

3 Natural facts: a historical perspective on science and sexuality

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Introduction

The distinction between women as natural and men as cultural appeals to a set of ideas about the biological foundations of womanhood. Understanding the historical dimensions of these two inter-related pairs of dichotomies in European thought entails revealing the connections between science and sexuality. Sex roles were constituted in a scientific and medical language, and, conversely, the natural sciences and medicine were suffused with sexual imagery. This paper explores the links between nature/culture, woman/man through a historical study of the biomedical sciences and the metaphors and symbols they employed. I draw my examples principally from eighteenth- and nineteenth-century France and Britain.

Since the eighteenth century the polarities seem to have hardened, yet the lived experience to which they supposedly relate was extremely complex. Recent feminist history has shown the diversity of women's social and occupational roles despite the inflexibility of contemporary ideas about them.¹ The lack of fit between ideas and experience clearly points to the ideological function of the nature/culture dichotomy as applied to gender. This ideological message was increasingly conveyed in the language of medicine.

As there seems no easy way to reconcile material conditions with ideas

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1 See for example, Hufton (1971: 1975-6).

of sex roles, some feminist scholars have been tempted to turn for help to another dichotomy, that of oppressor/oppressed. Dichotomies such as man/woman illustrate the simplistic model of oppression which is useful because it seems to imply a clear power relationship:

nature	:	culture
woman	:	man
oppressed	:	oppressor
(because powerless)		(because powerful)

This approach takes a simple social relationship and finds a natural basis for it, so that, for example, women become the bearers of ignorance and men of knowledge. We then construct this as a form of oppression. But in doing so, we abstract from the dichotomy only one of its dimensions. Historically, the notion of women as natural contained not just women as superstitious but also women as the carriers of a new morality through which the artificiality of civilization could be transcended. In the same way, men as culture implied not just the progressive light of reason but also the corruption and exploitation of civil society. Next to what is presented as the desirable domination of superstition by reason, and women by men, in Mozart's opera *The Magic Flute*, one must put repugnance for the exploitation and inequality generated by masculine domination expressed in the eighteenth-century French novel *Paul et Virginie*. And in the end, it is not the possibility of finding texts with these extreme views clearly expressed which is most interesting, but rather the extent to which they were inseparably intertwined, as, for example, in the popular books on women published in the mid nineteenth century by the French historian Jules Michelet.

In our attempts to understand the deployment of symbols and metaphors, we must recognize the fact that one of the most powerful ways of using them in our culture has been in the form of these dichotomies, where the two opposed terms mutually define each other. It is not just male and female, masculine and feminine, or nature and culture, but also town and country, matter and spirit, body and mind, capitalist and worker — our entire philosophical set describes natural and social phenomena in terms of oppositional characteristics. Each polarity has its own history, but it also develops related meanings to other dichotomies. For instance, the pairs church and state, town and country also contain allusions to gender differences, and to nature and culture. Transformations between sets of dichotomies are performed all the time. Thus, man/woman is only one couple in a common matrix, and this reinforces the point that it cannot be seen as isolated or autonomous.

The power of dichotomies such as man/woman, nature/culture, city/country does not just consist in the apparent clarity of definition by contrast. More important is the possibility of a dialectical relationship between

the members of each pair which is an essential part of their social value. The fact that there are a number of related pairs, and that the terms of each one have a complex relationship to one another further reinforces the point that we are not speaking here of simple linear hierarchies. Debates about sex and sex roles, especially during the nineteenth century, hinged precisely on the ways in which sexual boundaries might become blurred. It is as if the social order depended on clarity with respect to certain key distinctions whose symbolic meanings spread far beyond their explicit context. At certain times (perhaps times of perceived rapid change), physicians were deeply concerned about the feminization of men, for which homosexuality could be adduced as evidence, and the masculinization of women, which they believed could result from excessive physical or mental work. Raymond Williams has suggested that oppositional pairs provided a way to explore the parameters of change without upsetting the social order. He takes a case which is analogous and closely related to the one this book addresses — the long established Western dichotomy between the city and the country:

On the country has gathered the idea of a natural way of life: of peace, innocence, and simple virtue. On the city has gathered the idea of an achieved centre: of learning, communication, light. Powerful hostile associations have also developed: on the city as a place of noise, worldliness and ambition; on the country as a place of backwardness, ignorance, limitation [Williams 1975:9].

This quotation illustrates the point that more complexity can be held within dichotomies than at first sight appears. It also suggests that the city/country opposition has a sexual dimension. The innocence and simple virtues of country people were typically expressed through the unworldly sentiment of women. The negative image of the country, pervasive in Enlightenment writings, portrayed the superstitious and credulous behaviour of peasant women. The 'light' and civilization of city culture were symbols of male capacity for abstract thought and intellectual genius. The negative side of urban life was best expressed in exploitative domination and economic competition, clear metaphors of masculinity. Despite the superficial clarity of the city/country polarity, Williams stresses that it is the relationship between the two which has posed fundamental questions. Cities arise out of the countryside, urban and rural life are inescapably linked, while between cities and the country lie a whole host of intermediate forms of human settlements: villages, towns, suburbs, garden cities. The dichotomy seems to deny historical reality, which suggests that there must be a reason for the persistence of these archetypes; possibly it lies in the way they provide coherence in the face of threatened social disorganization.

The oppositions between women as nature and men as culture were expressed concretely through distinctions commonly made such as that

between women's work and men's work. The ideological dimension to these oppositions is discernable in the dichotomy constructed by the elite of the medical profession between male strength and female vulnerability. Social and conceptual changes take place slowly and in piecemeal and fragmented ways. Our project is not to search for neat consistent ideological structures, but through the contradictions, tensions and paradoxes to find patterns we can understand.

There are strong reasons for beginning with the Enlightenment. In this period the shifts in meaning and usage of words such as culture, civil, civilize, nature and life, provide indicators of deep changes in the way human society and its relations with the natural world were conceived. Ultimately, the Enlightenment is no easier to define than notions of nature and culture are, but, in the term itself, we can see an appeal to light as a symbol of a certain form of knowledge which had the potential for improving human existence. Rational knowledge based on empirical information derived from the senses was deemed the best foundation for secure knowledge. Starting with a sensualist epistemology, and a number of assumptions about the potential social application of an understanding of natural laws, many Enlightenment writers critically examined forms of social organization. In so doing, they employed a language fraught with sexual metaphor, and systematically examined the natural facts of sexuality.

Science and medicine were fundamental to this endeavour in three different ways. First, natural philosophers and medical writers addressed themselves to phenomena in the natural world such as reproduction and generation, sexual behaviour, and sex-related diseases. Second, science and medicine held a privileged position because their methods appeared to be the only ones which would lead away from religious orthodoxy and towards a secular, empirically based knowledge of the natural and social worlds. Finally, as I hope to show, science and medicine as activities were associated with sexual metaphors which were clearly expressed in designating nature as a woman to be unveiled, unclothed and penetrated by masculine science. The relationship between women and nature, and men and culture must therefore be examined through the mediations of science and medicine.

Enlightened environmentalism

In the self-conscious scientism of the Enlightenment, the capacity of the human mind to delve into the secrets of nature was celebrated. Increasingly this capacity for scientific prowess was conceptualized as a male gift, just as nature was the fertile woman, and sometimes the archetypal mother (Kolodny 1975). People had explored their capacity to master and manipulate nature for many centuries (Glacken 1967), but the powerful analytical tools of the natural sciences and the techniques of engineering and tech-

nology enormously enhanced their confidence that human power over the environment was boundless. As Bacon expressed it in the early seventeenth century, 'My only earthly wish is . . . to stretch the deplorably narrow limits of man's dominion over the universe to their promised bounds' (Farrington 1964:62). And the process by which Bacon thought this would be achieved was a casting off of 'the darkness of antiquity' in favour of the detailed study of nature (Farrington 1964:69). 'I am come in very truth leading to you Nature with all her children to bind her to your service and make her your slave' (Farrington 1964:62).

In discussions of human domination over nature, the concept of environment comes to hold an important, and complex, place from the late eighteenth century onwards (Jordanova 1979). Above all, the environment was that cluster of variables which acted upon organisms and were responsible for many of their characteristics. An understanding of human beings in sickness and in health was to be based on a large number of powerful environmental factors; climate, diet, housing, work, family situation, geography and atmosphere. This notion of environment could be split into two. First, there were variables such as custom and government which were human creations and were, at least in principle, amenable to change. Second, there were parameters such as climate, meteorology in general, geographical features such as rivers and mountains, which were in the province of immutable natural laws and proved more challenging to human power. In the first case environment denoted culture, in the second, nature.

Taking environment in the sense of culture, it was clear to people at the end of the eighteenth century that living things and their environment were continually interacting and changing each other in the process. This was also true of sexuality, for, although sex roles were seen as being in some sense 'in nature' because of their relationship to physical characteristics, it was also acknowledged that they were mutable, just as physiology and anatomy in general were taken to be. The customs and habits of day-to-day life such as diet, exercise and occupation, and more general social forces such as modes of government were taken to have profound effects on all aspects of people's lives; their sexuality was no exception. The foundation for these beliefs was a complex conceptual framework which spoke naturalistically about the physiological, mental and social aspects of human beings. An understanding of this framework is therefore an essential background for any account of the relations between nature, culture and gender in the period.

In the bio-medical sciences of the late eighteenth century, mind and body were not seen as incommensurable, absolutely distinct categories. Mental events, such as anger, fear or grief, were known to have physical effects, while illnesses such as fevers produced emotional and intellectual changes. I would argue that at the end of the eighteenth century a model

of health and illness became dominant in which lifestyle and social roles were closely related to health. This model was applied to both men and women, but with different implications. A tight linkage was assumed between jobs performed in the social arena (for women, the production, suckling and care of children, the creation of a natural morality through family life) and health and disease. Women thus became a distinct class of persons, not by virtue of their reproductive organs, but through their social lives. The total physiology of women could, it was argued, only be understood in terms of lifestyle and the social roles they ought to fulfil, if they were not doing so already.

I want to stress that the model applied to both sexes. For example, people who lived in certain climates, such as men who worked in mines or factories, were known to be susceptible to particular diseases. Physicians therefore advocated that they take precautions to preserve their health: appropriate diet, exercise, housing, clothing, behaviour, regimen. The same argument applied to women, and in fact each way of life held its own particular dangers for the health of men and women which could be held at bay by the appropriate preventive measures. In the case of women, permissible occupation was tightly defined according to putatively natural criteria. There was thus a reflexive relationship between physiology and lifestyle; each affected the other. Through habit and custom, physiological changes took place which had been socially induced.

The emphasis on occupation and lifestyle as determinants of health, which led to a radical boundary being drawn between the sexes, had as its explicit theoretical basis a physiology which recognized few basic boundaries. It conflated moral and physical, mind and body; it created a language capable of containing biological, psychological and social considerations. This is clearly revealed in the use of bridging concepts such as 'temperament', 'habit', 'constitution' and 'sensibility' as technical terms in medicine. These concepts alluded to aspects of human physiology which were not just physical or mental, but contained something of both while being also closely bound to social change. As a result, the temperament and constitution of an individual were seen as products of biological, psychological and social interactions.

Because health was determined to a large extent by variables outside the human body, each person had a distinct physiological make-up which corresponded to his or her unique experience. Groups of people living under the same environmental conditions displayed similar biological and social characteristics. The systematic understanding of these conditions, on which appropriate therapy could be based, was derived from the analysis of a number of distinct variables. The factors affecting groups and individuals had to be clearly delineated. Yet although it was seldom made explicit, there were considered to be limits to the extent to which people could be changed. It was widely acknowledged that there was much vari-

ation among women which derived from different climates, patterns of work and so on, but that, nevertheless, all women had in common certain physiological features, not directly a matter of their reproductive organs. For it was a basic premise of physicians in late-eighteenth-century France that women were quite distinct from men by virtue of their whole anatomy and physiology. As Cabanis put it at the end of the eighteenth century: 'Nature has not simply distinguished the sexes by a single set of organs, the direct instruments of reproduction: between men and women there exist other differences of structure which relate more to the role which has been assigned to them' (1956, I:275). The teleological argument was made more explicit by his contemporary, Roussel: 'The soft parts which are part of the female constitution . . . also manifest differences which enable one to catch a glimpse of the functions to which a woman is called, and of the passive state to which nature has destined her' (1803:11-12).

The ways in which gender differences were conceptualized can be illustrated by referring to the medical notion of sensibility. This was a physiological property which, although present in all parts of the body, was most clearly expressed through the state of the nervous system (Figlio 1975). The nervous system was taken by many to be that physiological system which, because it brought together physical and mental dimensions of human beings, expressed most precisely the total state of the individual, especially with respect to the impact of social changes. Thus it was said that increases in hysterical illnesses in women during the eighteenth century were evidence of the growing use of luxuries such as tea and coffee, and of other changes (Pomme 1782:578-82). By virtue of their sex, women had a distinct sensibility which could be further modified during their lifetimes. Women, it was said, are highly *sensible* (in the sense of sensitive, or even sensitized) like children, and more passionate than men. This is because of 'the great mobility of their fibres, especially those in the uterus; hence their irritability, and suffering from vapours' (Macquart 1799, II:511). The peculiar sensibility of women could also be used to explain their greater life expectancy in a way which associated lifestyle with the physical consistency of the constituent fibres of their bodies. Barthez, a prominent eighteenth-century French physician explained:

Probably women enjoy this increase in their average age because of the softness and flexibility of the tissue of their fibres, and particularly because of their periodic evacuations which rejuvenate them, so to speak, each month, renew their blood, and re-establish their usual freshness . . . Another important cause of women living longer than men is that they are usually more accustomed to suffering infirmities, or to experiencing miseries in life. This habit gives their vital sensibility more moderation, and can only render them less susceptible to illness [1806, II:298].

However, he went on to say that because of their 'delicate and feeble constitution', women feel things more deeply than men. This aptly portrays

the ambivalence which we have already noted in the association of woman and nature. Women are tougher *and* softer, more vulnerable *and* more tenacious of life than men. However, more often than not, the softness of women was returned to again and again, and it was a metaphor that was imaginatively built on to construct a whole image of the dependent nature of woman:

This muscular feebleness inspires in women an instinctive disgust of strenuous exercise; it draws them towards amusements and sedentary occupations. One could add that the separation of their hips makes walking more painful for women . . . This habitual feeling of weakness inspires less confidence . . . and as a woman finds herself less able to exist on her own, the more she needs to attract the attention of others, to strengthen herself using those around her whom she judges most capable of protecting her [Cabanis 1956, I:278].

Eighteenth-century physiology was based upon necessary links between biological, psychological and social phenomena, not on the anatomical organs of reproduction alone. Although the physiological presuppositions on which Cabanis' views were based applied to both sexes, there was an important asymmetry in that women's occupations were taken to be rooted in and a necessary consequence of their reproductive functions, whereas men's jobs were unrestricted. Women's destiny to bear and suckle children was taken to define their whole body and mind, and therefore their psychological capacities and social tasks. Men were thereby potential members of the broadest social and cultural groups, while women's sphere of action, it was constantly insisted, was the private arena of home and family. As a result, women became a central part of contemporary social debates which focussed on the family as the natural, i.e. biological, element in the social fabric, and on women, who through motherhood were the central figures in the family.

The links between women, motherhood, the family and natural morality may help to explain the emphasis on the breast in much medical literature. There is a danger in our seeing the uterus as the constant object of attention in the search for the biological roots of womanhood. It seems likely that different parts of the body were emphasized at different periods, and from different points of view. While the uterus and ovaries interested nineteenth-century gynaecologists, the breast caught the attention of eighteenth-century medical practitioners who were concerned with moral philosophy and ethics. The breast symbolized women's role in the family through its association with the suckling of babies. It appeared to define the occupational status of females in private work in the family, not in public life. The breast was visible — it was the sign of femininity that men recognized. It could thus be said to be a social law that sexual attraction was founded on the breast, and a natural law that women should breast feed their own children. Based on the natural goodness of the breast it was

easy to create a moral injunction on women to feed their own children. It was, it was claimed, an undeniable law which, if thwarted, resulted in suffering for the child and in punishment for the rest of the mother's life, including the miscarriage of subsequent children. 'It is thus that one exposes oneself to cries of pain, for having been unfeeling about those of nature' (Macquart 1799, I:77). The breasts of women not only symbolized the most fundamental social bond, that between mother and child, but they were also the means by which families were made since their beauty elicited the desires of the male for the female. An excellent example of this fusion of aesthetic, medical and social arguments is Roussel's book on women, *Système Physique et Moral de la Femme* (A Physical and Moral System of Woman) which was an instant success when it first appeared in 1775 and at once became part of literary culture (Alibert 1803:7). It is significant that in praising Roussel, Alibert employed the metaphor of science unclenching woman: 'I would like to see the author . . . portrayed receiving . . . homage from the enchanting sex whose organism he has unveiled with so much delicacy and so much insight [pénétration]' (Alibert 1803:7).

There was a strong aesthetic component in medical writings on women in this period. Discussing the beauty of the breast in the same breath as its vital nutritive function was not undisciplined confusion but indicative of the conflation of social and physiological functions. The breast was good, both morally and biologically, hence its attractiveness and the resultant sociability between the sexes. Indeed the family and thus society were predicated on natural sociability, a quality which Roussel characterized as a major universal law. In these ways the physiological, the social and the aesthetic aspects of human existence were brought together.

So far we have noted a number of overlapping sets of dichotomies and the extent to which the two members of each pair were blurred:

nature	:	culture
woman	:	man
physical	:	mental
mothering	:	thinking
feeling and superstition	:	abstract knowledge and thought
country	:	city
darkness	:	light
nature	:	science and civilization

I have also stressed that these associations worked in two ways so that the association of women with nature had a positive and a negative side. Their sentiment and simple, pure morality constituted the first side, their ignorance and lack of intellectual powers, the second. It was common in the eighteenth century to emphasize the second, negative aspects of female naturalness in attacks on superstition and credulity. *Philosophes* in the van-

guard of the Enlightenment believed that they had to fight against the superstition and ignorance of the mass of the people because these were impediments to social progress, and one of the vehicles for their polemic was a form of sex-role stereotyping. The classic example of the problem was the uneducated woman under the thumb of her priest who fed her a diet of religious dogma, urging her to believe things which served his interests alone. This situation was the antithesis of that the savants were trying to promote, where people, free from the influence of the entrenched powers of the aristocracy and clergy, lived according to simple moral precepts derived from the direct study of nature. Women were seen as a major impediment in this process of enlightenment, because they repeated hearsay and tittle tattle and were more prone than men to religious enthusiasm. It was therefore in the interests of savants to polarize women and men, reaction and progress.

The opposition between superstition and tradition on the one hand, and enlightenment and progress on the other, functioned not just in the passionate anti-clericalism of eighteenth- and nineteenth-century France, but in debates about the care of children and about midwifery. The theme of the irrationality and irresponsibility of women's ways with small children was articulated in Britain by William Cadogan in his *Essay on Nursing*, first published in 1748. He argued that 'the Preservation of Children should become the Care of Men of Sense' because 'this Business has been too long fatally left to the Management of Women' (1753:3). He justified the charge of female irresponsibility by invoking the 'superstitious Practices and Ceremonies' which they had inherited from 'their Great Grandmothers' (1753:4). He recommended a transfer from female to male authority regarding infant care. He was not simply co-opting a new field for male medical practitioners for he also wished fathers to take a more active role: 'I . . . earnestly recommend it to every Father to have his Child nursed under his own Eye, to make use of his own Reason and Sense' (1753:29). Cadogan thought that women perpetuated ancient practices such as swaddling which should be abolished in favour of the forms of care advised by physicians. He never suggested that men should take over the care of children, but that women should perform their allotted tasks under the advice of men, both their husbands and their doctors. So, it was not that female functions had been abolished or co-opted, but that a hierarchy had been established where women acted under the supervision of men. Men such as Cadogan did not argue for a changed division of labour but for an altered division of power.

The same image of female irresponsibility was implied in attitudes to midwives. The relationship between midwives and other medical practitioners was a complex one (Donnison 1977). There was the element of competition for patients and the related issue of fees for services. It was commonly implied that midwives were dangerous and ignorant in com-

parison with physicians and surgeons. This claim must be seen in the context of the great concern about quacks, i.e. unlicensed practitioners, in the second half of the eighteenth century. Among the most common complaints against them was that they sold specific remedies and tried to keep the recipes secret. According to the medical establishment, such charlatans clearly traded on the ignorance and blind faith of the simple people who bought their potions rather than employing the skilled eye and brain of a better educated practitioner. Midwives appeared especially suspicious to enlightened savants. Their territory was the intimate and tightly knit circle of women, at least in the imagination of their detractors. Midwives being women with children themselves, and being associated with birth, were at the centre of stereotypes about women and their world.

The treatment of midwives in Britain and France provides an excellent example of the ways in which women were subject to social regulation in a manner which suggests that they were feared as polluting, morally and sexually. It is well known that the midwife was frequently the butt of caricatures and bawdy humour and that she was castigated for drunkenness and uncleanness (Donnison 1977:33-4). This suspicion was made explicit in the proofs of morality which were demanded of them. In eighteenth-century France this often took the form of a letter from their priest attesting to their good character.² At this time both males and females were trained to be *accoucheurs*, the former becoming surgeons, the latter midwives. The education of these two groups was done separately; in fact the idea of instructing them together was considered indecent. The young surgeons were apparently not subject to the moral restraints applied to midwives. They were typically much younger than the pupil midwives, the boys were mostly in their early teens while the women were rarely younger than 20 and mostly married. One decisive difference between the two groups might be the greater sexual experience of the women who had, in all probability, borne children themselves. We could argue that young boys were in principle just as potentially 'dangerous' in the childbirth situation as married women were, probably from our perspective more so. Yet there is no evidence that it was seen that way at the time by medical men. The reasons are partly sexual, and partly a question of class, since the midwives were certainly of humbler origins than the surgeons. The delivery of babies was performed by both men and women, although it would be hard to devise simple rules which determined whether a man or a woman delivered any particular mother. Here we have a situation where the actual division between the sexes was blurred in that, in addition to midwifery, women from all social strata practised a whole range of medical techniques. What we can detect is an unease about the demarcation between male and female

2 This account is based on my archival work in Lille using departmental and municipal collections. See also Gélis, 1977 and Morel, 1977.

medical practitioners resulting in recurrent attempts to control and clarify the sexual boundaries.

Unease about midwives in relation to their male competitors for custom was expressed quite explicitly in a poem by the medical practitioner turned parson and poet, George Crabbe.³ In *The Parish Register* of 1807 he describes the battle between an established midwife and a young doctor newly arrived in the village (Crabbe 1823, I:122-5). 'The young doctor . . . sneered at the midwife as "Nature's slave", who trusted only to luck, and in emergencies to prayer, while he, with his "skill" and "courage", took pleasure in bending Nature to his will' (Donnison 1977:38).

The uncomfortable position of the midwife illustrates one of the ways in which beliefs in women as bearers of tradition and men as bearers of modernity worked. The fact that forceps were used by men may have further reinforced their image of modernity and power through new techniques. The professional struggle hinged on who should have charge of birth, the event which, more than any other, occupied the centre stage of many women's lives and of the symbolic structures associated with women.⁴

It was as mothers that women were archetypally seen, and, in the case of anatomical drawings, actually in the state of pregnancy itself. But of course there were other images too, especially those derived from classical mythology and used in engravings, oil paintings, statues, bas reliefs, and representations for ceremonial or official purposes. The classical traditions, and their eighteenth-century transformations are extremely complex from the point of view of sexual symbolism. One example may however be useful to illustrate the association of a female deity with natural health.

In his *Sermon on Exercise* of 1772, Benjamin Rush contrasted the natural therapy of exercise with the artificiality of specific remedies. To illustrate the superiority of the former approach to illness he constructed a parable. A wondrously beautiful woman appears to a group of chronically sick people who are suffering from the disastrous effects of quack concoctions. She addresses them with the words: 'Ye children of men, listen for a while to the voice of instruction . . . My name is Hygiea. I preside over the health of mankind. Discard all your medicines, and seek relief from Temperance and Exercise alone' (Rush 1947:371). They heed her advice and their natural vigour is restored.

I have argued that there was a complex language in medical writings in the second half of the eighteenth century which employed the nature/culture dichotomy in relation to gender. The attributes of women ranged from ignorance and superstition to true civilizing wisdom. Some of those

3 For a very brief introductory account of Crabbe see Brett (1968).

4 In fiction, Sterne's *Tristram Shandy*, first published 1759-67 provides an illustration of this point.

attributes were visually represented in explicit models, statues, engravings and anatomical plates.

Images of woman -- nature disrobes before reason

An important eighteenth-century example of images of woman rendered visual is the wax anatomical models of human figures used for making anatomical drawings and for display in popular museums. (Haviland and Parish 1970, Thompson 1925, Deer 1977) (see plate 3.1). These were intended for teaching, both popular and technical, and for decoration. Although male and female anatomical organs, especially the female abdomen, were commonly depicted in anatomy texts from the sixteenth century onwards (Choulant 1962), these models are distinctly different. In the wax series, many of which were made in Florence at the end of the eighteenth century (Azzaroli 1975), the female figures are recumbent, frequently adorned with pearl necklaces. They have long hair, and occasionally they have hair in the pubic area also. These 'Venuses' as they were significantly called lie on velvet or silk cushions, in a passive, almost sexually inviting pose. Comparable male figures are usually upright, and often in a position of motion. The female models can be opened to display the removable viscera, and most often contain a foetus, while the male ones are made in a variety of forms to display the different physiological systems (see plate 3.2).⁵ The figures of recumbent women seem to convey, for the first time, the sexual potential of medical anatomy. Until this time it was usual in engravings for the actual genitals to be covered by a cloth but in the waxes, as in some contemporaneous medical illustrations, they are not just present, but drawn to the attention. Not only is the literal naturalness of women portrayed, in their total nakedness and by the presence of a foetus, but their symbolic naturalness is implied in the whole conception of such figures. Female nature had been unclothed by male science, making her understandable under general scrutiny. The image was made explicit in the statue in the Paris medical faculty of a young woman, her breasts bare, her head slightly bowed beneath the veil she is taking off, which bears the inscription 'Nature unveils herself before Science'.

Women's bodies as objects of medical enquiry as well as of sexual desire

- 5 Here I have alluded briefly to what is in fact a very complex issue. There were many different traditions of anatomical models but little has been written about them. See however Thompson (1925), on early ivory manikins, and on anatomical illustration in general, Wolf-Heidegger and Cetto (1967: especially pp. 434, 438, 504, 505, 546-7). Collections which include these or similar figures are: Wellcome Collections, Science Museum, London; Institut für Geschichte der Medizin der Universität, Vienna; Museo 'La Specola', Florence.

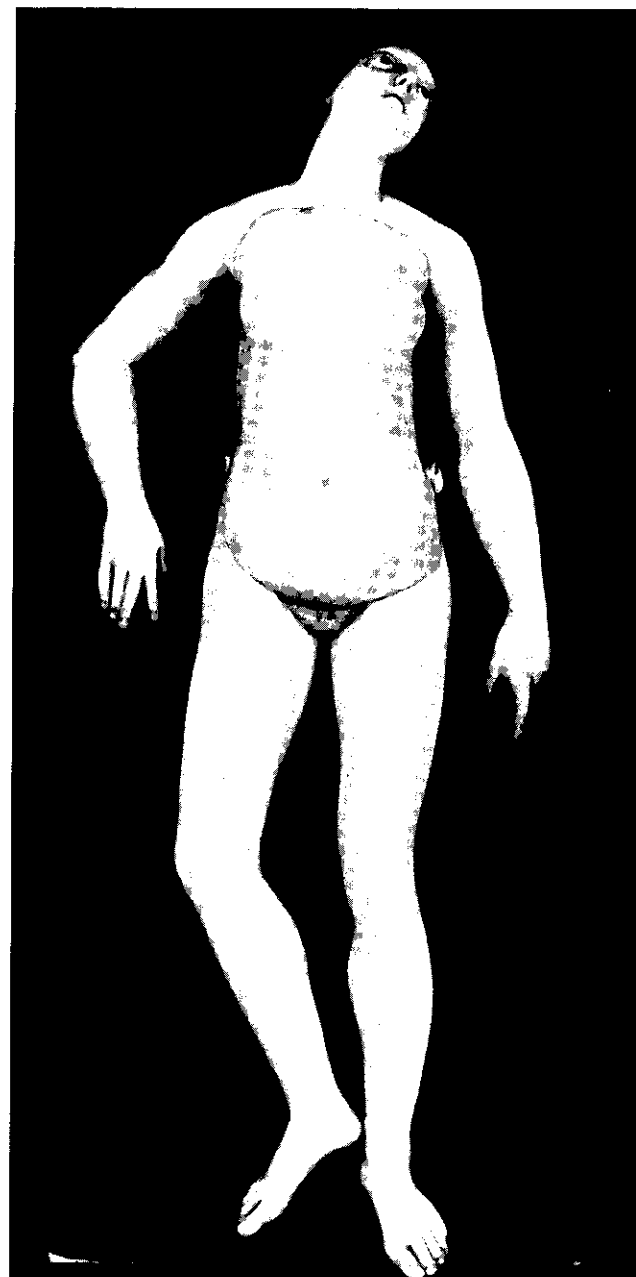


Plate 3.1 French eighteenth-century wax figure. By courtesy of the Wellcome Trustees.

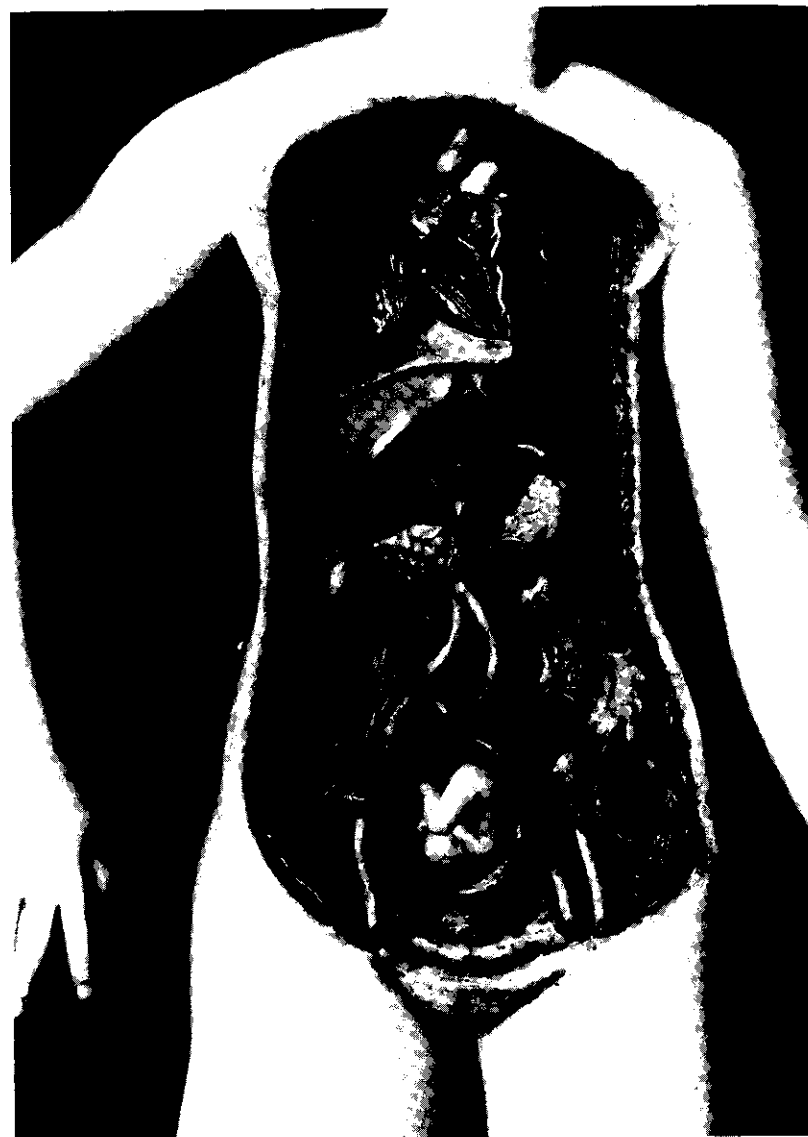


Plate 3.2 French eighteenth-century wax figure with the covering of the trunk removed. By courtesy of the Wellcome Trustees.

became the focus for a physiological literature which expressed a refined aesthetic of women's natural beauty, and found in their bodies an expression of their social condition. To understand women was thus a scientific and medical task which involved revealing the manner of physiological functioning, both normal and pathological, that was peculiar to women. It was for this reason that when Jules Michelet wished to comprehend the condition of women in mid-nineteenth-century France, his first port of call was the dissecting room, and his reading was anatomy texts. In the cadavers of women, Michelet saw their lives revealed and explained before his very eyes. Once again a dual meaning of woman as natural was evoked: she was taken as a creature defined by her biology and as the feminine natural object of masculine science. But perhaps we should add a new third sense. In her pregnant state woman evoked nature yet again through her capacity to reproduce the species, to pass on life. With the definition of life as a new guiding concept at the end of the eighteenth century (Figlio 1976:25ff.), the mechanism whereby life was transmitted took on fresh significance. The capacity to engender life seemed a special elusive force, made concrete through the female reproductive system. This sacred function went hand in hand with female anatomy. One expression of this was the concern among anatomists to discover ideal female beauty. During the eighteenth century medical writers placed great emphasis on the aesthetics of the human body, and on the natural beauty of women which, they argued, should remain undeformed by clothing, and especially by corsets (Choulant 1962:304).

The peak of the sexualized female anatomy was a German painting and lithograph of a beautiful young woman, who had been drowned, being dissected by an anatomist, Professor Lucae, who was interested in the physical basis of female attractiveness. A group of men stand around the table on which a female corpse is lying. She has long hair and well-defined breasts. One of the men has begun the dissection and is working on her thorax. He is holding up a sheet of skin, the part which covers her breast, as if it were a thin article of clothing so delicate and fine is its texture. The corpse is being undressed scientifically, the constituent parts of the body are being displayed for scrutiny and analysis. The powerful sexual image is integral to the whole pictorial effect.⁶

By the 1860s when this engraving was produced, the image it contained might be associated with others which were relatively new to the general public. I am thinking in particular of the fierce public debates about vivisection, which in Britain was opposed, interestingly enough, by a number of women's groups and early feminists (French 1975:239–50). In vivi-

⁶ The original painting is in the Historisches Museum, Frankfurt, the lithograph is in the Wellcome Institute for the History of Medicine, London. An illustration of the former is in Wolf-Heidegger and Cetto (1967:546).

sectional experiments, pictures of which were prominently displayed in the propaganda put out by critics, there was the same contrast between the utter passivity of the living material used and the active intrusion and manipulation of the experimenters. Despite the long history of anatomical dissections, and the fact that the victim was dead, the anatomizing of the corpse, especially as portrayed in Hasselhorst's picture of Lucae, seems to have similar qualities to the vivisectional experiment. And the exaggerated femininity of the corpse reinforced its passivity. It is almost as if women in their sexually stereotyped roles were made kin to all living objects brought under the penetrating enquiry of male reason.

The two sides of woman as nature

If in death the female body evoked an image of sexual passivity, it was in the association of women with their capacity to give life that they were seen as active. This activity had a moral nature. As Bernardin de Saint-Pierre said to the female race in 1806, 'You are the flowers of life . . . You civilise the human race . . . You are the Queens of our beliefs and of our moral order' (1966:70-1). Less rhetorically, he explained:

Women lay down the first foundations of natural laws. The first founder of a human society was a mother of a family. They are scattered among men to remind them above all that they are men, and to uphold, despite political laws, the fundamental laws of nature [1966:67]. Not only do women bind men together by the bonds of nature, but also by those of society [1966:68].

These words were written for a new edition of Bernardin de Saint-Pierre's best known work, *Paul et Virginie*, which originally appeared in 1788. It was an immense popular success from the 1790s onwards; its heart-rending story, and in successive editions a series of beautiful plates, made the images of sexuality it contained widely disseminated.

A supposedly true story, it tells of how two young women, independently, and for different personal reasons, flee the old world with its social inequalities and consequent inhumanity, to start a new life for themselves and their children in surroundings untainted by human destruction. They meet in the Ile-de-France and bring up their children, Paul and Virginie, together in total harmony with nature. Paul and Virginie knew uncorrupted love, for each other, for their mothers, and for the fertile environment in which they lived. In early adolescence Virginie was called back to France to be educated (and civilized) by a rich old aunt of her mother's. Her mother consented to this since Virginie's awakening sexuality was causing her some anxiety and she wished to avoid an early marriage between Paul and Virginie. Virginie's departure for Europe represents the first rupture of the happy and moral state of nature they had all enjoyed together. Her stay in France was not a success; her aunt wished her to marry against her

will and when she refused the offer of a rich husband, she was sent home during the season of storms and hurricanes. Within sight of home the ship went down, and Virginie with it since she refused to take off her clothes and jump into the water with the nude sailor who was urging her to escape. For Bernardin this was a heroic death: 'Virginie, seeing that death was inevitable, put one hand on her clothes, the other on her heart, and lifting up her serene eyes, she seemed like an angel taking wing to heaven' [1966: 159].

Paul et Virginie was a moral fable, and one which the 1806 introduction suggests was consciously built on the capacity of women to redeem the ailing civilization of the *ancien régime* and the chaos of revolution.⁷ Bernardin idealized women as mothers in his eloquent descriptions of their instinctive, intuitive love for their children. Men, the book implies, are dispensable in the rearing of children. The natural modesty and morality of women manifested in Virginie's death was the foundation on which society would be regenerated. Although Bernardin was politically moderate and held rather conservative religious views, his condemnation of wealth and luxury is obvious enough. But for him there is no political solution to the corruption of a civilization which has lost touch with nature; instead personal morality is appealed to as the means of reform. Bernardin makes no serious allusions to the deployment of power, but argues for the regeneration of pure sentiment.

Mozart's opera *The Magic Flute*, first performed in 1791, stands in marked contrast in conceptualizing the two elements, female/nature and male/culture as locked in a struggle for dominance.⁸ Just as *Paul et Virginie* presented clusters of images about women and nature, so did *The Magic Flute*, but the moral judgement went in quite the opposite direction. In the opera there was a battle between good and evil, between light and darkness, which was a struggle between a patriarchal lineage (Sarastro and Tamino) and a matriarchal one (the Queen of the Night) (Mann 1977:591-640). It is well known that the opera contains many allusions to freemasonry, a considerable radical force in late-eighteenth-century Austria (Chailley 1972). This opposition between the enlightenment of free-

7 It should be noted that Bernardin's treatment of women contains certain ambiguities. It was, after all, Virginie's developing sexuality which caused the first disruption of natural harmony of the miniature society. Women as *sexual beings* carry danger; it is really only as *mothers* that they are safe.

8 I have referred to the opera as by Mozart for the sake of simplicity. The words were probably written by a number of people working together, but they were originally attributed to Schikeneder, a Freemason and a friend of the Mozart family (see Chailley 1972 and Mann 1977). For an analysis which employs an anthropological framework, see Hiatt, 1979.

masonry, from which women were, of course, excluded, and the darkness of evil was expressed in sexual terms. Chailley (1972:74–9) argues that the libretto must be seen in the context of contemporary attempts to set up a parallel masonry system for women which were strongly condemned by most (male) masons.

The Queen of the Night was the wife of the Priest of the Sun. She was part of a matrilineal succession but, before his death, her husband had handed to Sarastro, the ruler of the Temple of Wisdom, an emblem of sovereignty to be kept for his male successor. Sarastro kidnapped Pamina, daughter of the Queen, in order to marry her to the new King. One surmises that such a marriage would have served to legitimate the substitution of a patriarchy for a matriarchy. Throughout the opera, play is made on the native ignorance of women needing to be tempered by the reason and wisdom of men. The three ladies of the Queen of the Night represent the state of unenlightenment of the Catholic church. They describe to Tamino, the chosen Prince, how 'a powerful, evil demon' has kidnapped Pamina and the suffering this has caused the 'loving maternal heart' of the Queen (Mozart 1971:42). In the suggestion of the deep suffering of the Queen caused by the cruelty of Sarastro, the Queen and her ladies exploit the nature/culture metaphor to win sympathy for their feminine vulnerability, but the opera firmly places right on the side of male reason. This moral superiority is reinforced by scenes in the Masonic Lodge represented as a temple of wisdom, nature, and reason; these are the places where 'prudence, work and art dwell' (51). Throughout, women are told of their inferior position to men and denigrated: 'women do little but chatter much' (54). Sarastro chides Pamina, 'a man must guide your heart, for without one every woman seeks to exceed her rightful place' (59). He describes her mother, the Queen of the Night, as 'a woman who vaunts herself and hopes to delude the people by trickery and superstition' (62). However, the symbolism is by no means unequivocally demeaning to women and the treachery in the opera is perpetrated by the Moor, Monostatos, who wants Pamina for himself. Chailley claimed that at the end of the opera, the marriage of Pamina and Tamino mitigates the generally violent anti-feminist tone by 'a proclamation of the redemption of Woman and her rise to equality with Man in the Mystery of the Couple' (1972:295). However, I would argue that the ultimate victory is unambiguous; light triumphs over darkness, men over women. As a modern commentator has put it: 'The entire opera legitimizes the principle of patriarchy through its assignment to men of the realm of reason, to women the realm of emotionality; its assignment to men, but not to women, of the realm of power and the right to pass it on, including the right to give the daughter away' (Coser 1978:347).

The richness and inventiveness of the imagery is striking in *The Magic Flute*, and I would suggest that it provides some useful clues as to how the

sexes were conceptualized at the end of the eighteenth century. Its late-eighteenth-century audience would certainly have found the political message about the bankruptcy of absolute monarchy and the need for a new secular order quite obvious. Presumably they also took the point that this could be seen as a battle between women and men.

History as well as art provides instances of struggles between men and women. In 1835 the Norman peasant Pierre Rivière created a sensation by killing his pregnant mother. His mother's dominating behaviour towards his father, her ownership of land and her consequent power were so fundamentally objectionable to him that he took her life (and those of a brother and a sister) to vindicate the honour and dignity of his father. What is even more remarkable is the lengthy testimony he wrote explaining in minute detail the history of his family and his motivation for committing the crime (Foucault 1973).

In many different ways the dichotomy between women as nature and men as culture was conceptualized as a struggle between the forces of tradition and those of change. This is particularly clear in the anti-clericalism of men like Michelet (Cabanis 1978) who believed that giving women the vote would result in a move towards a more conservative, church-based government, since women were particularly vulnerable to the machinations of the Catholic church, and of Jesuits in particular. Ironically, it was the very qualities which made women the mainstay of society in the family — their delicate feelings — which also made them vulnerable to political exploitation and so becoming a dangerous force if given political rights. Private virtues could easily become public vices.

The ideology of progress which was so deeply entrenched in Enlightenment thought meant that the growth of a humane, rational, and civilized society could also be seen as a struggle between the sexes, with men imposing their value systems on women in order to facilitate social progress. The nature/culture dichotomy thus has a historical dimension. Human history, the growth of culture through the domination of nature, was the increasing assertion of masculine ways over irrational, backward-looking women.

A brief examination of the concept of culture may throw light on this point. There was a transition in the meaning of culture during the eighteenth century from a noun of process, denoting the tending of something, such as plants and animals, to a more abstract usage, often associated with the state of development of human society. Not only did this concept of culture incorporate a historical dimension, but it also allowed the possibility that each nation, each people and its constituent groups had its own distinctive culture (Williams 1976:76–82). In tying culture specifically to the state of civilization, it was logical for writers to stress those features of civilized life they considered paradigmatic of their own society's achievements. Starting in the eighteenth century, and becoming more marked in the nineteenth,

was the trend towards identifying these with science and technology, with the capacity for abstract thought. The relative strength of nations was not just a matter of military or economic prowess, but of the extent to which science was cultivated. This is the background of the 'decline of science' debates of the mid nineteenth century, where considerable fears were expressed in Britain about the ascendancy of French and German science (Babbage 1830). This notion of progress was one in which men played the dominant role; women were deemed incapable of contributing because of their lack of analytical modes of thought.

The contrast between the qualities of men and women suggested that there was a deep complementarity between them. This was the position held by Jules Michelet, one which he stated with exceptional clarity. It is of some interest because it reveals the mixture of public and private problems thought to result from the differences between the sexes. His profound anti-clericalism has already been mentioned. His beliefs about the illegitimate power priests had over women were closely related to his views on sexuality and family life. Priests, Michelet claimed, created a schism between husband and wife, whereas he thought the woman's basic commitment should be to her husband, indeed it was in her nature for it to be so. Marriage was thus elevated to an ideal moral state where each partner acted as the moral guardian of the other. Michelet identified two major impediments to a more universal state of happiness on which a more healthy society could be built. These were women who worked outside the home and men who were unwilling to marry. Men, he feared, did not wish to be tied down, and preferred to spend their money on drink. If only they would marry, young men would then be reformed by their wives, and boost France's flagging population in the process. The mechanism of reform was the domestic haven the wife provided, impossible to construct if she were working. It was not suitable for unmarried women to work either, because they were exploited by greedy employers, resulting in illness, poverty and death. 'The population is no longer growing, and it is of diminishing quality. The peasant woman is dying of overwork, the working women in industry of hunger' (Michelet 1860:xviii). The moral for Michelet was that women cannot survive alone, they need an asylum, the home, and a protector, the husband. He saw sexual relationships as ideally didactic with husbands instructing younger wives.

The naturalness of female biological rhythms, especially menstruation, were to be adored by husbands, and Michelet looked to medical science and natural history for further information on the state of womanhood, and on sexuality in nature in general. In this he was the heir of Enlightenment traditions. His emphasis was on the natural morality of women (it is therefore no coincidence that he was an admirer of Bernardin de Saint-Pierre) and on the study of anatomy and physiology. These studies constantly reinforced the intertwining of the physical and the moral dimensions

of human beings. The immense popularity of Michelet's books on women is significant. Above all Michelet was a constructor of mythologies, and the special interest of his writings on women is the clear comment they make on contemporary social issues, with an eloquence and a power that gained their author enormous influence. In fact, it might be argued that Michelet's thought as a whole was based on his notion of the fundamental differences but underlying complementarity between the sexes. He employed metaphors of sexuality quite consciously in all the areas on which he wrote.⁹ Michelet's concern with contemporary political issues is not after all surprising, for if everything in the universe is sexual, either literally or metaphorically, then maintaining the social order was a problem of the regulation of sexuality. The framework within which Michelet cast his ideas was the naturalness of woman *versus* the rational control of husbands and doctors. Furthermore the avowed basis of this was natural history and the bio-medical sciences.

Conclusion: gender logic

I have stressed that the nature/culture opposition as applied to gender was based on a study of human beings which combined physiology and anatomy, psychology, sociology and anthropology to produce an analysis of people as integrated units. In particular the descriptive and the moral went together to produce a medical science which showed what ought to be as well as what was. I have also argued that the polarity between nature and culture was conceived of as a struggle between two opposing forces.

In the eighteenth century a struggle was imagined inside each individual: between those elements which were thought to be masculine — reason and intelligence — and those which were thought to be feminine — the passions and the emotions. Typically, men were portrayed as serious and thoughtful, and women as frivolous and emotional. This was not a total division of mental properties between the sexes but a continuum according to the extent to which reason dominated, fully consistent with the physiology based on lifestyle which I discussed earlier. Here I want to stress two points. First, there was a battle envisaged between the two aspects of an individual's psychology, just as there was between male and female elements in society as a whole. Second, this sense of psychological division between the sexes became rigidified during the nineteenth century. Michelet questioned whether women were responsible, from a legal point of view, in the way that men were. Lotze in 1852 claimed, 'analytical reflection is so little natural to women that it may be asserted without risk of being far wrong that words like to the right, to the left, across . . . do not signify any

9 For an account which explores Michelet's use of metaphor see Barthes (1954).

mathematical relationships in women's speech but certain peculiar feelings which one has in following these indications while working' (Ploss et al. 1935, I:129).

Some decades later Durkheim expressed similar views in *Suicide*, first published in 1897. He asserted the greater devotion of women to religious practices and summarized the differences between the sexes thus: 'Woman's sexual needs have less of a mental character because, generally speaking, her mental life is less developed. These needs are more closely related to the needs of the organism, following rather than leading them. Being a more instinctive creature than man, woman has only to follow her instincts to find calmness and peace' (1952:272). The pre-condition for Durkheim's statements was a well-developed biological and medical science which gave meaning to such terms as organism and instinct. By using these same terms Durkheim was able to conjure up a set of biological assumptions which, added to the woman = nature stereotype, conveyed a degree of biological determinism for women which far exceeded that for men. I have argued that there was a well established bio-medical tradition going back to the mid eighteenth century which developed a language for speaking about gender, through which savants attempted to provide naturalistic explanations of all facets of knowledge about women. I further stressed that the conceptual divisions between the sexes seemed to be hardening. It is therefore tempting to refer to contemporary changes in material conditions — proto-industrialization; changing forms of family life such as the demise of the family economy, which affected work patterns; child rearing customs, and possibly also the ways the sexes viewed each other. But there is so much geographical and class variation in these conditions that it is impossible to discern a simple pattern emerging in Europe during the period we are concerned with. There is evidence to suggest that men and women shared in their traditions and religiosity, and that in the peasant world of the eighteenth century sex roles were not as uniformly distinct as is commonly believed.

I want to insist that in these nature, culture, gender associations we are not speaking of an ideology which directly reflected material conditions, but a programme of reform to create a universe which did not yet exist. Nor did it or could it ever exist. The normative intentions and the stereotyped categories bore little relationship to the messiness and pragmatic complexity of lived experience for the majority of the population. The nature/culture ideology expressed the interests of the small but influential elite which generated the literature I have been discussing. These writers were not aristocrats or politicians, but intellectuals and professionals from the middle strata of society who gained influence precisely because of their ideas and 'knowledge'. Their concern was to establish the validity of their vision of the world, and their right to debate social issues. They shared by and large a vision of science and medicine as the motors of social advance.

Women occupied a peculiar position in the march of progress. On the one hand, their traditionalism had to be fought to the death, but, on the other hand, they had a major role to play in putting the family on a secure moral footing which was a necessary step in improving social life.

In speaking about the dichotomies between men and women, nature and culture, I have stressed that there was no obvious relationship between the *ideas* about sexual divisions and the way they functioned in day-to-day life. Between the theories of a small elite and the lives of the majority of the people stood a set of assumptions about sexuality which undoubtedly affected both groups in a profound manner. We might usefully speak about these sets of assumptions as myths. Simone de Beauvoir (1972) was right to emphasize the importance of myths in the ways women are seen. She takes for granted, however, that the polarities they contain are basic to the way the human mind works. Thus, for her, it is inevitable that woman has been taken as other by man, and so seen only in relation to him. In her state of otherness, woman is the repository of the myths and stereotypes that de Beauvoir analysed. She did relate her analysis to specific periods of history in specific cultures, but nevertheless asserted her perspective at a level of generality which seems vague and abstract. In particular she did not draw attention to the historical importance of science, medicine and technology in the promulgation of myths of femininity. Precisely through the study of nature as it was conducted after the 'Scientific Revolution' of the seventeenth century did the stereotypes of the sexes become reified and hardened. These notions were not consistent but were necessarily contradictory. It was in elaborating paradoxical stereotypes about women (and men) that the myths became powerful. The different elements clouded and veiled each other, partly perhaps to disguise a deeper antagonism between the sexes (the antagonism that Pierre Rivière was unable to control), and partly because a simple debasement of women by men would not have commanded assent and would not have begun to convey adequately the complexity of full social relations between the sexes.

The importance of de Beauvoir's emphasis on myths of otherness is that she does not employ an evolutionist perspective to describe the different social positions of men and women. For example, Ortner speaks of women as lower than or subordinate to men, stemming from her belief that 'the secondary status of women is one of the true universals' (1974:67). This way of speaking assumes a model of society where there are unambiguous, rigid hierarchies, and so clear criteria for assigning their rank to any individual. Even if we clearly separate issues of value (bad/good) from those of control (sub/superordinate), there are no simple scales on which men and women can be ranged.¹⁰ Women are deemed both good *and* bad, and both evaluations may be represented as stemming from their naturalness. Simi-

10 I have found Brown (1980) particularly helpful.

larly, they may be subordinate in some areas of life (e.g. legal rights) and superordinate in others (e.g. control of the house), and both descriptions could be based on their putatively natural qualities. This pervasive vocabulary which uses notions of simple hierarchies betrays the lasting influence of nineteenth-century evolutionary theories on how we think about gender. Of course, the evolutionist perspective in all its complexity was crucial to the development of anthropology as a discipline in the late nineteenth and early twentieth centuries. But we must not be uncritical of the historical legacies of our disciplines.

Perhaps returning to the Enlightenment can teach us two lessons. First, our ways of thought have a long history, despite the belief that the social sciences are a relatively new field. A more textured understanding of our historical inheritance helps us to analyse current ideas and problems more adequately. Second, recent notions of nature and culture have taken them to be infinitely more simple, reduced categories than they were in the eighteenth and nineteenth centuries. I have stressed the complexity and ambiguity with which ideas of nature, culture and gender were endowed. But I have also pointed to another layer — that of science itself as a sexual activity in its relationship to nature.

While it is important to realize that nature was endowed with a remarkable range of meanings during the period of the Enlightenment (Lovejoy 1960), there was also one common theme. Nature was taken to be that realm on which mankind acts, not just to intervene in or manipulate directly, but also to understand and render it intelligible. This perception of nature includes people and the societies they construct. Such an interpretation of nature led to two distinct positions: nature could be taken to be that part of the world which human beings have understood, mastered and made their own. Here, through the unravelling of laws of motion for example, the inner recesses of nature were revealed to the human mind. But secondly, nature was also that which has not yet been penetrated (either literally or metaphorically), the wilderness and deserts, unmediated and dangerous nature. To these two positions correspond two senses in which women are nature. According to the first, they, as repositories of natural laws, can be revealed and understood. This was Michelet's point in denying that women are unpredictable. On the contrary, he claimed, they are so clearly subsumed under nature's laws, expressed for example in the menstrual cycle, that their states of mind and body can be read by the trained person. For this reason, a systematic study of the anatomy and physiology of women was of great importance. According to the second position it was woman's emotions and uncontrolled passions which gave her special qualities. Women, being endowed with less reason than men, indeed with less need for reason since their social lives required of them feeling and not thought, were more easily dominated by extreme emotions. Women were therefore conceptualized as dangerous because less amenable

to the guiding light of reason. According to this second perspective, moves to contain women's dangerous potential are more appropriate than attempts to subject them to scientific scrutiny. Their potential for disorder can be minimized by drawing and maintaining strong social boundaries around them. To these two positions corresponded these positive and negative moral evaluations of the female sex discussed earlier. Ultimately we might say that nature, culture and gender in the history of our own society were and are concepts which express the desire for clarity in areas of life which appear constantly subject to change. Their historical inter-relatedness does teach us important lessons about the ways in which apparently distinct areas of life are linked through sets of symbols and metaphors. Furthermore, the links between these cognitive structures and the behavioural level of sexuality are immensely complex, and still largely unexplored.

I have stressed the role of science and medicine as mediators of our ideas of nature, culture and gender, and argued for the rootedness of these ways of thought in recent Western history. One of the most powerful aspects of scientific and medical constructions of sexuality is the way in which apparently universal categories were set up which implied the profound similarities of all women, and to a lesser extent, of all men. Perhaps one of the problems with the current promiscuous use of the nature/culture dichotomy in relation to gender is that it has taken the claims of Western science at face value, and so lapsed into a biologism which it is the responsibility of the social sciences, including history and anthropology, to combat.¹¹

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11 Haraway (1979), is a good starting point in this enterprise.

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