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The Shadow and the Substance

The Sex/Gender Debate

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In spite of the foundational implications of the distinction between 'sex' and 'gender' for feminism, this chapter seeks to explore ways of reconciling the two concepts, so that a unified field of feminist research could be developed, one that encompasses consideration of bodies in the analysis of the social and cultural and that identifies in those bodies, and the interpretation of those bodies, the unmistakable impact of the social and cultural environments within which they exist. This requires recognizing that the mind that creates these environments is both brain and social and cultural product.

The challenge for feminism is to produce a social science that recognizes and understands the biological, without taking biological characteristics as a given, and a biology that takes full account of the fact that human beings are pre-eminently social and cultural creatures who, in shaping the world around them, also shape themselves. It is in this latter area that some of the most exciting developments could lie for a feminist biology.

INTRODUCTION

The sex/gender distinction has been essential to the full flowering of second-wave feminism. The point of making that initial distinction, however, was not to create two concepts, but to allow the concept of gender to take off. And take off it did. There followed over thirty years of enormously productive feminist scholarship, which made evident that what the term 'gender' uncovered was a vast and intellectually fertile domain. This handbook is itself testament to the complexity and richness of this new terrain. But accepting the straightforward existence of something called 'sex', which was not – at least initially – to be an area of investigation for feminism, meant that there was something obdurate embedded at the edges of feminist scholarship that never quite went away.

Quite early in its history, Christine Delphy declared herself disappointed by the concept of 'gender', which had failed, she said, to live up to the promise it carried in embryo: in remaining tied to the concept of 'sex', it had not 'taken wing' but had 'on the contrary seemed to cling onto its daddy' (1984: 24–5). She was dismayed to find that the term 'gender' was so often to be found in composites such as 'sex/gender' or 'sex and gender', in which the forward slash or the 'and' denoted the fact that 'gender' had not separated itself from, but always resided with, 'sex'.

In a sense, the adoption by feminists of the distinction between 'sex' and 'gender' originally proposed by John Money (1965) and theorized by Robert Stoller (1968), however radical its impetus and consequences, embodied a concession. This concession is evident in Ann Oakley's first formulation of the feminist concept of gender, and that is that there were 'natural' differences between the sexes which were self-evident and undeniable: 'The constancy of sex must be admitted,' she said, 'but so also must the variability of gender' (1972: 16). Yet Oakley's own work indicated quite clearly that variability was not the sole prerogative of gender. In *Subject Women* (1981: 54–5), she pointed out, for example, the impact of social situations on testosterone levels in animals, research that has since been confirmed by human studies (Bernhardt et al., 1998). Nevertheless, although the very notion of 'sex' has lately come to seem far more problematical than it used to, and there have now been a number of forays by feminist scholars into the realm of the biological, 'sex' continues to act as something of a lodestone in the study of gender, a taken-for-granted binary divide in the population which unambiguously classifies all human beings, alive or dead.

The concession that was tacitly embodied in Oakley's formulation has returned to haunt feminism. Casual Internet searches reveal a wealth of ruminations on the reinigorated topic of 'nature' versus 'nurture', with a return to the claim – believed successfully dispelled and dismissed by feminism in the 1970s – that there are ineradicable behavioural and psychological characteristics peculiar to women (or in a more 'progressive' vein, peculiar to women and to men) which cannot be wished away by feminist social scientists as the products of social and cultural construction. 'Gender', in other words, is under threat as a concept. Even Delphy herself talks of the 'social *aspect* of the sexual dichotomy' (1984: 24), as if there were something basic and irrefutable about the dichotomy between the sexes as a biological reality.

But before we simply fall into line and concede what looks like the inescapable biological case, it is worth opening up the whole issue of biology for scrutiny. What R. W. Connell described as the 'doctrine of natural difference', the conviction of the foundational character of biological difference for gender, forms for many people, he says, 'a limit *beyond which thought cannot go*' (1987: 66, emphasis added). Indeed, acceptance of the idea that there are fundamental and foundational differences between the sexes is sometimes actively embraced by feminists as an acknowledgement of

the specificity of women's experience in the flesh. Not only does the doctrine of natural difference imply that sex forms the bedrock, the foundation for gender, but the assumption is, as Oakley's statement indicates, that sex has constancy: it is a 'matter of fact', based in a stable biological reality, which by definition does not alter.

One problem, then, lies in what precisely it would mean for the concept of 'gender' to take wing, as Delphy had hoped it would do. For there appears to be an unavoidable sense in which gender is 'about' sex, which makes it difficult to see how gender could cease to be, as Delphy puts it, set on 'anatomical sex like the beret on the head of the legendary Frenchman' (1984: 25). Although the concept of 'gender' first came into being in order to address the potential discrepancy between an individual's anatomy and their attribution of identity to themselves (so that, for example, someone could be anatomically male but see themselves as female), the notion that gender in some sense elaborates on, or builds on, sex, and that sex is a given, seems to obey a compelling logic.

Both of those ideas, the notion that sex is a given and that it is somehow foundational and more 'real' and solid than gender, however, are open to question – on different kinds of grounds admittedly, as we shall see in what follows, but neither should be taken for granted. The apparent solidity and reality of sex is strongly associated with the idea that it is bodies ('sex') that have substance, where minds and relationships ('gender') do not. The idea of what she called the 'materiality' of sex was investigated by Judith Butler in her 1993 book *Bodies That Matter*. In a complex philosophical discussion, she unpicks the contradictions involved in endorsing the claim that the body is somehow outside and beyond minds, relationships, and language (1993: 1–32). How did it come to be the case, she asks, that sex is seen as something irreducible, in other words as something which is essentially outside and beyond human thought?

It is this apparent integrity and solidity to 'sex' that provides the basis for Delphy's disappointment. Particularly problematical for the fate of the concept of 'gender', she says, is the fact that, although 'sex' can be spoken of without 'gender', the same is not true the other way around. In remaining tied to 'sex', Delphy argued, 'gender' becomes no more than a gesture, a way of paying lip-service to the social aspects. As the dependent term in the pair, 'gender' has a tendency to collapse back onto what is regarded as primary: 'sex'. The powerful way in which this collapse operates in all our lives is perfectly encapsulated by a transsexual quoted in Suzanne Kessler and Wendy McKenna's pioneering book, *Gender: An Ethnomethodological Approach*, who said: 'Gender is an anchor, and once people decide what you are they interpret everything you do in the light of that' (1978: 6). The weight in that anchor is 'sex', or to be more precise, genitalia, which, as Kessler and McKenna point out, represent the biological insignia which are seen to determine whether someone is male or female, and are therefore attributed to them as

of right. These 'cultural genitals' are those that it is believed people possess under their clothing, or if not, *ought* to possess, as a legitimate member of their gender category. Gender attribution is therefore in a sense always genital attribution: 'The cultural genitals (not some configuration of biological material) are the foundation for any gender attribution made'¹ (Kessler, 1998: 86). This means that the collapse of 'gender' onto 'sex' goes even further than Delphy suspects, since 'sex' to all intents and purposes amounts to 'genitals'.

In keeping with this insight, Delphy's attempt to retrieve the concept of 'gender' from this collapse lies in exposing what is for her the fact that 'sex' is not a fundamental and incontrovertible reality but a marker, the marker used by a discriminatory and oppressive social system to differentiate between superordinate and subordinate groups of people. 'Sex' marks out the exploited group, women. For Delphy, then, 'sex' is not a matter of fact; rather, sexual differentiation serves a social purpose in patriarchal exploitation. 'Women' and 'men' are social, not biological categories, and the very clarity of the distinction between them, both in practical terms and in terms of discourses, is about the maintenance of what Delphy sometimes describes as two castes within the population. The alleged differences between the sexes are identified, and indeed 'found' to exist, in order to construct the hierarchy between the two. The traits identified, where indeed they exist, would otherwise be no more important than the difference between having blue eyes and having green eyes. One could summarize this by saying that 'sex' is to sexism as 'race' is to racism.

Although persuasive, this point of view seems to go against the grain of common sense, as if it were essentially counter-intuitive. Both Delphy's notion of 'sex' as a marker and Kessler and McKenna's use of the notion of 'cultural genitals' seem to call forth the rejoinder that there really is such an entity as sex and there really are such things as genitalia: their *uses* may be social, but their reality is incontrovertible. Against such views, there will also always be those who, as Simone de Beauvoir pointed out over half a century ago (1972 [1949]: 14), will rush to make the claim that women simply *are not* men and to insist that the difference between the sexes is the most fundamental of human differences, which it is at best foolish and at worst detrimental to ignore. Indeed, with the recent ascendancy of biologicistic explanations in general, and the increasing prestige of genetics in particular, feminism is now faced with something like the return of the repressed, the idea that maybe there really are differences between the sexes, differences which might have implications for the ways in which women and men should be treated.

WOMEN ARE BUT MEN TURNED OUTSIDE IN

One of the most revolutionary and compelling pieces of research of the 1990s, however, is to be found in Thomas Laqueur's luminous book, *Making Sex: Body*

and Gender from the Greeks to Freud. It dislocates our commonsense understanding of what 'sex' and 'gender' are and how they might be related to one another. Put briefly, what Laqueur argues is that 'sex' is a concept which was invented at a particular point in time in our culture. 'Sex' as a biological entity was 'made' rather than simply discovered, and brought into being for reasons other than the scientific.

Not only did the idea of 'sex' not always exist, but in the past – before about 1800 in Europe – bodies were seen in radically different ways from those we take for granted. Far from our ancestors living in a world in which sex was a fundamental reality given by biology, the primary reality for them was a divine order, an order in which bodies were oddly insubstantial things. Women's and men's bodies in pre-Enlightenment accounts are indices of a metaphysical reality – literally a reality beyond the physical – a reality more profound and more fundamental than the presence and disposition of organs, like penis or uterus. Indeed the disposition of organs shows a mutability which would simply provoke incredulity in us: a girl chasing her swine suddenly springs an external penis and scrotum (for vaginas were assumed to be internal ones – penises turned outside in); men associating too much with women lose the more perfect hardness of their bodies and regress towards effeminacy (Laqueur, 1990: 7). As Caroline Walker Bynum (1989) has pointed out in another context, bodies do strange and remarkable things – male bodies lactate; the bodies of female saints are miraculously preserved after death – but these phenomena are related to a completely different understanding of what bodies *are*. As Laqueur puts it, rather than bodily morphology providing evidence of an underlying biological reality, instead it merely 'makes vivid and more palpable a hierarchy of heat and perfection that is in itself not available to the senses' (1990: 27).

Prior to the Enlightenment, what Laqueur calls the 'one-sex model' described woman as a lesser version of man, in whom a lack of 'vital heat' caused her to retain inside her body structures that in men would have been on the outside: 'women are but men turned outside in', as early nineteenth-century doggerel would have it (1990: 4). Men themselves would, in Christian theology, have been placed below the diverse orders of the angels, but above the whole of the animal kingdom. What emerges after the Enlightenment to replace this view is the notion, familiar to us, of a fundamental polarity between the sexes based upon discoverable biological differences: 'No longer would those who think about such matters regard woman as a lesser version of man along a vertical axis of infinite gradations but rather as an altogether different creature along a horizontal axis whose middle ground was largely empty' (1990: 148).

So important is this sense of an empty middle ground between the sexes, of a no-(wo)man's land that separates them and that no human being should occupy, that surgery carried out on the genitalia of intersexed infants effectively sets out to create it. Suzanne Kessler (1998: 43) points out that there are published guidelines for clitoral and penile size, which are devised so as to leave a clear 1.5 cm gap between the two sets of measurements. The result

is that clitoral lengths above the stipulated maximum will tend to be surgically reduced, while penises below the required dimensions could even lead to the reassignment of the child to a gender deemed more appropriate to the size of his genital.

The temptation, of course, would be simply to say that our ancestors got it wrong, that scientific advances have revealed the ideas behind the 'one-sex model' to be a myth. But Laqueur does not allow us such comforting rationalizations. The historical evidence reveals that the reconsideration of the nature of women and men which is the basis of our understanding occurs roughly 100 years before the scientific discoveries that are brought to bear to support it: 'In place of what, in certain situations, strikes the modern imagination as an almost perverse insistence on understanding sexual difference as a matter of degree, gradations of one basic male type, there arose a shrill call to articulate sharp corporeal distinctions' (Laqueur, 1990: 5). What is also marked after 1800 is that bodies are being thought of in a different way, as the foundation and guarantor of particular sorts of social arrangements (1990: 29). As Laqueur puts it, 'no one was much interested in looking for evidence of two distinct sexes until such differences became politically important' (1990: 10).

SEX AS A MOTIVATED INVENTION?

What Laqueur's book suggests, then, is that 'sex' is a motivated invention, born, if you like, of gender. In that sense, he might seem to agree with Delphy. He demonstrates very clearly the inextricable link between the ways in which bodies are imagined and what we would now recognize as the political and cultural imperatives of gender. More importantly, what he suggests is that the body does not automatically give itself to be interpreted in this or that particular way: 'Two sexes are not the necessary, natural consequence of corporeal difference. Nor, for that matter, is one sex' (1990: 243). This contention is in part an issue about the body itself, as something which is not as unambiguous as it first appears, and in part a point about human knowledge. Talking of the anthropological literature, he has a wonderful description of the way in which human purposes, symbolism, frameworks of interpretation, and even fantasy can act to transform things that appear to have an unassailable reality into something rich and strange:

The cassowary, a large, flightless, ostrich-like, and, to the anthropologist, epicene bird, becomes to the male Sambian tribesman a temperamental, wild, masculinized female who gives birth through the anus and whose feces have procreative powers; the bird becomes powerfully bisexual. Why, asks the ethnographer Gilbert Herdt, do people as astute as the Sambia 'believe' in anal birth? Because anything one says, outside of very specific contexts, about the biology of sex, even among the brute beasts, is already informed by a theory of sameness and difference. (1990: 19)

Laqueur's point is that human beings impose their own symbolic order onto what he calls a world of continuous shades of difference and similarity. Particular symbolic configurations make little sense to an outsider, and the same object may well appear in widely differing ways within different systems of meaning. Quoting Claude Lévi-Strauss's example about the sagebrush, *Artemisia*, and the variable parts it plays in association with other plants in a Native American ritual, Laqueur says: 'No principle of opposition could be subtler than the tiny differences in leaf serrations that come to carry such enormous symbolic weight' (1990: 19)

In short, carving out what is empirical reality from human purpose is no straightforward matter. Our obvious rejoinder might be to reach for the scientific method as the guarantor that what *we* are dealing with when *we* look at cassowaries, sagebrush, or indeed male and female bodies in their infinite variety is what is *really* there. Unfortunately, as in every other area of scientific work, a set of methodological protocols certainly provides some assistance, but it does not supply any guarantees.

Some of the most interesting recent work, such as that of feminist biologists like Anne Fausto-Sterling (1989; 1992; 2000), has been invaluable in uncovering the gendered assumptions embedded in the supposedly cool neutrality of biological research on 'sex'. The places in which such gendered assumptions are to be found can be quite subtle and surprising. In an article written as early as 1989, entitled 'Life in the XY Corral', Fausto-Sterling identified the complex ways in which gendered assumptions entered into such obscurely technical issues as the role of the cell nucleus and gene activity in embryological development. She makes the case that these assumptions downplay other vital contributory factors, not least of which is the part played by the cytoplasm of the egg cell. Her more general point is 'not that political philosophies cause bad theory choice, but that there are often several fairly good accounts of existing data available. Which theory predominates depends on much more than just how well the data and the facts fit together' (1989: 324).

Does that mean, though, that our whole idea of 'sex' is, as Delphy suggests, a politically constructed fiction? Well, not necessarily. But we do now have to think very hard about how we should henceforth regard the scientific discoveries associated with the idea of 'sex' that to us seem so unimpeachable precisely because they are scientific. We might all be familiar with the idea that the science of sexuality can be host to some dubious gendered assumptions, as Emily Martin (1991) pointed out in her article on the romance of the egg and the sperm. But none of us doubts the existence of egg and sperm. Indeed, Laqueur finds himself in some difficulty here because, on the one hand, he quite clearly believes that scientific advances *have* taken place, talking of certain beliefs about sex as 'patently absurd', while on the other, he argues that the whole science of difference is misconceived (1990: 21–2). There is simply no discussion of biological realities

that does not have its admixture of value, desire, and social and political exigency:

Sex, like being human, is contextual. Attempts to isolate it from its discursive, socially determined milieu are as doomed to failure as the *philosophe's* search for a truly wild child or the modern anthropologist's efforts to filter out the cultural so as to leave a residue of essential humanity. And I would go further and add that the private enclosed stable body that seems to lie at the basis of modern notions of sexual difference is also the product of particular, historical, cultural moments. It too, like opposite sexes, comes into and out of focus. (Laqueur, 1990: 16)

We might then logically suppose that even eggs and sperm themselves – regardless of any romance they may be engaged in – are to be cast into doubt. Laqueur clearly wants to resist any such notion, and what he describes as the erosion of the 'body's priority over language'. He identifies what he calls a powerful tendency among feminists to empty sex of its content by arguing that natural differences are really cultural. He also says, however, quoting Maurice Godelier, that 'society haunts the body's sexuality'. He describes his own work and much feminist scholarship in general as caught in the tensions of this contradictory formulation, 'between nature and culture; between "biological sex" and the endless social and political markers of difference'. The analytical distinction between sex and gender, he suggests, 'gives voice to these alternatives and has always been precarious'. 'We remain poised,' he goes on, 'between the body as that extraordinary fragile, feeling and transient mass of flesh with which we are all familiar – too familiar – and the body that is so hopelessly bound to its cultural meanings as to elude unmediated access' (1990: 11–12).

Judith Butler suggests that talking about the social construction of the natural appears to produce 'the cancellation of the natural by the social':

Insofar as it relies on this construal, the sex/gender distinction founders...if gender is the social significance that sex assumes within a given culture...then what, if anything, is left of 'sex' once it has assumed its social character as gender?...If gender consists of the social meanings that sex assumes, then sex does not *accrue* social meanings as additive properties, but rather *is replaced by* the social meanings it takes on; sex is relinquished in the course of that assumption, and gender emerges, not as a term in a continued relationship of opposition to sex, but as the term which absorbs and displaces 'sex'. (1993: 5, original emphasis)

We cannot, however, remain poised over a precarious analytical distinction between 'sex' and 'gender', in which the former at least comes into and out of focus, nor can we simply obliterate what is designated by the term 'sex' by bringing it under the heading of 'gender' as that is commonly understood.

THE HAUNTING OF THE BODY'S SEX

An abiding theme of the last decade has been the feminist dilemma of how we should think about the body and 'sex' in a context in which we are

aware that what we have now come to think of as 'gender' plays a major role. Attempts have been made both to recoup and recognize what are deemed to be the biological realities of women's lives (often indistinguishable from those things with which opponents of feminism had weighed women down in the past) and, by contrast, virtually to dissolve what Laqueur calls that 'transient mass of flesh' into something which appears at first sight to be nothing but social meanings. Since neither provides a satisfactory alternative, we have to find a way not so much of maintaining what Butler describes as 'a continued relationship of opposition' between 'gender' and 'sex', as of bringing them together and reconciling them.

One way of doing so is to begin to see the relationship between 'sex' and 'gender' less like a relationship between chalk and cheese, and rather more in terms of what Laqueur points out is the impossibility of ever entirely separating the body and our understanding of it from its socially determined milieu. Part of this reconceptualization involves dismantling the taken-for-grantedness of 'sex' as a form of categorization for human beings and examining the ways in which such a categorization is built. As early as 1932, a biologist called John Lillie pointed out that 'sex', rather than being an entity, was just a label which covered our total impression of the differences between women and men. This view is confirmed by contemporary biological research, which is increasingly breaking down what we label 'sex' into its component parts, so that we would now say that it takes a number of quite complex processes to come together and cohere in order to produce what we would spontaneously identify as a male or female animal.

One of the sharpest and fastest ways to arrive at an understanding of the complexity of what lies under the heading of 'sex' is to look at those who disturb our conventional sexual categories, for example transsexuals, but more especially, the intersexed. In this context, undoubtedly one of the most significant pieces of work of the last twenty-five years has been Michel Foucault's (1980) case history of *Herculine Barbin*, the hermaphrodite who was brought up as a girl but was subsequently reassigned to the male sex, a reassignment that resulted in her suicide. It is with Herculine that we first see doctors assuming that underneath her indeterminate anatomy was hidden what she *really* was and striving to decipher 'the true sex that was hidden beneath ambiguous appearances' (1980: viii). As Foucault points out, it is the moment in history when hermaphrodites stop being people in whom a combination of sexual characteristics can be found (and who might therefore be allowed to choose what they wished to be) and become those whose bodies deceptively hide their real identities, their *true* sex, which the expertise of the doctors can detect. At that point in time, our world becomes one in which, Foucault says, sexual irregularities are henceforth to be seen to belong to the realm of chimeras, those fictions which represent errors in the most classically philosophical sense; in other words, 'a manner of acting which is not *adequate to reality*' (1980: x, emphasis added).

Hermaphrodites, or what we would now call the intersexed, become – in a notion which is entirely familiar to us – ‘errors’ of nature, a way in which reality is not adequate to itself. This is the point at which we could say that ‘sex’ as an ontological category, as something that defines us in the depths of our being, is born. Herculine had the misfortune to live on the cusp of this new world, in which the intersexed are no longer able to be themselves (providing they did not behave in a licentious manner and take advantage of their ambiguity by having sex with both women and men alike), but had to be redefined as ‘really’ something else, a man or a woman. With Herculine’s case history, we can also watch the doctors strive to identify what might be the *real* markers of sex. Despite concluding that Herculine had both vagina and clitoris, the clinching element for them is the presence of testes and spermatid cords (even though there are no sperm), which leads them to conclude that, upbringing notwithstanding, Herculine is really a man. There is, in other words, an alignment of the components of sex in such a way as to tidy up the picture, to produce a clear binary divide when the empirical evidence provided by Herculine’s body defied all attempts to place it categorically on one side or the other of that sexual divide. It marks the moment when a conviction is born that even if the elements that make up a sexed creature do not line up, they *ought to*.

Fausto-Sterling’s research indicates just how persistent the notion is that all of the processes necessary to the creation of a sexed being automatically fall into place to produce a clear binary divide in the population, and that there is, furthermore, a single ‘key’ that locks the whole thing into place. Criticizing the work of David Page et al. (1987) who set out to look for a master ‘sex-determining locus’ in the Y chromosome of male mammals, she points out just how many different items we might regard as key to identifying sex:

In both XX males and XY females, then, what does the notion of a sex-determining gene mean? Is maleness decided on the basis of external genital structure? Often not, since sometimes physicians decide that an individual with female genitalia is really a male and surgically correct the external structures so that they match the chromosomal and hormonal sex. Is it the presence of an ovary or testis that decides the matter? If so, oughtn’t the gonad to have germ cells in it to ‘count’? Or is it enough to be in the right place and to have the right superficial histological structure? There are no good answers to these questions because EVEN biologically speaking sex is not such an either/or construct. Page and co-workers chose to leave some of the messy facts out of their account, which makes the story look much cleaner than it actually is. (1989: 328–9)

Maybe, then, egg and sperm are not as obvious as they might at first appear to be? If Fausto-Sterling is right, can we any longer be sure that, even if we can see them under the microscope, our interpretations of egg and sperm are really correct? What mechanism can we use to separate them clearly from the admixture of social and cultural concerns with which we imbue them?

Even if we are led to doubt the correctness of our interpretations, however, awareness of this kind does not lead us to obliterate their existence merely

because our understanding of them is bound up with the imperatives of the world in which we live. The key lies in recognizing that entities like egg and sperm, even if they seem pristinely biological, do not come into being in that pristine a way for us: we only come to know them in what are very precisely definable social contexts. The strength of their capacity to exist independently, and therefore in some sense their scientific longevity, is marked by the extent to which they can continue to exist and their existence be confirmed in other, quite different contexts. Put very simply, if recognition of egg and sperm allow *in vitro* fertilization to take place successfully, we can be fairly sure that they are what we assume them to be.

Take the notion of sex hormones, which are not only a consistent feature of our world, but, as pharmaceutical preparations, some of the most widely consumed of all drugs (not least in the form of the contraceptive pill). Should the idea that they are social constructs necessarily imply that this is all that they are, or that their social meaning in some sense cancels their biological reality? Nelly Oudshoorn's 1994 book *Beyond the Natural Body: An Archaeology of Sex Hormones* would suggest not. The hormones do, nevertheless, emerge from their history as constructs, quite literally things that were built. But they are built of a combination of things, both 'natural' and 'social': the concepts that inform their discovery, the investigative context in which that discovery takes place, the professional rivalries and relationships that shape how they come to be described, the manner in which the substances are isolated chemically, the uses to which they are put, the clinical settings in which they are deployed. The sense that emerges from Oudshoorn's book is that hormones can be both socially constructed and historically specific and yet also what we would recognize conventionally as 'material objects' that have a defined effect on the world around them, in this case on the bodies of those that ingest them.

One obvious way in which they can be regarded as socially constructed is to be found in the very name given to them as 'sex' hormones. As Oudshoorn points out, part of the ideas that surrounded their discovery was that, like the portion of the Y chromosome researched by Page et al. (0.2 per cent of it!), they might just provide the key to what made women women and men men, something which is reflected in their subsequent extensive clinical uses in the restoration of 'femininity' to post-menopausal women. The expectation that they might provide the key to sex was, however, belied by the discovery not only that women, for example, secrete testosterone (the allegedly 'male' hormone) but also by the fact that oestrogen was first isolated in the urine of, not mares, but stallions.

The social construction of the 'sex hormones', then, is about much more than words and social meanings – although it is about those, too. In a more profound sense, they are socially constructed through the wide range of elements that contributed to their birth and maintain and sustain their existence thereafter. Oudshoorn makes the point that science encompasses much more than theories and facts: it involves laboratories, investigative

techniques, relationships between scientists, commercial settings, complex instrumentation, a whole social reality that also entails a range of what she calls 'material conditions' and 'material effects' (1994: 13). Therefore, when we look at such seemingly simple ideas as that of 'egg' and 'sperm', we need to be alive not only to the ways in which the facts and the theories have been put together but to the whole context in which the objects they identify exist, a complex combination of 'social' and 'natural' elements. And when we focus in on the concepts of 'egg' and 'sperm' themselves, we have to remember the differences that are wrought in those concepts by the assumptions with which we imbue them. Thinking of the egg as a large mass that simply waits passively for the arrival of an aggressive little sperm provides for a very different picture from the idea of an egg cell whose outer membrane draws the sperm in or whose cytoplasm plays a key role in embryological cell differentiation (Fausto-Sterling, 1989: 322).

BODY AND SOUL

There is, nevertheless, another way that we can think about the complexity of the processes that need to combine in order to produce what we spontaneously recognize as male or female animal. One of the major insights of Kessler and McKenna's early work (1978) was that when we make a judgement that someone is male or female, what we use in doing so is all of a piece. For that reason and because that process obeys some key social rules, they describe it not as the attribution of 'sex' but as 'gender attribution.'² In that sense, they also refuse to differentiate between the processes employed by biologists in categorizing people into one sex or another and the processes used by the rest of us. And there is a kind of wisdom in this.

What we are seeing when we make the instantaneous gesture of classifying someone as female or male is a seamless combination of the biology of the body and the social and cultural context in which that body exists. In spite of the early tussles between feminists and anti-feminists over whether or not a particular feature belonged more properly to 'gender' or to 'sex', in practice the two are indistinguishable from one another. There will never be any natural experiment in which we might find out what the sexed body entails entirely outside the ways in which it, and the person whose body it is, has been gendered. Seeing 'sex' and the body as socially constructed, therefore, could also mean looking at the ways in which the body might itself be shaped by a social and cultural context. Connell, in keeping with Marx's notion that human beings transform the material world they encounter, including themselves and their own lives, talks of the practical transformation of the human body in its encounter with culture. 'In the reality of practice,' he says, 'the body is never outside history and history is never free of bodily presence and effects on the body' (1987: 87). As an example, he describes the way in which

particular combinations of force and skill become strongly cathected (in other words, emotionally charged) aspects of an adolescent boy's life. These owe as much to fantasy as they do to activity, and together they produce a model of bodily action and bodily conformation whose result is, as Connell puts it, 'a statement embedded in the body':

The social definition of men as holders of power is translated not only into mental body-images and fantasies, but into muscle tensions, posture, the feel and texture of the body. This is one of the main ways in which the power of men becomes 'naturalized,' i.e. seen as part of the order of nature. (1987: 85)

In fact, of course, one needs to go beyond the generality of men as a social grouping, not merely in terms of the inflections produced by class or culture, but towards the kind of cultural detail provided by, say, Loïc Wacquant in *Body & Soul: Notebooks of an Apprentice Boxer* (2003). Wacquant – who, incidentally, proposes the idea of a somatic sociology – charts his own training as, and transformation into, a boxer, describing the notion of the pugilist's honour, which requires that the boxer develop the mental resolve to fight on, regardless of pain or discomfort and possible or even actual injury. In other words, the process of becoming a boxer involves not only the creation of a particular kind of body but also the shaping of a whole moral and psychological universe inhabited by the boxer.

An analogous point can be made about developing the body of a classical ballet dancer, who, in a much more systematic way than the general incorporation of masculinity into the body of the adolescent boy, learns quite precisely what the body of a dancer should *feel* like and the appropriate mental attitudes to accompany and foster success as a dancer. In that process, the body itself is literally reshaped – it becomes a particular kind of object, with distinctive musculature and capabilities – but so too, as the title of Wacquant's book indicates, does the soul. Body and mind – musculature and skill, fantasy and conceptualization – are indivisible here. Furthermore, this melding has to be understood to go much further than mere morphology; it has to be taken right through to the biochemistry of body and brain. What is happening here is quite literally an in-corporation, the creation of a particular way of incarnating masculinity, femininity, or even a transgendered status, in the body. We shape ourselves at the very moment in which we are shaped.

Although these forms of incorporation describe very well the way in which gender goes considerably beyond the apparently insubstantial questions of minds and relationships, understanding of these processes tends to be limited to the sociology of the body. What is lacking here is much recognition or investigation into the potential for transformation of the human body from within biology. There is ample attention paid within the pages of the journal *Body & Society*, for example, to both the symbolic aspects and the lived experience of such forms of incorporation as those of, say, women body builders, but a relative lack of engagement within the biological sciences with the ways in which social, psychological, and cultural elements interface

with the physiology of the body. The general way in which transformation of the body is conceptualized is limited by an assumption, familiar to us from athletic competition and the controversy over the use of banned substances (now not even describable as drugs), that the body sets limitations to this process. There is, apparently, only so much transformation any body can take. If anything, this assumption is strengthened where sexual difference is concerned, as if it were there to form a counterweight to disturbance caused by the contemporary blurring of gender boundaries and the fact that we are routinely witness to transsexual reassignments that are so effective they would be undetectable without prior knowledge.

FISHES LIVE IN THE SEA

There is some evidence that we have barely begun to understand the potential malleability of the body, malleability of the kind that was so graphically illustrated over half a century ago by W. B. Cannon's investigation into what he called 'voodoo death', the situation in which someone with no apparent physiological abnormalities dies following a curse by a witch doctor (Cannon, 1942; Sternberg, 2002).³ Biological research and the prevalence and popularity of genetic explanations are largely driving in the opposite direction.

Part of the revived rhetoric of sexual difference currently in circulation is the injunction to accept that there might be fundamental genetic, hormonal, physiological, and psychological differences between the sexes with which we must all come to terms, and we seem to be particularly enjoined to deny any malleability in the distinction between women and men. In that context, our current behaviours and ways of being are believed to reveal our natural boundaries.

Erving Goffman describes this rather complacent approach to human behaviour in *Gender Advertisements* (1979) when he identifies the little bit of folk wisdom that underpins the ways in which we consider ourselves and naturalize our own behaviours:

There is a wide agreement that fishes live in the sea because they cannot breathe on land, and that we live on land because we cannot breathe in the sea. This proximate, everyday account can be spelled out in ever increasing physiological detail, and exceptional cases and circumstances uncovered, but the general answer will ordinarily suffice, namely an appeal to the nature of the beast, to the givens and conditions of his existence, and a guileless use of the term 'because.' Note, in this happy bit of folk wisdom – as sound and scientific surely as it needs to be – the land and the sea can be taken as there prior to fishes and men, and not, contrary to genesis – put there so that fishes and men, when they arrived, would find a suitable place awaiting them. (1979: 6)

This little parable about the fishes draws attention to the fact that we tend to explain what happens and how we behave by dint of an appeal to 'the very

conditions of our being'. There is a deeply held belief in our culture, which we apply to ourselves in relation to what Goffman calls 'gender displays', that objects are passively informing about themselves through the imprints they leave on the surrounding environment, that they give off unintended signs of what it is that they are: 'they cast a shadow, heat up the surround, strew indications, leave an imprint; they impress a part picture of themselves' (1979: 6). As human beings, says Goffman, we learn not only how to convey and express who we are to others, but also to abide by our own conceptions of expressivity, to convey that characterological expression as if it were natural and unavoidable. In terms of gender, we not only learn to be a particular kind of object, but to be 'the kind of object to which the doctrine of natural expression applies...We are socialized to confirm our own hypotheses about our natures' (1979: 7). We learn how to behave and then, like learning to ride a bicycle, we forget that we once wobbled and found the whole thing improbable and impossible, and it all comes naturally. The lack of conscious intentionality in a large part of our performance then supplies its 'naturalness'.

Not to take account of this latent reflexive capacity in human behaviour is crucially to miss a trick. It is not merely that we can be self-conscious about particular encounters and our behaviours within them, or indeed about the whole repertoire we have at our disposal, it is that we need to have an understanding that behaviours are the behaviours of whole bodies in social settings, and it is for this reason that Goffman begins by considering gender displays under the heading of ethology. The application of ethology to human beings, however, is often interpreted to mean a reduction and simplification of human behaviours to some allegedly more primitive state of affairs (take Desmond Morris's *The Naked Ape* as a caricatural example), which belies and bypasses the sophistication of the cultures within which human beings operate and negotiate their being.

Thus, the gender displays we supply to others to provide background information about our sex and our selves are no different in kind from the 'background information' that an eighteenth-century slave owner might employ in addressing his slaves, or a twenty-first-century motorist in responding to a police officer. They represent our own staging of something which quite literally *embodies* discourse and conceptualization, fantasy, social and psychological knowledge, and so on, and it is there to set the terms of the engagement. Anyone who has ever watched a parent dealing with a child in a way which is markedly different from the way one would deal with one's own child is testament to these processes: the tone of voice that is rather too loud for someone standing a mere two feet away, the slowed-down speech patterns that imply some notion of the essential idiocy of children – all of these attest to a common way of conceptualizing the status and capabilities of the child, some of which they share with those defined as 'elderly' and with foreigners who, perversely, refuse to speak English. In a more complex vein, in *Counting Girls Out*, Valerie Walkerdine and her co-authors give some enlightening

descriptions of the ways in which the respective behaviours of middle-class and working-class mothers towards their children reveal assumptions about what a 'good mother' is and how she should conduct herself in relation to her child – the middle-class-mother-as-educator, for example, for whom 'every possible permutation of events, actions and conversations becomes a "not-to-be-missed" opportunity for a valuable lesson' (Walkerline et al., 1989: 46).

The fact of such a staging also being a 'statement in the body' naturalizes the performance, for what could be more 'natural' than the body? The over-loud tone of voice used with children, the elderly, or foreigners is clearly simply that which is deemed necessary. From the point of view of either the actor or the recipient of any such performance, it is all a matter of knowing who one is dealing with. The marked particularity of persons, or for that matter the specification of objects in the natural world (dangerous or benign snakes, for example), is there merely to allow one to know how to respond appropriately, safely, and in a way that allows for some prediction of the outcome.

It would certainly be naïve therefore to downplay the way in which human beings actively negotiate and shape such processes, including the representation of their sex. The biological underpinnings are not the impoverished *reductio ad absurdum* given to us by much contemporary evolutionary psychology, but the potential province of a new and dynamic feminist biology – a socio-biology in the true sense. Until and unless we recognize the unity of these processes, of the complex human biological apparatus and the sophisticated psychological and social engagements created by that apparatus, which in its turn shape its creator, we shall be condemned to miss the point in terms of 'sex' and 'gender' and the relationship between them.

NOTES

1 In fact, when Kessler and McKenna's book was first published, there was arguably only a single genital being attributed, the penis, with men being defined as possessing a penis and women as lacking one, just as any good Freudian might have expected. More recently, in *Lessons from the Intersexed*, Kessler suggests that there is some evidence that vaginas may now be emerging as cultural genitals, although 'there are no cultural clitorises' (1998: 157, n.15). This is in keeping with the dominance of a reproductive imperative in the way in which women's bodies are read. So it is not only that gender attribution and genital attribution can be considered synonymous, it is that the only legitimate cultural genitals for women are arguably those which are tied to, the potential at least, of reproduction.

2 Kessler and McKenna face a similar problem to that confronted by Laqueur insofar as they have difficulty accommodating the biological itself in their argument about the primacy of gender attribution. Speculating as to whether or not infants have an inherent capacity to detect the difference between the sexes prior to their learning the rules for gender attribution and about the fact that small children are better at 'seeing through' the attempts by transsexuals to 'pass' in their chosen gender, Kessler and McKenna find themselves

resorting to a concept of 'gender' differentiation, which they endeavour to explain, not entirely successfully, as the identification of whether someone is 'the same' as oneself or not, 'perhaps in terms of some basic reproductive criteria' (1978: 166–67). The quotation marks around the term 'gender' in that formulation reveal the tension within it.

3 Claude Lévi-Strauss (1977) explains 'voodoo death' as being produced by the shock of the withdrawal of all social anchorage points from the person being cursed, who is effectively declared dead. This is, to all intents and purposes, the dissolution of their social personality. The result is that their physical integrity thereby collapses with, amongst other things, a catastrophic and ultimately lethal drop in blood pressure.

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