The Menstrual Cycle

Anne E. Walker

Women and Psychology

ROUTLEDGE

THE MENSTRUAL CYCLE

The menstrual cycle is a 'hot topic' in gender politics, from nineteenth-century ideas that studying during menstruation would ruin women's health to twentieth-century notions that women are unfit for responsible careers because of their 'raging hormones'. As a result, the relationship between the menstrual cycle and women's cognitive and emotional state has fascinated scientists for over a century. While biomedical researchers have been preoccupied by the nature and biological causes of 'premenstrual syndrome', feminist scholars and scientists have challenged the conception that cycles of oestrogen and progesterone are necessarily problematic for all women.

In this book, Anne Walker critically examines the theories and studies which have considered the relationship between menstruation, the menstrual cycle and women's psychological state, and sets them in their historical and socio-cultural context. She traces the development of modern scientific preoccupations with 'premenstrual syndrome' and the 'menstrual cycle' (rather than menstruation itself or the menstrual problems for which many women seek help), and asks what part psychology has to play as a discipline in the development of this research. Her conclusion is that menstrual cycle research is entering a new phase of development, with a shift towards biopsychosocial models in medical research and therapy and a growing concern with women's experiences and the meaning of menstruation in the social sciences, reflecting a change in the way that psychology and sociology conceptualise the body.

This contemporary and comprehensive text is an invaluable resource for all serious students of psychology, gender and women's health. It offers hope for a future in which psychology can bring new perspectives and new understandings to women's experience and can reconceptualise the relationship between the menstrual cycle, women's feelings and women's lives.

Anne E. Walker is Lecturer in Health Psychology at the University of Leeds. She is joint editor of the *Journal of Reproductive and Infant Psychology* and has co-edited (with Catherine Niven) a series of three books on *The Psychology of Reproduction: 1: Reproductive Potential and Fertility Control* (1996); *2: Conception, Pregnancy and Birth* (1996) and *3: Current Issues in Infancy and Early Parenthood* (1997).

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PREFACE

My research interest in the menstrual cycle began in 1983. At the time, I was a psychology student, and looking for inspiration for my honours thesis. I had settled on the broad area of stress, and it was while browsing the library shelves for books on that subject that I came across Katharina Dalton's book *The Premenstrual Syndrome and Progesterone Therapy* (Dalton, 1977). As with many women before and since, the experiences described in the book made sense to me. I recognised the moodiness, irritability and tension – the apparently irrational anger and depression.[1] Not only did these descriptions seem to fit emotions which I had experienced, but her explanation of them fitted well into my understanding of human experience at that time – an understanding based on a largely scientific education and undergraduate career. The possibility that there might be a link between apparently inexplicable emotions and the biological fluctuations of the menstrual cycle had great appeal, so I went back to my thesis supervisor and planned a project on the menstrual cycle instead of stress. Like many undergraduate projects, mine did not answer the questions I was really interested in, and left me wanting to do more menstrual cycle research. This I did through a PhD concerned with the relationship between ovarian hormones and premenstrual experiences.[2] After three years of collecting thousands of daily diaries and hundreds of urine samples for hormone assay, I found that women's experiences are far more variable than my reading of Dalton's book implied, and not related in a simple way to any of the hormone measures I assessed.[3] My personal journey for a straightforward hormonal explanation for premenstrual experiences had ultimately been a fruitless one.

It was the next phase of my career which sparked the questions this book addresses. I returned to psychology and started going to psychology conferences, becoming aware both of feminist perspectives on PMS and the absence of women's voices in menstrual cycle research. I noticed the general lack of interest of mainstream psychology in anything to do with women's reproductive bodies or menstruation in particular. For instance, there was no mention of menstruation in the mainstream introductory psychology texts I was using at the time. I began to wonder whether I was in the wrong discipline. Was there in fact a distinct psychological perspective on the menstrual cycle?[4] Could there be a

psychology[5] of the menstrual cycle – and should there be? It is these questions which are explored in this book.

I begin my exploration of these questions by putting menstrual cycle research into the context of discourses about menstruation, and giving some historical perspective before considering the methods used by menstrual cycle researchers. In the next section of the book, I describe the findings of menstrual cycle research. Finally, I complete my investigation by considering the dominant feature of twentieth-century menstrual cycle research – premenstrual syndrome. This discussion leads me to the conclusion that there are several psychologies of the menstrual cycle. These have made major contributions to menstrual cycle research, although currently none can be described as autonomous from biomedical approaches. I believe that an autonomous psychology of the menstrual cycle is both possible and necessary, to link the insights of biomedical research and feminist deconstruction into new theoretical accounts of menstruation. Such a discipline is embryonic, and dependent in part on changes in psychology itself, but nonetheless offers hope for a better understanding of women's experiences.

ACKNOWLEDGEMENTS

Most of this book is a literature review, and therefore I am indebted to all the researchers and writers who have contributed to this literature. I appreciate too the voluntary contribution of the many women who have participated in menstrual cycle research, completing daily diaries and questionnaires, participating in experiments or clinical trials and talking to researchers about their experiences. I am particularly grateful to the women who have taken part in my own studies over the years, especially to those who were willing to talk to me, both in clinics and elsewhere, about their premenstrual experiences. Thanks are also due to the people who have supported me during the writing of this book – family, friends and colleagues – and to Jane Ussher, Nicola Horton, Vivien Ward and an anonymous reviewer for their advice and comments. I am grateful to the Haworth Press for permission to reproduce the material included in Table 4.1.

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MENSTRUATION

Menstruation is the only tangible evidence that most women have of the continuous cycle of fertility going on within the reproductive system. For most of human history, menstruation has been the only evidence anyone has had of women's reproductive potential. As a result, scientists, physicians and writers have focused on menstruation as the source of femininity – the essential difference between men and women. In this century, scientists have developed a variety of means to investigate the various endocrine events of the menstrual cycle. Levels of hormones can be measured in blood, urine or saliva. The ovaries, uterus and fallopian tubes can be examined by ultrasonography or laparoscopy. As a result of these intensive investigations, we now see menstruation as only one event within a 'cycle' – the menstrual cycle. Scientific accounts no longer describe menstruation as the most significant event within the cycle. Instead ovulation is the lynchpin – the 'purpose' of the rhythm. The shift in scientific attention from menstruation to the menstrual cycle began in the nineteenth century with the discovery of ovulation, but had its greatest boost in the early twentieth century with the discovery of the 'ovarian hormones'[1] – oestrogen and progesterone. At this time, too, the menstrual cycle rather than menstruation itself came to be seen as the most significant determinant of female emotional and intellectual experience. So, in the late twentieth century, it is possible to consider the psychology of the menstrual cycle – a subject which would have made little sense a hundred years ago. This book is about twentieth-century attempts to understand the relationship between the menstrual cycle and women's minds. The assumption that there is such a relationship, however, comes from the earlier assumptions of the links between menstruation and the nature of womankind. These ideas are too recent and have too long a history to have disappeared from our cultural imagination. Ideas about menstruation and the moon, or the metaphor of menstruation as 'seed' or 'heat', for example, still influence at some level both the questions which scientists ask about the menstrual cycle and the meaning which the menstrual cycle has for many women. A study of the psychology of the menstrual cycle, while possible in the twentieth century, is still incomplete without some consideration of what menstruation means. The purpose of this chapter, then, is to consider what

menstruation means, both in women's writing about it and in scientific and mythological accounts. What is menstruation and what sort of stories are told about it?[2]

WHAT IS MENSTRUATION?

Experiencing menstruation

Approximately half the world's human population experience menstruation. The mythical average Western woman who has regular periods between the ages of 13 and 50, interrupted by two pregnancies, will menstruate more than four hundred times. Between one-seventh and one-fifth of a woman's adult life could be spent menstruating (Greer, 1971). Menstruation is not a rare or even unusual experience. However, in our culture and many others it is a private and largely hidden one. As a result we know little about women's experiences of menstruation, what it feels like to menstruate or to be a menstruating woman, either now or in previous times. In the nineteenth century, for example, menstruation was rarely mentioned in women's diaries or correspondence, which are the main documentary source about women's lives (Jalland and Hooper, 1986; Blodgett, 1988). It seems that there is either nothing to say about menstruation – or an absence of words in which to say it.[3] The absence of menstruation from women's diaries, etc., can be seen as one aspect of female repression through language. Menstruation was literally unmentionable because there were no words in the man-made language which could be used to describe the experience politely. As Blodgett (1988) notes, any references which were made may have been removed by fastidious editors before publication, suggesting that even if words exist they are not suitable for public expression. This silence remains a feature of modern life. Sophie Laws (1990) identified a 'menstrual etiquette' in her research on men's views of menstruation, forbidding mention of menstruation in male company. Similarly, Kathryn Lovering (1995) has found that adolescents have nothing to say about menstruation itself. The only discourses which they can use to describe their experiences are medical ones, which describe pain, distress and mess. Unless these girls have period pain, or difficulties obtaining sanitary towels, they have nothing to say. Emily Martin (1989) too, in her interviews with women, found that medical descriptions of menstruation dominated in women's accounts with virtually no references being made to the phenomenology of menstruation. There are simply no words to describe how menstruation feels unless it is painful, traumatic or messy. This is all that we can say about menstruation – and not surprisingly, accounts of it in literature are dominated by this discourse. For example, the heroine of Erica Jong's novel *Fear of Flying* mentions her period because she has no tampons. The terms she uses emphasise blood 'gushing' and being taken by surprise. This kind of menstrual experience can be described, but it is relatively rare. The majority of periods pass unremarked and even unnoticed, without pain, gushing blood or fear of

public embarrassment. It seems that there are no discourses or even words available which can be used to describe these ordinary and unexceptional experiences.

When menstruation is mentioned, it is rarely spoken of directly but more often euphemistically. Victorian women used phrases such as 'turns', 'monthlies', 'poorliness', 'the curse' or 'being unwell' (Perkin, 1993). Some diarists used an idiosyncratic code to record menstruation or wrote parts of the diary in a foreign language (see Blodgett, 1988; Rosenblatt, 1983). Women in the twentieth century also use a wide variety of euphemisms (see Joffe, 1948; Ernster, 1975). Sharon Golub (1992) lists 53 common North American expressions. Like the earlier names for menstruation, many of these refer to pain or discomfort (e.g. 'unwell', 'the curse', 'wrong time of the month') or emphasise the regularity of menstruation, sometimes describing it as a visitor (e.g. 'period', 'monthlies', 'that time of the month', 'Aunt Tilly is here', 'I've got my friend'). A second category refers to menstruation as a sign of sexual non-availability (e.g. 'the red flag is up'), nonpregnancy (e.g. 'safe again', 'celebrating') or a symbol of femininity (e.g. 'woman's friend', 'Mother Nature's gift'). Others refer to the colour of menstruation (e.g. 'the reds') or menstrual accoutrements (e.g. 'riding the cotton pony', 'on the rag', 'white cylinder week'). Studies of men suggest that they also refer to menstruation euphemistically, although the range of terms found in male discourse is narrower, referring usually to menstrual paraphernalia (e.g. 'jammy rags') or presumed sexual non-availability (Ernster, 1975; Laws, 1990). Sophie Laws notes that these phrases can also be used differently by men, as terms of abuse towards other men, as well as menstrual euphemisms (Laws, 1990).

The silence about menstrual experiences in literature has, until recently, been broken only by accounts of a woman's first period. These accounts often recollect feelings of horror and confusion, or fear about apparently inexplicable bleeding. Hence, they fit the dominant patriarchal discourse of menstruation as unexpected, painful, gushing blood. This is what we are allowed to say about menstruation. So, for example, Simone de Beauvoir describes her first period like this:

> We were staying with friends during the stifling heat of mid-July; I awoke horror-stricken one morning: I had spoiled my nightdress. I washed it, and got dressed: again I soiled my underclothes. I had forgotten Madeleine's vague prophecies, and I wondered what shameful malady I was suffering from.
>
> (de Beauvoir, 1963:101)

Fear was also the chief recollection of Kathleen Dayus writing of her impoverished working-class life in Birmingham before the First World War. 'When I saw my first period I was scared to death. I ran all the way home from school thinking I was going to bleed to death' (Dayus, 1985:95). In Germaine Greer's account it is the need for secrecy and the suspense of waiting for the first period to come which make it memorable, rather than the blood itself. She writes: 'For

six months while I was waiting for my first menstruation I toted a paper bag with diapers and pins in my school satchel. When it finally came, I suffered agonies lest anyone should guess or smell it or anything' (Greer, 1971: 50). Interview studies suggest that first menstruation (menarche) is not memorable for all women. It is more likely to be memorable if it happens at school, or causes embarrassment, otherwise it may be unremarkable (Lovering, 1991, 1995; Kissling, 1996). They also suggest that menarche can be framed within a discourse of 'growing up' – as a step on the way to adulthood. So, for example, Gina, one of the participants in Emily Martin's study, says: 'The first time I had my period I was so happy that I remember singing in the bathroom, "You are a big girl now"' (Martin, 1989: 102).

The experience of menstruation after the first occasion is written and spoken about much less. Ordinary, repeated menstruation is much less likely to be unexpected or messy, and, after adolescence, less likely to be painful. There is nothing left to say. As the women interviewed by Nancy Friday said, 'What's there to discuss? It's like fingernails, hair – they grow. It's just a fact of life. What's there to feel?' (Friday, 1979:149). One of the rare accounts is found in Anne Frank's diary. For her, menstruation is a bittersweet event.

> Each time I have a period . . . I have the feeling that in spite of all the pain, unpleasantness and nastiness, I have a sweet secret . . . that is why, although it is nothing but a nuisance to me in a way, I shall always long for the time that I shall feel that secret within me again.
>
> (Frank, 1953:115)

Anne Frank's words suggest the possibility of alternative discourses which could be used to describe menstruation. Hints of other ways of talking about it also emerged in the 1970s, as the feminist revival brought an increased 'menstrual consciousness' among many women, and a forum in which experiences could be described, at least for those women active in consciousness-raising and broadly feminist activities. The descriptions of the menstrual experience given by women writing and researching in this tradition suggest that there is something to feel, and something to talk about, at least for some women. The feelings that they describe range from physical experiences of pain and discomfort to more abstract feelings of purification and sisterhood. For example, one of the women in Paula Weideger's study in the 1970s describes menstruation as 'a pain in the vagina', while others say: 'It makes me very much aware of the fact that I am a woman . . . It's also a link to other women. I actually enjoy having my period. I feel like I've been cleaned out inside.' Another says,

> the menstrual cycle has become such a part of my life by now, I don't want to change it. It is a part of being a woman, which I am proud to be. I really like it. It's difficult to explain, but it's the same way I like the changing of the seasons. I guess the monthly cycles are 'earthy' and symbolic to me.
>
> (Weideger, 1976: 4–5)

Imogen Sutton also writes of the feeling of identification with other women which menstruation gives her:

> I was newly inaugurated into the business of blood each month; blood every month – did it really happen to all women? I would stare out of the window of the bus and gaze at the women around me. 'So she is probably bleeding now . . . and her, and her.' It made me identify with other women in a way I had never done before.
>
> (Sutton, 1989: 1)

In the same vein, Lara Owen writes of the power of menstruation – its reminder to her that we are a part of nature and its ability to connect women across the centuries:

> Periods . . . are a wild and basic, raw and instinctual, bloody and eternal aspect of the female – and no amount of 'civilization' will change that. My period is a monthly occurrence in my life that I have in common with all women who have ever lived. Women living in caves twenty thousand years ago, priestesses in palaces in ancient Egypt, seers in temples in Sumeria, all bled with the moon. The first woman who made fire might well have had her period at the time . . . If menstruation is a highly creative time for women psychically and spiritually, who knows what gifts humankind has been brought by women during their menses.
>
> (Owen, 1993: 66)

These descriptions refer to menstruation in an abstract and even poetic way – emphasising its symbolism and 'power'. In this way they are similar to the religious and mythological accounts of menstruation (see below). We discover little of the pragmatic emotional and practical reality of menstruation from them. Is the menstrual experience always the same? Dena Taylor's book *Red Flower: Rethinking Menstruation* (1988) is full of women's own accounts of menstruation, positive and negative, in prose and poetry, including extracts from a menstrual diary kept by Miriam Sagan. These suggest that the feelings aroused by menstruation may vary from one month to the next, and also remind us of the often ambivalent link between menstruation and pregnancy:

> April 8: Began to bleed standing in the Museum of Science . . . Felt a surge of interest in the exhibit on reproduction, the cross section of ovaries. 'That's me!' I wanted to say. Then, felt sudden exhaustion on the subway coming home. Bleeding, bleeding. Exhaustion under my eyes, cramps. Yet energy flowing beneath the fatigue. Felt exhilarated, ultra-sensitive.
>
> May 8: Menstruating: two days late, was already having pregnancy fantasies. Imagined sitting in the waiting room of an abortion clinic. Almost more of a wish than a fear. Every period the loss of a potential child; loss, sadness, even though there is no room in my life for a child now.

> August 1: Feel very low. Depressed, suicidal. Menstruating. Physically shakey, spacey. No energy. No mail. No phone call.
>
> (Sagan, cited in Taylor, 1988: 65–66)

Erica Jong's description of her heroine's desperate search for tampons is a reminder of the practical aspect of menstruation, and the emphasis on secrecy and absence of 'mess' in our Western culture. This aspect of the menstrual experience is less often described in literature but is inferred in the adverts and information provided by the menstrual products industry (Berg and Block Coutts, 1994; Treneman, 1988). Women experiencing menorrhagia (very heavy menstruation) often describe a feeling of loss of control and concern about leakage and mess, which can severely restrict their activities and self-confidence (Marshall and Bundred, 1994; Hodges, 1996). These concerns and fears fit well into the dominant menstrual discourse – they can be talked about, even to a clinician. Similarly, anxiety about the unpredictability of menstruation can be expressed. As Owen puts it: 'Menstruation is predictably unpredictable. You never know exactly when it's going to come, and sometimes it completely surprises you' (Owen 1993: 66). Menstruation which fits the messy, bloody, painful, potentially embarrassing description is perceived as problematic and a medical solution can be sought.[4] So, for example, some women welcome the oral contraceptive pill because it controls this unpredictability. Nancy Friday says: 'What I myself liked about the pill was that you always knew when you would menstruate, the flow was less and so were the cramps' (Friday 1979: 152). Others seek more direct help from a physician, although for most this is a disillusioning experience (Scambler and Scambler, 1993; see chapter six). Not surprisingly, a high proportion of women who experience menstrual pain, heavy menstrual loss or unpredictability also express antipathy towards menstruation. As one said, 'I don't bloody like them. I think it's because I have so much trouble with them – all the backaches and the stomach aches and the heavy bleeding. I've had so many problems with it ever since I started' (Scambler and Scambler, 1993: 32).

These anecdotal descriptions in women's writing and interviews with women suggest that menstruation can be anything from a messy and painful discharge to a mystical or near-religious experience. The sensation of menstruation (its look, feel and smell) and its emotional interpretation vary from woman to woman and period to period. The dominant menstrual discourse is one of pain, mess and unpredictability and it is this which is most often remarked upon and talked about. It may not be this which is the most common experience, however. We have very little phenomenological information about 'unremarkable' periods. Perhaps statistical information from general population studies will cast some light on this.

Menstrual statistics

The development of natural history and science in the eighteenth century and the 'science of woman' (Moscucci, 1993) in the nineteenth century led to an interest in cataloguing and describing menstruation and its associated customs and practices. The early studies of this kind were anthropological in nature, the best known being *Das Weib*.[5] This weighty work attempted to describe all aspects of women's life in 'primitive' (sic) cultures, in a nineteenth-century anthropological tradition. In modern times, these works can be criticised for racism and *Das Weib* in particular for its objectification of woman as a separate species from man (Weideger, 1985; Moscucci, 1993). However, much of our knowledge of the practices and customs associated with menstruation in non-Western cultures is derived from these works – and often quoted uncritically by modern researchers.[6] These studies were principally concerned with customs and practices rather than with the apparently more mundane questions: How often do women menstruate? Is the frequency of menstruation constant over a lifetime? How many days do women menstruate for? Is the amount of menstrual fluid lost equal, or of the same 'quality', on all menstruating days? and so on. Comments were made, however, on the ages at which menstruation began and ended. This aspect of menstruation has long fascinated recorders of human experience, so that age at menarche in particular can be traced back over many centuries (see Shorter, 1983).

In Western cultures, girls usually experience their first menstruation between the ages of 10 and 16, with 13 being the average age (Asso, 1983; Coleman and Hendry, 1990). Throughout this century, the age at which menarche occurs in Western industrialised countries has been gradually reducing – at the rate of approximately one month per decade. The reason for this so-called 'secular trend' is unknown, but it is usually attributed to improvements in general health or diet (Coleman and Hendry, 1990). Menarche is one of the later events of puberty for girls, and although it came as a shock to many young women of previous generations, it is now more likely to be an anticipated event.[7] Many textbook descriptions imply that once the first period has occurred, menstruation occurs regularly every 28 days (the menstrual cycle), unless interrupted by pregnancy, until the menopause at around age 50.[8] A number of extensive longitudinal studies in which women record the dates of menstruation as it happens have shown this to be relatively rare, however (Treloar *et al.*, 1967; Vollman, 1977; Voda *et al.*, 1991). The time between periods can vary between 10 and 60 days (Vollman, 1977). Menstrual cycles vary in length both among women and from one cycle to the next, with only around one in eight cycles being exactly 28 days in length. Vollman (1977) found that cycle length also changes with age, with an average length of 35 days in the early teenage years reducing to a minimum of 27 days in the early forties and then increasing to 52 days in the mid-fifties. In the first year after menarche, over 40 per cent of girls in Finland report irregular cycles, compared to only 9 per cent of their mothers

(Widholm and Kantero, 1971). So, menstruation is not as predictable as folklore and medical texts would have us believe. Neither is menstruation always preceded by the release of an egg from the ovary (ovulation). Glen Metcalf and her colleagues collected weekly urine samples for three months from 209 women in New Zealand, and found that in the first year after menarche only 23 per cent of the women's periods were preceded by ovulation, rising to 83 per cent among women who had been menstruating for nine years or more (Metcalf *et al.*, 1983; Metcalf, 1983). Menstrual cycles are a variable experience.

Menstruation is not the only type of blood loss from the vagina. Many women will experience bleeding after childbirth, or when they have an infection or other disorder of the womb or vagina. Some women experience 'break-through bleeding' while taking the pill, or slight bleeding at ovulation. Menstruation itself is also a variable experience and can be difficult to define. The most detailed study of normal menstrual bleeding was commissioned by the World Health Organisation in the late 1970s (WHO, 1981; Snowden and Christian, 1983). The survey involved 5,322 women in ten countries around the world (Egypt, India, Indonesia, Jamaica, Korea, Mexico, Pakistan, Philippines, United Kingdom and Yugoslavia), with around fifty women in each country keeping a daily diary of menstrual bleeding. Across all of these countries, a menstrual bleed of 4 or 5 days was most commonly reported, and the majority of women described their menstrual loss as 'moderate'. However, there were large variations among women. For instance, more of the women in Egypt, India and Mexico reported short periods (1 to 3 days) than women in other countries, while British, Indonesian and Pakistani women were more likely to report periods of 6 or more days than women in other countries. It is difficult to know whether these findings reflect a real difference in the number of menstruating days or a difference in the definition of menstruation in the different countries. Snowden and Christian (1983) also report different 'shapes' of menstrual bleeding. Some women reported heavy menstrual loss on the first days of their period, becoming lighter towards the end (about 45 per cent), while other women reported a few days of light loss (spotting or staining), followed by two or three days of heavy menstruation and a gradual tail-off (around 30 per cent). Still other women reported an equal menstrual loss on each day of their period. The duration, volume and shape of menstruation was found to vary with the type of contraception used. IUD (intra-uterine device) users were more likely to experience a gradual onset of menstruation and more loss overall, while pill users were more likely to report an equal menstrual loss on each day of the period, and a lighter bleed overall than other women. There may be some ambiguity about the start and end of menstruation – especially for those women who experience the gradual onset pattern. Hence, the possibility arises that differences in the way menstruation is defined may influence the reporting of menstrual onset, even in diary studies, and result in apparent differences in menstrual length between different countries (McNeill, 1992).[9] There is some evidence that menstruation lasts longer in the winter and spring than in the

summer (Datta, 1960), so it is also possible that climatic changes contribute to this finding.

Therefore, not only is the menstrual cycle variable among women, but so also is menstruation itself. While having periods may connect us with other women, as Imogen Sutton (above) suggests, and there may be similarities between our own menstrual experiences and those of other women, there are also differences. Each woman has her own idiosyncratic menstrual pattern, falling somewhere within normal ranges of cycle length, volume of fluid lost and days of menstruation. Erin McNeill (1992) notes that women are often implicitly criticised in menstrual research for reporting 'regular' cycles and 'moderate' periods, when in fact these are both variable experiences. Following Treloar (1967), she suggests that terms like 'regular', 'twenty-eight days' and 'moderate' are used by women as a shorthand to mean 'normal for me'. There may be other reasons for this too. Perhaps menstruation is too commonplace an experience to merit special attention (as Nancy Friday suggests, above), so that most women don't routinely chart its occurrence, noticing it only when it changes in some way. Alternatively, perhaps the silence surrounding menstruation is so great that we avoid consciously acknowledging it even to ourselves and are not aware of our own variability. Terms like 'regular' may be used (or more likely ticked on a questionnaire) to mean that we have no reason to think that we are different from anyone else and are not concerned about our periods, or because none of the other ways of describing them fit the experience either.

Some menstrual experiences do fall outside the normal range, and increasingly these are defined as disorders requiring medical attention (Scambler and Scambler, 1993). The most common of these are menorrhagia (excessive menstrual blood loss) and amenorrhea (absence of periods). Apart from these, many women experience pain associated with menstruation. Dysmenorrhea, or severe period pain, results from strong contractions of the uterine wall and is associated with high levels of prostaglandin in the endometrium. Women who experience severe period pain may have up to seventeen times more of the prostaglandin PG2a in the uterus than women who don't (Chan *et al.*, 1979). This type of smooth muscle contraction can be exacerbated by psychosocial factors, such as stress (Nicassio, 1980), so dysmenorrhea can vary from month to month for psychosocial or physiological reasons. This makes it difficult to assess the number of women experiencing severe pain. We do know, though, that dysmenorrhea is most frequent during adolescence. For example, Widholm and Kantero (1971) studied the menstrual experiences of 5,485 adolescent women (aged 10–20 years) and their mothers in Finland. They found that 8 per cent of the mothers reported severe menstrual pain with every period compared to 26 per cent of the regularly menstruating adolescents. Just as menstruation is not the only form of blood loss from the vagina, dysmenorrhea is not the only form of pain associated with periods. A substantial number of women report breast pain either before or during menstruation, and descriptions of backache and headaches or migraine are not uncommon.

Epidemiological studies of menstruation suggest that menstruation is a variable experience across the whole population, but possibly less variable for individual women. We may all have our own usual pattern of menstrual cycle length, days and 'shape' of bleeding – a pattern which changes with age, and possibly with other factors such as having children or changing diet or exercise or being ill. Very few of these experiences fit the textbook 28-day cycle, and it seems too that the majority do not fit the painful and bloody unpredictability of the dominant menstrual discourse. Periods which do fit this picture are likely to prompt a woman to seek medical help. The majority of periods, though, are ordinary, unremarkable and undramatic. It is not this unspoken routine which has made menstruation, and later the menstrual cycle, interesting throughout the centuries, but an extreme and perhaps imaginary experience.

STORIES ABOUT MENSTRUATION

Women have been menstruating, as far as we know, for as long as there have been women. We are not the only menstruating species: several types of primate also have menstrual cycles (see Profet, 1993; Strassman, 1996), although most other mammals experience oestrus cycles, which, we now know, differ physiologically from menstrual cycles. The first appearance of a bloody discharge in young girls and its repetition at intervals thereafter has, not surprisingly, intrigued most civilisations and cultures. Why do women menstruate? What purpose does it have? What significance does this blood have? Explanations for menstruation can be found not only in medical and scientific writing but also in anthropological accounts, folklore and mythology. There are many of these accounts and for the purpose of this chapter, I have grouped them into broad categories. Some of these ideas are more common in some cultures than others, and some have been more popular than others at particular points in history. Echoes of all of them can be found in the descriptions given by women of their own menstruation, quoted earlier in this chapter, and some of them have profound implications for gender politics, as will be shown in the next chapter. Running through all of these accounts is the assumption that menstruation is somehow related to reproduction or fertility, although how this relationship is manifest is not a concern for most of the explanations. Much more important is the regular appearance of blood in the absence of injury. The descriptions given are relatively brief because of the focus of this book.[10]

Menstruation as blood loss

The most consistent metaphor in accounts of menstruation is that of blood loss. Most women would recognise that menstrual fluid is not the same as circulating blood. It has a different consistency, appearance and smell, for instance. It also behaves differently, not clotting in the same way as circulating blood does, and not flowing in the way blood from a cut finger flows either. Menstrual fluid does

contain some blood, but it also contains the broken-down uterine lining, mucus from the vagina and other fluids. It is not blood, but the perception of it as blood has given it a powerful symbolic significance, both in mythology and in medicine.

In some psychoanalytic theories, it is the bloody nature of menstruation which makes it taboo. The unconscious association between blood and death makes menstruation a powerful symbol and source of fear (Chadwick, 1933; Daly, 1935; Bettelheim, 1955; see Lupton, 1993, for a review). Anthropological accounts, too, focus on the perception of menstruation as blood in their interpretations of the cultural practices surrounding it, as shown in the titles of books such as *Blood Magic* (Buckley and Gottlieb, 1988) or *Blood Relations* (Knight, 1991). For many writers, it is the bloodiness of menstruation which links it with 'nature' rather than 'culture'. Nature is seen to be uncivilised, governed by biological impulses and 'red in tooth and claw'. Humans can overcome this through intellectualisation. However, it is harder for women to separate themselves from their biological selves in the same way that men can because of their repeated blood loss. This idea is found both in nineteenth-century accounts of women's character (see Bland, 1995) and in some contemporary feminist accounts (e.g. Owen, 1993), with differing perceived implications. In medicine the significance of menstrual blood loss is attributed to the risk of anaemia. So, for example, menorrhagia is defined in terms of the amount of blood lost because this may leave a woman at risk of anaemia, not in terms of the total amount of fluid lost during a period, or the number of days on which menstruation occurs (Hallberg *et al.*, 1966). Hence, a period which a woman perceives to be 'heavy' may not be defined by her doctor as menorrhagic because the amount of blood within it is not enough to put her at risk of anaemia (Hallberg *et al.*, 1966; Fraser *et al.*, 1984; Warner 1994; Hodges 1996). However, the language used by women seeking help for menorrhagia suggests that they are concerned about the degree of inconvenience and 'menstrual handicap' caused by having to manage the amount of fluid lost, rather than about the risk of anaemia (Hodges, 1996). So, while the blood in menstruation may be of key significance in mythology, psychoanalysis and medicine, for a menstruating woman the quantity of fluid may be just as important.

Blood is a powerful and meaningful symbol for humans. Bleeding is often a frightening experience, with a proportion of people being actively blood phobic (Costello, 1982; Öst *et al.*, 1989). The absence of reports of an equivalent 'menstruation phobia' in the literature, despite many accounts of blood phobia among women, adds to the suggestion that menstruation is not always perceived as blood.[11] Until recently, most of the writers about menstruation have been men, so perhaps it is not surprising that the focus has been on blood – the only part of menstrual fluid which men will have experienced. A focus on blood may increase the power and fearfulness of menstruation in some men's eyes, as it did for Sigmund Freud. For others, though, a perceived equivalence between menstrual fluid and blood may reduce the mystery of menstruation and make it

less frightening. One of the men in Sophie Laws' study of menstrual etiquette describes this. He says:

> Well when I was younger and they said that there was a lining on the womb, and that all this lining and a lot of blood came out as well, and I used to imagine all sorts of horrible things coming out. . . . Until I was going out with this present girlfriend I still imagined what I'd thought when I had the biology lessons, but since I've been going out with my present girlfriend, I've just thought of it as just blood, just the same, because we've had sex when she's been on a period, and there has been, you know , some blood . . . and it's just the same, it's not different, so now, it doesn't bother me at all. I must admit at first I was a bit worried, in case there was . . . God knows what coming out.
>
> (Laws, 1990:113)

In either case, arguably the association of menstruation with blood makes it a controllable experience. Either it is so powerful and mysterious that it is taboo and must be controlled by silence and limitations on activity, or it is so ordinary and nonsignificant that it is not worth mentioning and ignored.

Menstruation, rhythm and time

The idea that menstruation is a regular and time-related event is almost as prevalent as its association with blood in both scientific and non-scientific accounts. As noted earlier, longitudinal studies suggest that the number of days between periods varies both between women and between cycles, with only about one in eight cycles being of twenty-eight days. Menstruation is a repeated experience, but in reality not always the clockwork-like phenomenon that it is often suggested to be. Several writers have argued that repeated menstrual cycles are a more significant feature of modern life than they would have been for women without access to (or freedom to use) contraception. For example, Short (1984) has described the menstrual pattern of modern !Kung women, whose experience may be similar to that of Palaeolithic women.[12] They typically experience a later menarche and earlier menopause than industrialised women, coupled with prolonged breast-feeding between pregnancies. These factors make menstruation a relatively rare event, and suggest that for most women it would not have been regular enough to be a reliable measure of time. Knight (1991) argues that women living in largely female groups would experience menstrual synchrony;[13] hence menstruation would be a collective rather than an individual experience. If all of the women in a group menstruated at the same time, even if some were pregnant or breast-feeding, the menstrual rhythm among the others would continue. As a woman stopped lactating, her menstrual cycles would return in the same rhythm as those of the women around her. As long as all the women were not pregnant or feeding babies, the underlying cycle would continue and could be an accurate marker of time. As with the perception of

menstruation as blood, the view of menstruation as a time-related event of strict periodicity has a basis in reality, but is an exaggeration of (modern) women's experience. It may, too, serve the political purpose of making menstruation controllable. Either it is so magical and mysterious, amazingly happening every month, that it is taboo, or it is predictable and can be controlled, by men or by women.

The phrases used to describe menstruation often refer to its temporality: for example, 'period' and 'the monthlies' in English and *das Regule* in German. The name *menses* is from the Latin for month. In Gaelic, the words for menstruation and calendar are the same (*miosach* and *miosachan*). Some anthropologists and historians have suggested that menstrual cycles were used as a way of measuring time in early history. Marshack (1972) describes bone slates or 'batons' dating from Palaeolithic times (around 35,000 BC). These are small and light enough to be carried around, and are marked by notches which may have indicated the passing of days. Female figurines have also been found with similar notches, which Boulding (1976) suggests were used to count the days of the menstrual cycle. Further evidence comes from a large Palaeolithic female figure, found at Laussel in the Dordogne area of France and dating from around 20–25,000 years BC. In one hand she holds a horn (or broken crescent) on which are thirteen incisions, while her other hand is placed on her abdomen. A number of writers have suggested that this represents the thirteen menstrual cycles which could occur in a year and links them with fertility (Fisher, 1979; Stonehouse, 1994).

The idea of menstruation as a time-related event is also found in assertions of a link between women's cycles and the changing phases of the moon. The association of the moon with femininity and menstruation is a long one, and has been well documented (e.g. Harding, 1989; Shuttle and Redgrove, [1978] 1986). Briffault ([1927] 1952) recounts numerous instances of the same word being used to describe both menstruation and the moon. For example, he says that French peasants describe menstruation as *le moment de la lune*; in the (then) Congo, menstruation is called *ngonde*, which means moon, and so on. Stories which link the moon with menstruation fall into two categories, those which associate some aspect of the moon (or moon god/goddess) with the origins of menstruation, and those which link the menstrual cycle with the phases of the moon. For example, Ploss *et al.* (1935) describe a Sinaugolo myth from the Rigo area of New Guinea: 'The moon lived on earth as a tiny youth covered with silvery hair, cohabited with a woman, was slain by her husband and has punished women ever since' (Ploss *et al.* 1935: 651). The association of the moon with menstruation is also found in accounts of numerous myths and rituals (see Shuttle and Redgrove, 1986; Harding, 1989; Knight, 1991).

As well as being seen as the originator of menstruation, the phases of the moon are often linked to the timing of menstruation (see Harding, 1989; B. Walker, 1983; Shuttle and Redgrove, 1986). The stereotypical menstrual cycle is remarkably similar in length to the lunar cycle of 29.5 days. Evidence that fertility in non-human primates and other species is influenced by day length (or

night length) also suggests that associations between moonlight and ovulation may have as much to do with biology as mythology (Gwinner, 1981). Although our current systems of marking time are not based around the moon, there is evidence for the earlier use of a lunar calendar in many rituals, nursery rhymes and fairy tales. Barbara Walker (1983) argues that a lunar-based calendar was used before the Julian calendar was introduced by the Christian Church. In the lunar calendar there would be 13 lunar months of 28 days – giving a year of 364 days. Hence the phrase 'a year and a day' in many nursery tales to refer to the 'new' Christian year of 365 days. She then argues that lunar calendars are typical of matriarchal and goddess-worshipping cultures, in which the moon and menstruation are often linked. Hence, the lunar calendar may originally have been a menstrual calendar, or may have been a menstrual calendar in practice. Such links are difficult to establish in modern times. Although repeated individual experiences of menstruation are more a feature of modern life than they may have been in ancient cultures, the influence of artificial light has obscured possible effects of natural light. Nonetheless, the link between the moon and menstruation is still made, with modern research continuing to investigate the effect of day length and moon phase on the occurrence of menstruation and ovulation (Cutler *et al.*, 1987; Jacobsen *et al.*, 1988; Graham *et al.*, 1992).

The notion of menstruation as a regular and predictable event was reinforced by the discovery of ovulation and fluctuating levels of ovarian hormones in the late nineteenth and early twentieth centuries (see below). Modern scientific textbooks emphasise the cyclicity of menstruation, considering it to be only one part of a larger rhythm which is focused on conception (Martin, 1989). Hormonally, menstrual cycles are remarkably variable – ovulation does not always occur, and circulating levels of oestrogen and progesterone can differ greatly from one cycle to the next. This can make the identification of hormonal dysfunctions very difficult. However, this is not the story of menstrual cycles which is found in the textbooks, and it is not the story which most psychologists and clinicians have access to in their design and interpretation of studies concerned with menstrual cycles and well-being. Hence, the metaphor of a menstrual rhythm has had a powerful influence on descriptions of women's psychology, as will be seen in chapter two.

The power of this story lies in the implication that menstruation, and menstrual processes can be contained and controlled. This is a possibility which figures significantly in modern self-help guides for PMS, for example, which advise women to limit the impact on their lives of negative premenstrual mood changes by being conscious of where they are in their cycles and by planning crucial events (e.g. taking a child to the dentist) around them (e.g. Dalton, 1969). From a different perspective, writers such as Shuttle and Redgrove (1986) and Owen (1993) advocate an increased menstrual consciousness, allowing women to be 'in tune' with their cyclicity. While these writers are concerned with controlling feelings which may be associated with menstruation, other researchers are concerned with controlling menstruation itself through an understanding of its

cyclicity. So, research into the mechanisms which cause menstrual synchrony, for instance, can be justified not only on the grounds of 'purely' academic interest but also because an understanding of the mechanisms may result in better forms of contraception or infertility treatment. Hence the research is concerned not only with the way menstrual cycles work, but also with how the process can be controlled. An awareness by women of their own ability to control menstrual rhythms, sexuality and fertility is seen by Chris Knight (1991) as one of the cornerstones of the development of civilisation 40,000 years ago.

Menstruation and fertility

All of the stories about menstruation link it in some way with reproduction or fertility. Interpretations of European Palaeolithic cave paintings and figures suggest that women were thought to be parthenogenetic,[14] and that an association was made between menstruation and fertility (Stonehouse, 1994). As ideas about how humans reproduce have evolved, however, the role of menstruation within them has changed, from the concept of menstruation as 'seed', a vital component of a foetus, to the analogy of menstruation with 'heat' or oestrus, a time of fertility, to modern ideas of menstruation as a waste product having no active role in the reproductive process.

Menstruation as seed

The idea of menstruation as female 'seed' suggests that it has a direct role in the creation of human life and is not just a symbol of fertility. Barbara Walker (1983) writes that, in Hindu legend, the menstrual blood of the Great Mother formed a clot or crust from which she gave birth to the cosmos, while the great goddess Ninhursag in South American Indian mythology made humankind out of clay mixed with her menstrual blood. The concept of menstrual fluid coagulating to form a baby has a long history, and dominated medical thinking until the eighteenth century.

The earliest written ideas of menstruation as seed occur in the Hippocratic texts. According to these writers, human reproduction is based on pangenesis, and requires two seeds (Laqueur, 1990; Cadden, 1993). In this theory, both parents are thought to contribute 'seed', which is drawn from all parts of the body and stored in the testes/ovaries (pangenesis).[15] This seed takes the form of semen in the male parent and menstrual fluid in the woman. These combine to form the baby. Hence, menstrual fluid is the crucial female contribution to a baby, rather than a source of nourishment for a developing foetus.

The most influential exponents of the idea of menstruation as seed were Aristotle (384–322 BC) and his followers. His works, and the works attributed to him, were the major influence on thinking about reproduction until at least the Renaissance. Even up to the 1930s, the most widely used lay guide to midwifery and 'sex education' was entitled 'Aristotle's Masterpiece' (see Blackman, 1977).

This work is not directly attributable to Aristotle but owes much to Aristotelian ideas. It appears in many printed versions published and distributed privately, and probably handed down from mother to daughter – a slightly 'disreputable' book, but one of the few available sources of information about sexuality, conception and childbirth. The ideas about menstruation contained within it probably influenced both physicians and women themselves.

Aristotle also thought of menstruation as female seed, or the vehicle for female seed, but inferred different functions for the male and female seed in reproduction. In Hippocratic descriptions semen and menstruation each contain both male and female forms of the parental characteristics. This led Aristotle to ask why women can't make babies by themselves. He solved the difficulty by suggesting that male and female seed are different. The male seed, in its semen vehicle, provides the essence or soul of the child, its fundamental humanity. The female provides the matter, or material from which the child is formed, in her menstrual fluid. Women are not capable, by this account, of making semen because females are cooler than males and can only change excess food into blood. Men, with their extra heat, can convert blood into semen. However, menstrual fluid is still seen as an essential component in reproduction, providing the 'clay' from which the child is formed (Laqueur, 1990; Cadden, 1993).

These ideas have little resonance today – they may even seem ridiculous to modern science. However, elements of them can still be found in some modern studies of menstrual knowledge and attitudes (see chapter four), and the idea that menstruation is the starting point for a baby still has some currency. Such thinking remains important because it illustrates the relationship between ideas about the purpose of menstruation and gender politics. In the Hippocratic description, men and women are equal partners in reproduction. In Aristotelian thinking, it is the man who provides the important part, the 'soul', the woman's role being little more than that of an incubator. Feminist critics have observed this type of thinking – woman as 'womb-container' – in much of the discourse surrounding the new reproductive technologies (Corea, 1985; Spallone, 1994; Rowland, 1992). Similarly, the words used to describe the male reproductive system in physiological texts are often more positive than those used to describe the female system (Martin, 1989). These examples suggest that, like Aristotle, modern science attributes activity to the male part of reproduction and passivity to the female part. Looking back at Hippocratic notions reminds us that these ideas are culturally constructed. Hence, our understanding of menstruation can change to fit the dominant cultural view of gender roles.

Menstruation as heat

Laqueur (1990) identifies another metaphor or story about menstruation, which appeared in the nineteenth century. He writes: