agrees with me here too:

PPT: 7.51: 'Injuries are rare because the rams have double-layered skulls reinforced with bone struts. Powerful nuchal ligaments in their neck absorb the recoil of the impact.'

To me, this makes clashes amongst wild rams rather less like the kind of armed combat described by Geist and others, and rather more like professional wrestling. Certainly, most clashes seem designed not only to avoid causing real harm but even to avoid seriously challenging the existing hierarchy. This makes them rather irrelevant to the process of evolution through sexual selection, which surely requires genuine competition for the best mate, and the killing or at least the driving off of subordinate rivals. In addition, Geist tells us as an aside that '[f]emales fight just like rams' even though they 'carry only tiny horns' - a phenomenon he doesn't try to explain.³ And not surprisingly, that we don't see footage of that in our video.

Subsequent studies of other kinds of free-living sheep contradict Geist's simplistic formula even more than some of his own observations: T. E. Rowell and C. A. Rowell, in an influential study of feral *Ovis aries*, found that the outright absence of horns did have some effect on rams' breeding success, but that

[PPT: Rowell quote]

'there were no simple rules of interaction among rams based on horn size, nor indeed on any other aspect of appearance, nor on body weight'.

In fact this study goes on to point out that during clashes rams take great care to make impact with the base of the horn, the area of strong new growth, since the older horn further out is relatively weak.

Here, again, it's interesting to refer back to our video: we are told that

PPT: 8:17: 'Chipped and battered horns are indications of past battles.'

And no doubt they are. But notice that, just as the Rowells' study suggests, all on the strong basal part of the horn – these animals have certainly been careful not to use the tips. Moreover, what matters in fighting amongst sheep is strength and size at the base of the horns, where there is very little variation after the third year of growth.⁴

The equation of big horns with sexual success, then, turns out to be a kind of just-so story, one that would not be hard to trace back to longstanding prejudices about masculine aggression, feminine passivity, and heterosexual preferences among *humans*.

An ovine reality even harder to explain according to the standard evolutionary theories of sexual selection is that most wild rams, most of the time, are homosexual. From the age of five or six years, bighorn males tend to leave their maternal herds and form groups of their own. Sex occurs throughout the year in these all-male herds of wild sheep, usually in pairs but sometimes in huddles of between three and ten animals, and even when the rams re-join the ewes during the rutting season, a quarter of sexual activity remains homosexual. Even Valerius Geist can't help but

describe as 'homosexual societies'.⁵ I put it that way because he admits he only came to this realisation with marked reluctance: in a strikingly honest passage, he writes that he 'still cringes' at the memory of seeing one of his favourite rams mount another ram; and goes on to say that he originally

[PPT: Geist quote]

called these actions of the rams *aggrosexual* behavior, for to state that the males had evolved a homosexual society was emotionally beyond me. To conceive of these magnificent beasts as 'queers' – Oh, God!

Geist, *Mountain Sheep and Man in the Northern Wilds*, 1975, pp. 97-8.

Here, most unusually, Geist lays bare the overwhelming force of that blend of personal learned homophobia and structural heteronormativity that is built into the standard understanding of evolution through natural selection.

Meanwhile other scientific observers, less self-reflective and critical than Geist, continued to explain away homosex amongst rams by calling it 'an expression of dominance' – as George B. Schaller does in his book on Himalayan mountain sheep and goats. (He makes no reference to it in his chapter on 'Courting', confining it instead to a chapter on 'Indirect Aggression'!)⁶

But as Geist recognises, this is clearly an inaccurate, or at least a hopelessly partial, explanation. For one thing, so-called 'mounting' between rams, when carried out seriously, involves anal penetration and ejaculation. In such cases, both partners participate, as shown by 'lordosis' in the animal being mounted – that is, the arching of the back in order to facilitate penetration, the same posture adopted by willing ewes during heterosexual mating.

Even more tellingly, 'mounting' occurs in the context of a whole range of *affectionate* behaviours between companionate same-sex pairs. Geist, Schaller and the Rowells all agree that the following constitute expressions of positive emotional bonds – in other words, love – between sheep: stretching the head and neck low and forward, twisting the muzzle toward the companion while flicking the tongue and grumbling, kicking a foreleg playfully against the belly or legs, laying the muzzle on the companion's back, or smelling the genitals using the 'flehmen' gesture, where the upper lip is curled back to expose a special olfactory organ. These behaviours account for no less than 70 per cent of interactions among rams.

In this light, let's look again at some of that footage I showed you earlier:

['A.M. Colorado': replay sequence: 8.06-8.50]

What are we really looking at here? A gentle clash, nuzzling, foreleg kick – these are indisputably signs of affection amongst sheep, both wild and domestic. These males

are not struggling for dominance or, at this point, even interesting in mating with females. They are expressing their love for each other. What would it be like if our popular science and our nature films were true to these kinds of realities? For one thing, I think our wildlife documentaries would immediately become far more multi-dimensional and exuberant. For another thing, the range of explanatory narratives about both human and nonhuman animal behaviour would immediately and exponentially multiply.

Let me say a bit more about what I mean by that.

Since the most salient features of ram anatomy and society – their big horns, their fighting, and their sexual activity – seem to be related to their procreative success only tenuously if at all, how are we to explain them? Perhaps wild sheep confront us, head-on and forcefully, with the need to recognise that not everything in nature can be explained by the Darwinian paradigm of evolution through natural selection. In 1973 Theodosius Dobzhansky wrote an essay combatting American creationists' rejection of Darwinism, which he entitled 'Nothing in Biology Makes Sense Except in the Light of Evolution' – a phrase that has been avidly taken up and repeated often by Darwinian evangelists such as Richard Dawkins and even by more sophisticated popular science writers like Casper Henderson.⁷ But such a position seems nothing other than a return to fundamentalism – to an absolute faith that a single formula explains the limitless diversity of the organic world.

There are various alternative explanations for the promiscuous clashing and non-reproductive sexual behaviour found amongst wild sheep. One, of course, is that they do it because it's fun – both fighting and sex are forms of adult play. Another is that they do it out of love – to express and reinforce the bonds of affection amongst members of their herd. Of course, there's no reason why play, pleasure and love cannot fulfil evolutionary functions – such as assisting the physical and cognitive development of the individual and the cohesion of the herd.⁸ It's just that these behaviours in wild sheep are abundantly in excess of what might be required to achieve such goals. For this reason, and because there are so many examples of this kind of profligate expenditure of vital energy in nature, Bruce Bagemihl suggests the term 'biological exuberance' as a way of thinking outside or alongside the Darwinian paradigm. He uses the phrase as the title of a book in which he offers the most compendious available account of non-heterosexual behaviour amongst animals. Along the way he shows how, throughout the history of the biological sciences, due to their conventional assumptions about (human) heterosexuality and gender difference, reinforced by a narrow focus on Darwinian sexual selection, ethologists have most often disregarded, or dismissed as anomalous, the great many non-procreative or same-sex sexual behaviours they have observed. By taking these behaviours seriously, Bagemihl seeks to open up a new way of thinking about the diversity of organic life in general, which he calls 'biological exuberance'.

[PPT: Bagemihl quote]

According to this view, excess and exuberance are primary driving forces of biological systems, as much if not more so than scarcity (competition for resources) or functionality (the “usefulness” of a particular form of behavior). Bataille’s fundamental observation is that all organisms are provided with more energy than they need to stay alive; the source of this energy is, ultimately, the sun. The surplus of energy will first be used for the growth of the organism (or larger biological system), but when the system reaches its limits of growth, the excess energy must be spent, expressed in some other form, “used up”, or otherwise destroyed.... Virtually all outpouring of activity ... – the development of baroque ornament and pattern ..., the wanton consumption of animal and plant foods ..., the extreme elaboration of social systems ..., the florescence of new species and the extinction of others ... – all these can be seen, ultimately, as mechanisms that “use up” or express this excess energy. (p. 253)

Accordingly, the prodigally wasteful forms of sexual behaviour amongst animals, or their more flamboyantly useless adaptations, can be understood as ‘mechanisms that “use up” or express this excess energy’.⁹ The unnecessarily baroque horns of wild sheep, along with their ground-shaking but indecisive clashes, and their enthusiastic bouts of non-procreative sex, seem especially good examples of this extravagant dimension of organic life.

Now, I'm a student of culture, not an evolutionary scientist or biologist, so I'm hardly in a good position to judge how valid this theory of exuberance might be as an explanation for some types of biological diversity, and how you'd go about testing that empirically. But, as a student of culture, I can draw a few of lessons from Bagemihl's presentation of the idea. First, we urgently need to continue to critique and recalibrate the most popular and widespread understandings of evolutionary theory, which as they have in the past, continue to provide apparently authoritative modes of naturalisation for ideologies of inequality, from robber-baron capitalism to patriarchal violence to homophobia. And second, there is clearly an exuberant diversity of conceptual models we might try out to explain the exuberant diversity of biological phenomena and behaviour, and as always we limit our knowledge when we insist on a single foundational theory that explains all. We need to be on our guard against *any* simplified and reductive 'argument from nature'. The idea of biological exuberance itself demonstrates this as clearly as evolutionary theory does: it's easy to imagine the consequences of applying this as a form of foundationalist thinking from the domain of biology to the domain of human ideology and economy: as a lesson from nature, the idea that all energy must be wasted, squandered and used up is precisely *not* the one that our current globalised economies and cultures should be learning. Ironically enough, however, it is a pretty good description of how contemporary capitalism actually works ...

As Stephen Jay Gould pointed out back in a 1982 essay for *Natural History*:

[PPT: Gould quote]

Stephen Jay Gould, 'Nonmoral Nature', *Natural History* 91 (February 1981), pp. 19-26:

[N]ature contains no moral messages framed in human terms. Morality is a subject for philosophers, theologians, students of the humanities, indeed for all thinking people. The answers will not be read passively from nature; they do not, and cannot, arise from the data of science. The factual state of the world does not teach us how we, with our powers for good and evil, should alter or preserve it in the most ethical manner.(p. 53)

Along the same lines, Stacey Alaimo asserts that, in recognising the exuberant challenges to heteronormativity that pervade biological nature,

[PPT: Alaimo quote]

[r]ather than simply toss queer animals into the ring of public opinion to battle the still pervasive sense that homosexuality is unnatural, we need to embrace the possibilities for the sexual diversity of animal behavior to help us continue to transform our most basic sense of what nature and culture mean.... [I]t is possible, I think, to look to queer animals, not as a moral model or embodiment of some static universal law, but in order to find, in this astounding biological exuberance, a sense of vast diversity, deviance ..., and a proliferation of astonishing differences that make nonsense of biological reductionism.

Stacey Alaimo, 'Eluding Capture: The Science, Culture, and Pleasure of
"Queer" Animals', in *Queer Ecologies*, ed. Catriona Mortimer-Sandilands and
Bruce Erickson (Indiana UP, 2010), p. 55

These are large issues. Let us find our way back to our sheep again. While all this exuberance is going on amongst the males, we might start to wonder what the ewes and lambs are up to over the hill, in their herds.

[PPT: Bighorn ewe closeup]

Well, of course, the traditional biases of human observers have often meant that female sheep are only discussed in relation to reproduction. So the first thing to say is that, in both feral and wild flocks alike, ewes also engage with each other in all of those affectionate and sexual behaviours I've just been talking about in relation to rams – flehmen, foreleg-kicking, nuzzling, horn-clashing and mounting.¹⁰

But their reproductive behaviour also turns out to be considerably more interesting and potent than conventional accounts allow. Because the ewe – and especially the older ewe, who is no longer suckling or rearing lambs – turns out to be the central figure in ovine society.

As all the experts I've cited so far agree, when left to themselves, sheep are matriarchal. Leadership of the mixed flocks of ewes, lambs and immature rams, *as*

well as the mixed flocks that occur when the mature rams rejoin the others during mating season, belongs to the oldest and most experienced ewe. (This is something that ancient writers knew perfectly well: in the first century CE the Roman naturalist Pliny noted that

[PPT: Pliny quote]

‘[i]t is natural for Rams ... to follow after old Ewes.’¹¹) As J.P. Scott, who wrote a classic study on sheep society in the 1940s, remarks: sheep society challenges our tendency to assume ‘that the ability to lead must be demonstrated by some sort of competition or fighting’. On the contrary, ‘several different sorts of leadership can exist in the sheep besides that based on fighting, which appeared to have only minor significance’. The elderly ewe who leads the flock is invariably

[PPT click: Scott quote]

‘inferior in strength and fighting ability to almost any ram, and often inferior to the younger ewes’; her position is achieved ‘by the care and feeding of her descendents without, as far as the observer can tell, any instance of violence toward her offspring’.¹² Such a realisation perhaps invites us not only to rethink our assumptions about sheep, but indeed about social authority itself; about what it means to lead, to follow, to be an individual, to be part of a society. That’s certainly what Scott, writing in 1945, seems to imply.

So, what about my video example of the Colorado bighorns? Well, in fact, if you watch it all the way through, I can promise you that it repeatedly and consistently shows rams toddling along after ewes, in a way completely ignored by the written cues that appear across the screen. Just to exemplify this briefly, in the one shot where there's a movement of the whole herd – which you've already seen, but let me just how it again –

[PPT: A.M. Colorado: replay 5.00-5.18 herd moves]

– it's quite evident, when you look at it again, that indeed the movement is being led by the ewes and those big muscly blokes are happily following along.

Primatologist Thelma Rowell conducted a study of feral sheep that she specifically designed to challenge the prejudices and assumptions about intelligence and social complexity embodied by comparative psychology's preference for studying animals most like ourselves, that is, other primates. Sheep were chosen as an alternative because they 'are popularly taken as the very paradigm of both gregariousness and silliness', and the study concluded that, at least when they are allowed to flock naturally, sheep display forms of emotional and social intelligence equal to or exceeding those of primates. These include 'an elaborate communicative repertoire and an interactive set of rules for using it'; 'long-term relationships which can carry over periods in which they are not evident'; and techniques for 'assessing and attempting to modify interactions between other sheep', including combinations of

behaviours 'akin to reconciliation'. Moreover, '[t]heir ability to lead and to respond to leadership exceeds anything that has been reported for a primate.'¹³

It's important to note that these and other fundamental features of sheep social behaviour are seldom observable on commercial farms. As Scott explains, this is partly because 'economic practice demands that ewes be sold when relatively young and that a minimum number of rams be kept, and partly because sheep may be kept either in crowded lots or in such large numbers that leadership cannot be analyzed if indeed it exists at all'.¹⁴ This obvious but easily overlooked point also helps explain the belief that sheep are exceptionally stupid and passive animals. This assumption has a long and potent cultural history, but it is also reinforced by the way sheep are most often farmed, which prevents their development of the forms of social intelligence fundamental to their natures. It is not hard to imagine how the disruption to natural patterns of bonding, trust, and leadership resulting from standard sheep-rearing practices might produce such effects.

At the same time as our farming practices disrupt these aspects of their social and emotional lives, they also contort the natural patterns of sexed and sexual behaviour among *Ovis aries*. After all, for eleven millennia, our species has been herding the complexities and diversities of sheep into the most reductive, fixed and monolithic categories of sexual differentiation possible: a femaleness comprising *nothing but* the gestation, birthing and suckling of young; a maleness comprising *nothing but* the capacity to fertilise females.

Let me finish with a single example that makes this point neatly: currently, animal scientists in the USA are currently hard at work trying to identify and eliminate homosexuality in domestic sheep: '[t]he long-term goal [is] to determine the biological and genetic basis of homosexual behaviour, so that duds [the term investigators used for a ram sexually interested only in other rams] could be weeded out of domestic sheep, enhancing the economics of sheep raising': Joan Roughgarden, *Evolution's Rainbow: Diversity, Gender, and Sexuality in Nature and People* (Berkeley, 2004), p. 139. If we're not sufficiently moved by the bleak, joyless, exhausting and reduced fate of animals under such an agricultural regime, then at least we can remember the point that John Berger makes: 'Nearly all modern techniques of social conditioning were first established with animal experiments' (Berger, 'Why Look at Animals', *About Looking*, 1980, p. 11).

¹ . The conventional distinctions between gender and sex are called into question in a human-animal studies context, just as they are by queer feminist theorists like Judith Butler: ‘Most feminist theory distinguishes between sex and gender, positing “gender” as a cultural, and thus solely human construct. Roughgarden, on the other hand, sees gender in nonhuman animals, defining it as “the appearance, behavior, and lived history of a sexed body” (2004, 27). She notes that “many species have three or more genders” (28), ...’ (Alaimo, 65)

² . Geist, *Mountain Sheep: A Study*, pp. 112, 131.

³ . *Ibid.*, pp. 177, 232, 235.

⁴ . T. E. Rowell and C. A. Rowell, ‘The Social Organization of Feral *Ovis aries* Ram Groups in the Pre-rut Period’, *Ethology*, 95 (1993), pp. 213-32; pp. 230-1.

⁵ . Geist describes how difficult he found it to overcome his reluctance to ‘conceive of these magnificent beasts as queers’ in *Mountain Sheep and Man in the Northern Wilds* (Ithaca, NY, 1975), pp. 97-8.

⁶ . George B. Schaller, *Mountain Monarchs: Wild Sheep and Goats of the Himalaya* (Chicago, 1977), p. 238.

⁷ . Theodosius Dobzhansky, ‘Nothing in Biology Makes Sense Except in the Light of Evolution’, *The American Biology Teacher*, 35 (1973), pp. 125-129. A recent example of Dawkins’ use of the phrase can be found by entering the phrase as a search term on the website of the Richard Dawkins Foundation at www.richarddawkins.net.

⁸ . Jonathan Balcombe, *The Pleasurable Kingdom: Animals and the Nature of Feeling Good* (Houndmills, 2006).

⁹ . Bagemihl, *Biological Exuberance*, p. 253.

¹⁰ . Bruce Bagemihl, *Biological Exuberance: Animal Homosexuality and Natural Diversity* (New York, 1999), pp. 405-7.

¹¹ . *Pliny's Natural History*, trans. and ed. Jonathan Couch et al. (London, 1847-8), vol. III, bk VIII, chap. XLVII, p. 86.

¹² . Scott, 'Social Behavior', pp. 8, 15-16, 24, 26.

¹³ . Rowell and Rowell, 'Social Organization', pp. 213, 241.

¹⁴ . Scott, 'Social Behavior', p. 24.