

Menopause, Local Biologies, and Cultures of Aging

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ABSTRACT Menopause marks the end of menstruation, once generally accepted as the closure of women's reproductive lives. The current medical view of menopause, however, is as a pathological event with its own distinct set of symptoms and diseases. Researchers have described women as facing a dramatic increase in the risk of heart disease, osteoporosis, stroke, and Alzheimer's, all as the result of the impact of changing hormone levels, particularly the decline in estrogen. The clinical literature has interpreted these findings in terms of the absolute necessity of replacing these lost hormones for all women who are menopausal regardless of any other physiological, social, or cultural characteristic they might possess. Using research done in Japan, Canada, and the United States, this paper challenges the notion of a universal menopause by showing that both the symptoms reported at menopause and the post-menopause disease profiles vary from one study population to the next. For most of the symptoms commonly associated with menopause in the medical literature, rates are much lower for Japanese women than for women in the United States and Canada, although they are comparable to rates reported from studies in Thailand and China. Mortality and morbidity data from these same societies are used to show that post-menopausal women are also not equally at risk for heart disease, breast cancer, or osteoporosis. Rather than universality, the paper suggests that it is important to think in terms of "local biologies", which reflect the very different social and physical conditions of women's lives from one society to another. *Am. J. Hum. Biol.* 13:494–504, 2001. © 2001 Wiley-Liss, Inc.

The end of menstruation is a complex bio-social and biocultural process, but the majority of clinical researchers and physicians appear to assume that biological changes associated with this stage of the life course are essentially universal. Although researchers are becoming more aware of differences in the subjective experience of individual women, the changes are attributed to variations in psychological, social, and cultural factors, layered over an invariant biological base. Over the course of the past two decades, the end of menstruation has come to be understood by the majority of health care professionals and by many women as an event that signals an increased risk for heart disease, osteoporosis, Alzheimer's disease, and stroke, just to name the most devastating of the vast array of disagreeable events that the medical world associates with female aging.

The medical view of aging is often justified by the erroneous claim that at one time virtually no women lived much beyond the age of menopause. Based on a misinterpretation of demographic data showing that the mean life expectancy until the turn of the century in North America and Northern Europe was less than 50 years, this statement is particularly misleading when linked with a second claim, very frequently made in the

medical literature: that a post-reproductive phase in humans goes "against nature" because virtually no mammals have a life span that extends much beyond reproductive senescence. These arguments assume that post-menopausal life in humans is the result of technological and cultural interventions which have influenced longevity favorably, and that women who survive past reproductive age are, in effect, biological anomalies.

While such arguments are patently wrong, they lend support to the dominant medical view of menopause as a pathological condition. Based in part on the media and advertisements of drug companies, menopause has become a condition in need of medication. The tempering of this pathological account by anthropological perspectives, biological and cultural, is not only important but also rather urgent. This essay uses material on differences in symptom reporting taken from research in Japan and North America as the basis for a broader discussion of not only the difficulties and

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challenges of doing comparative research but also of the reasons why it is of critical importance. In addition, the many variations, not just in symptoms but in the experience of menopause, among populations of women as these variations are reflected in the long-term sequelae associated with aging, such as the incidence of heart disease and osteoporosis, are considered. Finally, the need for greater recognition of the inseparable relationship between culture and biology is argued, using as illustration the lives of the generation of Japanese women who are now menopausal.

What is it that leads to the prediction that the majority of women would experience discomfort at menopause? One explanation lies in the use of small clinical samples, often drawn from women attending specialized clinics for menopausal women or referred for psychiatric care, as the basis for generalizations made about menopause, particularly in the 1960s and 1970s (Kaufert, 1988). It was not until large, community-based North American studies recruited women from the general population that the assumed connection between menopause and depression came into question (Whitehead, 1994). Another factor may have been the long-lasting impact of Freudian theories, particularly the work of Deutsch (1945) on menopausal women. The expectation that the loss of fertility would lead to depression was theoretically plausible, if empirically untested. The longitudinal research of both McKinlay and Kaufert (Avis and McKinlay, 1991; Kaufert et al., 1992) reveals that the association between menopause and depression does not hold for North American women. This paper uses research in Japan and from other cross-cultural work to suggest that an association is not made between menopause and discomfort in these societies.

Menopause as cultural construct

Historical and cross-cultural research suggests that menopause is best understood, not as a fact, but as a construct. The very definition of menopause as a woman's last menses does not "fit" with an experience which most women describe as a prolonged process rather than a singular event. The conflation of menopause with the end of menstruation is relatively recent in origin and was not always the case even within the medical literature. Writing in 1813, Halford

(1813:317) commented: "I should observe, that though this climacteric disease is sometimes equally remarkable in women as in men, yet most certainly I have not noticed it so frequently, nor so well characterized in females". Halford was writing about that "period of life at which the vital forces begin to decline, commencing from about 45 until 60 years of age." He described a general decay of strength, tiredness, loss of weight, and appetite and added: "The patient sometimes suspects he has a fever and might also experience head and chest pains, vertigo, rheumatic pains, swollen legs and sluggish bowels" but "above all, anxiety of mind and sorrow have laid the surest foundation for the malady." Halford (1813) concluded by wondering if it was the prospect of death that "inflicted the wound in the patient's peace of mind."

The term "ménopause" was invented in 1821 by the French physician Gardanne (Tilt, 1870). From the middle of the 19th century onward it gradually came into wide circulation in medical circles in Europe and North America to describe what was known in daily parlance in the English language as the "dodging time," i.e., the years before and after the last menstruation (Tilt, 1870). The concept used from medieval times in educated circles to express the idea of a transition at mid-life—the climacteric—made no distinction between men and women. Gardanne, by creating the idea of ménopause, and linking it with menstruation, singled out female aging as something that should be managed by medicine just at a time when the professions of obstetrics and gynecology were being consolidated.

It was over a century, however, before more than a few physicians paid serious attention to menopause. Tilt (1870) in England was a well-known exception for his clinical and theoretical work in the latter half of the last century, as was his colleague, Currier (1897), in the United States. Barnes (1873), another physician interested in menopause, represented the new approach to female aging when he noted: "[p]hysicians do, indeed, talk of the climacteric in man; but the analogy is more fanciful than real." He went on:

There is nothing to compare with the almost sudden decay of the organs of reproduction which marks the middle age of woman.

While those organs are in vigor, the whole economy of woman is subject to them. Ovulation and menstruation, gestation and lactation by turns absorb and govern almost all the energies of her system. The loss of these functions entails a complete revolution. (Barnes, 1873:263–264)

The assumption that menopause is a “revolutionary” transition appears to be shared by a good number of physicians today. There are, of course exceptions, including Novak et al. (1975), both father and son, at Johns Hopkins University who, together with a minority of physicians, have argued for many years in gynecological textbooks that menopause should be regarded as a physiological phenomenon that is protective for the aging body.

The movement to impose a definition of menopause as a woman’s last menses was engineered largely by a research community anxious to find some way of categorizing women as either menopausal or not-yet-menopausal. Lacking any reliable or cheap equivalent for menopause to pregnancy testing, they had to rely on self-reporting, but they did not trust women to know their own menopausal status. Asking them whether they had menstruated within the last 12 months offered a seemingly more objective alternative. The peri-menopause—the period before menopause—was then defined by whether or not a woman had menstruated within the previous 12 months, but not the previous three (Van Keep et al., 1976). Although surviving in Europe, the term “climacteric” dropped out of the North American literature and menopause was equated with the last menses.

Neither Japanese women nor Japanese doctors considered the end of menstruation to be a significant marker of female middle age in the early 1980s, when the research used in this paper was done. The Japanese word *kônenki*, usually translated into English as menopause, does not have its same narrow meaning. Understood as a long, gradual process to which the end of menstruation is just one contributing factor, the term *kônenki* is closer to the earlier European idea of the climacteric. Most Japanese respondents placed its timing at aged 45 or even earlier, lasting until nearly 60.

Shea (1998) translates the Chinese term *gengnianqi* as “a stage in which one in-

creases in years” or “a period of time in which one changes”, reading it as the equivalent of both *kônenki* and the European “climacteric”. She reports that many Chinese women used *gengnianqi* to identify their status in preference to describing themselves as no longer menstruating. By contrast, Thai women used the terms *modlyad* or *sudlyad*, translated by Chirawatkul and Manderson (1994), as “run out of menstrual blood”. While some Thai women expressed concern over no longer being able to discharge “bad blood,” the end of menses signaled not pathology but entry into a new, more spiritual phase of life. As one woman said: “Now I can go to the temple without anxiety of menstruation or spotting. I can go to other places very far from here to make merit as well”. Canadian women would sometimes define themselves as menopausal based on whether or not they were experiencing hot flashes or changes in their pattern of menstruation and not whether 12 months had elapsed since they last menstruated (Kaufert, 1988). A researcher would have labeled them as peri-menopausal, but they saw themselves as already menopausal women. The difference may seem slight, but their view of it transforms menopause from an event into a process, much closer in content to the idea of *kônenki*, *gengnianqi*, or the climacteric as a drawn-out, a transitional process.

The same impetus that made researchers want a clear-cut method of defining the menopause influenced their search for a list of characteristic symptoms associated with menopause. The debate over which symptoms were menopausal emerged in the 1960s and 1970s, a period marked by numerous small-scale clinical trials of the effectiveness of different forms and strengths of hormone therapy in the alleviation of symptoms. Usually carried out in clinical settings and based on very small samples of women followed for relatively brief periods of time, the studies rarely discriminated between those who had undergone surgical rather than medical menopause. Researchers freely extrapolated to the general population of naturally menopausal women using findings based on women attending menopause clinics after having an oophorectomy (Kaufert, 1988).

The assumptions underlying this research included the belief that differences between surgical and natural menopause

TABLE 1. Comparison of the rates of core symptom reporting by study^a

Symptom	Study			(2 df)
	Japan	Canada	USA	
Diarrhea/constipation	24.5	12.8	21.4	62.8*
Persistent cough	4.2	5.2	10.1	68.4*
Upset stomach	6.3	12.9	16.1	85.1*
Shortness of breath	3.1	8.2	15.6	177.6*
Sore throat	10.5	9.1	10.7	2.9
Backaches	24.2	26.8	29.6	17.7*
Headaches	27.5	33.8	37.2	45.2*
Aches/stiffness in joints	14.5	31.4	38.6	279.1*
Dizzy spells	7.1	12.3	11.1	21.4*
Lack of energy	6.0	39.8	38.1	503.3*
Irritability	11.5	17.1	29.9	246.6*
Feeling blue/depressed	10.3	23.4	35.9	365.1*
Trouble sleeping	11.7	30.4	30.6	189.8*
Lack of appetite	4.6	4.0	5.4	5.8
Hot flushes	12.3	31.0	34.8	246.6*
Cold or night sweats	3.8	19.8	11.4	158.2*
Hot flushes/sweats (combd)	14.7	36.1	38.0	252.5*
Total (100%)	1,225	1,307	7,802	

^aFrom Avis et al. (1993).

*Indicates $P < 0.01$.

were irrelevant, that all menopausal women were the same and, therefore, representative of each other, and that the symptoms of menopause were universal. Although questioned by a few anthropologists, the first major test of these assumptions was undertaken by three surveys; the first and second in 1980–1981 in Massachusetts and Manitoba (Canada), and the third in Japan in 1983–1984 (Avis and McKinlay, 1991; Kaufert et al., 1992; Lock, 1993). Each study was independently conducted, but there was an agreement to match methods and design, particularly the selection of participants from the general, as distinct from a clinical, population. The Japanese data were collected from three parts of Japan: southern Nagano, a rural area, where most women either manage or work on farms; the southern part of the city of Kyoto, where women are employed in factories and in other blue collar jobs; and in a suburb of Kobe, where women are mostly what is termed in Japanese “professional housewives.” The United States study used the annually compiled census list for Massachusetts. A list of Manitoba residents registered with a government-funded health insurance plan (virtually the entire population of the province) was used in Canada. Both studies used random sampling techniques to select women aged 45–55 years in Massachusetts and 40–59 years in Manitoba.

Symptom reporting at menopause

Symptom data were collected from 1,225 Japanese women, 7,802 Massachusetts women, and 1,307 Manitoban women who were 45–55 years. Table 1 indicates the 16 symptoms that were common across the surveys (Avis et al., 1993). These included the 11 symptoms that make up the menopausal symptom index developed by the International Health Foundation (1977). This index was embedded in a longer symptom checklist taken from a community-based survey of general health and placed in a section of the questionnaire focused on general health issues. This design was adopted to avoid cueing the response of women by labeling a list “menopausal symptoms” at the same time as asking them to define their menopausal status. Recall bias was limited by asking women only about symptoms experienced in the previous 2 weeks. The analysis shown in Table 1 used the chi-square goodness-of-fit test for equivalence of distributions from independent samples. The primary criterion value used for the chi-square tests is $\alpha = 0.01$ and indicates the presence of a statistically significant difference across the three studies.

There are significant differences on all but two of the 16 symptoms, sore throat and lack of appetite, neither of which comes from the International Health Foundation Index. Women in Massachusetts had the highest reporting rate for most symptoms,

TABLE 2. Percentage reporting hot flushes/sweats in each study by menopause status^{a,b}

Menopause status	Hot flushes/sweats		
	Japan	Canada	USA
Surgical menopause	19.8	38.8	44.4
Natural menopause	16.8	45.5	42.6
Perimenopause	15.8	45.2	37.3
Premenopause	9.7	19.3	13.8

^a $P < 0.01$.

^bFrom Avis et al. (1993).

and women in Japan had the lowest; Canadian rates fell somewhere between the two, but usually closer to the Americans. Constipation is the only symptom which was more frequent in the Japanese study. Two symptoms usually described in the gynecological literature as the *sine qua non* of menopause—hot flashes and night sweats—are markedly lower among Japanese women than among American or Canadian women (Table 2). There was a significant association between these two symptoms and menopausal status in each study; however, the results of a three-way analysis that included hot flash and menopausal status suggest that this association varies across the three countries ($P < 0.001$). Even among the women of Massachusetts, hot flashes are only the fifth most frequently reported symptom, ranking below stiffness in the joints, irritability, depression, and headaches. Japanese women were less likely than Canadian or American women to report having felt “blue” or depressed, but there is relatively little difference within each study by menopausal status.

Using the same set of 16 symptoms, Shea (1998) interviewed 400 women in China and reported that overall symptom reporting was higher among Chinese than Japanese women except for hot flashes. Their frequency was almost the same and much lower than that reported by women from Manitoba or Massachusetts. Chinese women were about as likely as American women to report headaches, backaches, and feelings of irritability. Thai women associated headache and irritability with the end of menstruation, but not hot flashes (Chirawatkul and Manderson, 1994). (Unfortunately, differences in the method of collecting symptom data prevent a direct comparison among Chinese, Japanese, and Thai women.)

On the basis of the differences between Japanese and Chinese women, Shea (1998)

suggests that sweeping generalizations about women and menopause in East Asia are to be avoided. Differences and similarities in these symptom patterns argue strongly against any *simple* causal link between declining endogenous estrogen levels and hot flashes or even depression. This should, however, provide the impetus for further research carefully designed to tease out the degree to which these differences are methodological artifacts, which can be corrected by better design or analytic techniques, and how much they are a reflection of a complex mix of biological with social and cultural factors. Accounting for the differences is more difficult and requires revisiting the difficulties of working comparatively across social and cultural boundaries.

Does the low rate of reporting of hot flashes in Japan indicate that women rarely have hot flashes, have them but do not notice them, or notice them but do not recognize them under the name given them by the researcher? Finding the right words even in the same language can be problematic. Americans refer to “hot flashes,” whereas Canadians follow the English mode and talk about “hot flushes.” Both appear to refer to the same experience. No equivalent terms for hot flushes or hot flashes exists in the Japanese language, although that language is capable of making very fine discriminations in connection with bodily states. One can simply say, “to suddenly become hot,” which of course conveys too broad a meaning. It is also possible to use *nobose*, which means a sudden rush of blood to the head or a “hot fit,” a term usually used in connection with feelings of vertigo or dizziness or when talking about a person who is “hot-headed.” A second term, *hoteri*, translates simply as feeling hot or flushed and is most often used when someone becomes flushed after drinking alcohol, as do many Japanese because of an absence of the enzyme aldehyde dehydrogenase (Goldman, 1995). The terms *hoteri* and *nobose* were both used in the questionnaire, together with a third term, *kyû na nekkkan*, meaning “to have a sudden feverish feeling,” a term that had already been used in a small survey conducted by a Japanese gynecologist (see Lock et al., 1988, for a more detailed description of the development of this symptom list).

These linguistic problems are not un-

usual. Shea (1998) found that many rural women did not understand *chaore* or *chaong*, the words for hot flashes used by Chinese physicians (1998). Chirawatkul and Manderson (1994) encountered a similar problem in Northern Thailand. Having to replace a single word by three, none of which is quite the same as the original, and finding that the term used by physicians was not understood by rural women illustrate the extreme need for caution when translating symptom terms.

A different problem arises when symptoms, strongly associated with menopause in one culture, are barely reported in another. The work of translating the questionnaire used in Canada and the United States into Japanese was preceded by a series of interviews with women and physicians and a review of the Japanese medical literature. A number of the symptoms that Japanese women and their doctors said were associated with *kônenki* did not appear in the list of symptoms developed for the two North American studies. Some of the omissions included symptoms which were very common in Japan, including shoulder stiffness, ringing in the ears, and a heavy feeling in the head. Others were symptoms that Japanese gynecologists suggested should be included in the study because they were associated with menopause in the Japanese medical literature. When back-translated, these symptoms seemed to be the equivalent of terms used at the turn of the century in the European medical literature to describe menopausal symptoms, such as "a feeling of ants crawling on one's skin". Rarely reported by Japanese women themselves, they may be remnants of an earlier impact of German medicine in Japan (Lock, 1993).

The International Health Foundation Symptom checklist has been used in numerous studies with both clinical and non-clinical subjects, both European and Asian (Boulet et al., 1994). It offers the advantages of comparability across study populations and can help answer the question of whether or not the same symptoms are experienced by women in one culture as compared with women in another culture, but not what symptoms are experienced in any one particular culture. The in-depth interviews conducted as part of the Japanese study turned up an array of symptoms not known in North America, or known but not seen as associated with menopause.

Use of a standard checklist of symptoms is particularly problematic when used outside the location in which it was developed and can be very deceptive. As illustrations, three studies of menopausal symptom reporting were carried out in Thailand at about the same time. The first was one in a series of studies in Asia which used the symptom list of the International Health Foundation (Chompootweep et al., 1993). The second study, which was also done in Bangkok, first reviewed the menopause literature and then developed a list of symptoms which was pre-tested on colleagues of menopausal age (Sukwatana et al., 1991). In the third study by Chirawatkul and Manderson (1994), both medical anthropologists, Thai women were asked what symptoms they associate with menopause. Several symptoms were common across all three studies, but the third study generated a list of symptoms much longer and more diverse than those in the International Health Foundation Index.

Many of the Japanese gynecologists interviewed as part of the study by Lock (1993) claimed that shoulder stiffness is the most common symptom reported by Japanese patients, and some physicians did not list hot flashes at all when asked to describe the symptoms of *kônenki*. Over the past few years, however, several Japanese gynecologists have become increasingly involved in international meetings on the subject of menopause and have now published widely in women's magazines in Japan where they describe hot flashes as the "typical" symptom of menopause. The symptoms associated with *kônenki* were also discussed with 105 Japanese women who were interviewed in depth about their experiences (Lock, 1993). Typical answers given by these women were as follows:

I've had no problems at all, no headaches or anything like that . . . I've heard from other women that their heads felt so heavy that they couldn't get up.

The most common problems I've heard about are stiff shoulders, headaches, and aching joints.

I get tired easily, that's for sure, *kônenki* and I get stiff shoulders.

My eyesight became worse, and sometimes I get ringing in the ears. I hear that some housewives get so depressed that they can't go out of the house.

A small number of women, 12 out of 105 interviewed, made statements that sound more familiar to North American ears:

The most noticeable thing was that I would suddenly feel hot; it happened every day, three times or so. I didn't go to the doctor or take any medication, I wasn't embarrassed and I didn't feel strange. I just thought it was my age.

It will be interesting to see to what extent symptom reporting by women changes in the future, if at all, as a result of the increasing volume of popular literature on the subject of menopause in Japan.

Local biologies

The comparison of health data collected in Japan, Massachusetts, and Manitoba showed that only 28% of Japanese participants suffered from a chronic health problem (diabetes, allergies, asthma, arthritis, high blood pressure) in contrast to 45% of Manitoban women and 53% of Massachusetts women. These figures suggest that middle-aged Japanese women were in better health than North American women of the same age. As is well known, Japanese women currently enjoy the longest life expectancy in the world—a mean of nearly 82 years (Statistical Bulletin, 1999). The incidence of breast cancer and of heart disease in men and women is about one-third of that in North America. The figures for osteoporosis are not well established, but the ongoing work of Ross et al. (1991) shows that the incidence for both Chinese and Japanese women is less than one-half that of Caucasian women in North America, even though Asian women on the whole have a lower bone density.

Japanese women who are currently around 50 years of age were born at the end of the war, and most experienced nutritional deprivation as young children. However, virtually none of them have smoked, alcohol and coffee consumption is low, and the usual diet is low in fat and rich in soy beans and vegetables. Soy beans are a source of natural estrogens, and diet may be one part of the cultural repertoire that contributes to the lower symptom reporting of hot flashes on the part of Japanese women (Aldercreutz et al., 1992). This cohort of women has, as part of their daily lives, always done considerable exercise and weight

bearing.¹ Obviously this picture will change as succeeding generations of Japanese women become middle aged in their turn. However, the population as a whole is highly educated, and, because women are socialized to be concerned about health, many will undoubtedly continue to follow a traditional diet and undertake regular exercise. Japanese women also make extensive use of herbal medicines and teas, some of which have a high phytoestrogen content (Lock, 1993).

The longevity and overall good health status of Japanese women invite further systematic investigation. Healthy longevity can probably be attributed in large part to the relatively even distribution of wealth in Japanese society, little poverty, and equal access to good health care and social benefits, to which are added universal public education of a high quality and a long tradition of both public and familial investment in preventive medicine (Marmot and Davey Smith, 1989; Lock, 1993). In addition, it seems most likely that the traditional Japanese diet—low in fat, high in protein and natural estrogens—plays an important role in both low symptom reporting at the end of menstruation and in longevity.

The graying of Japan

Changing demography and the burgeoning numbers of aging women who may become a burden to the health care system has stimulated the medicalization of menopause in North America. The primary focus has been on the risk of chronic diseases after menopause and whether their incidence is increased or decreased by hormone use. This approach has highlighted pathology, linking menopause with disease and estrogen with prevention. The benefits of hormone replacement therapy have been a popular message for governments, already concerned about aging populations and increased health care expenditure and easily convinced that the medicalization of female aging might save them money. The “gray-

¹By far the majority of Japanese women in mid-life walk considerable distances each day or ride bicycles in order to carry out the activities of daily life. Very few drive cars to work or to do the daily grocery shopping. The questionnaire survey carried out by Lock (unpublished) showed very high positive responses on the part of housewives and farming women to questions about daily exercise. The majority of women working in factories reported that they are required to participate in mandatory exercise periods at their place of work.

ing” of society also raises many concerns in Japan, especially because demographic changes that occurred over the course of about 100 years in Europe and North America have taken just 25 years there, and it is estimated that by approximately 2020 a quarter of the Japanese population will be over 65 (Ogawa, 1988; Sômuchô, 1997). Focus of attention in Japan is, above all, on who will take care of this burgeoning elderly population, and the postulated long-term effects of the end of menstruation on the health of individual women as they age has taken a back seat in the literature on aging.

The three-generation household, the *ie*, was for three-quarters of a century from the Meiji Restoration (1867) until the end of the Second World War recognized as the official family unit in Japan. In this household are enshrined the ancestors, representatives of moral and spiritual values. As part of such a family, a woman reaches the prime of life in her fifties, and at that time enjoys the acme of her responsibility, which, although it gradually wanes, is never extinguished unless she succumbs to severe senility or some other catastrophe. Many Japanese women still live in these circumstances, and their days are filled with monitoring the household economy, care and education of children and grandchildren, and care of dependent in-laws, to which is often added piece work done at home or participation in the household enterprise, usually farming or a small business (Lock, 1993).

The nuclear household, in which approximately 60% of Japanese currently live, lacking both enshrined ancestors and the elders, is thought by many commentators to be a fragile “pathological” conglomeration (Mochida, 1980). Members of the nuclear family—men, women, and children—are seen as particularly vulnerable to what has been termed “diseases of civilization,” including a range of neuroses, behavioral disorders, and deviant behavior. These diseases are made factual by catchy diagnostic labels such as “school refusal syndrome,” “high rise apartment neurosis,” “moving day depression,” “death from overwork,” and so on (Eto, 1979). One of them is “menopausal syndrome,” a problem believed to have surfaced only in post-war years and which is associated particularly with middle class “professional” housewives who live in urban environments. When asked if he thought that all

women experience trouble at *kônenki*, a Kobe gynecologist answered:

No, I don't think so. Women who have a purpose in life (*ikigai*) have the most trouble. Housewives who are relatively well off, who have only one or two children and lots of free time, come to see me most often. Menopausal syndrome is a sort of “luxury disease” (*zeitakubyô*), I'm sure women never used to come running to a doctor before the war with this kind of problem.

A physician who works in the countryside stated emphatically that rural women are much too busy to experience distress at *kônenki*, the implication clearly being that any discomfort they may feel is of minor importance, something that an active and busy woman will “ride over” (*norikoeru*) with ease (Lock, 1993).

The irony of this rhetoric does not pass unnoticed by feminist commentators in Japan (Higuchi, 1985). Women have systematically been excluded from the official full-time work force in post-war years, despite the fact that large numbers of them put in a full day's work on a regular basis (it is estimated that less than 30% of Japanese women are “professional housewives”). The majority of women who work outside the home in Japan are classified as part-time employees; they work long hours with no benefits and are subject to hiring and firing as the national economy waxes and wanes.

Nevertheless, the “homebody” is idealized and is made into the standard by which all women are measured; however, it is often argued that once she becomes middle aged the housewife residing in a nuclear family has time on her hands, in contrast to women who live in extended families. This stereotype is deceptive because a high proportion of women become, often for many years, the principal care givers for their parents-in-law, who come to reside with the younger generation when they become frail and sick (Lock, 1993).

Not surprisingly, it is the issue of home nursing and the new extended family which takes up the energy of activist women in Japan today. Against the urgency of this situation, the end of menstruation fades into the background, particularly so because of the moralistic rhetoric associated with it. In a country driven overwhelmingly by the

work ethic, few people relish being accused, even indirectly, of succumbing to an illness associated with luxury and indolence. The Japanese study revealed that housewives do not report any more symptoms than do other Japanese women at menopause; low symptom reporting was rather evenly distributed across the farming, factory-employed, and housewife samples. However, there is a small but significant increase of reporting of back pain, shoulder stiffness, tiredness, and irritability among a large proportion of those women taking care of elderly relatives (Lock, 1993).

Under these circumstances the end of menstruation is not a very potent symbol. While there is some mourning for loss of youth and sexual attractiveness on the part of a few women, emphasis is given by most to what is described as the inevitable process of aging itself: graying hair, changing eyesight, faulty short-term memory, and so on (Lock, 1986). Furthermore, these signs of aging are primarily signifiers for the future—for what may be in store in terms of an enfeebled body and hence an inability to work and to contribute to the family and society.

*Cultural construction of *kônenki**

Some Japanese women do not apparently mark the end of menstruation as part of menopause at all; 24% of the sample of women 45–55 years who had ceased menstruating for more than one year reported that they had no sign of *kônenki*. In this discourse about aging, therefore, women are not markedly distinguished from men, for the physical changes associated with middle age that are attributed with significance are common to both sexes.

Although the end of menstruation has been recognized for many hundreds of years in Sino/Japanese medicine, it received relatively little attention until the end of the nineteenth century when Japanese medicine, under the influence of German medicine, created the term *kônenki* to gloss as the European concept of the climacterium. Part of the German discourse that made good intuitive sense to the Japanese medical world at that time was the newly discovered concept of the “autonomic nervous system,” no doubt because it “fitted” with the physiological approach characteristic of Sino/Japanese medicine (Suzuki, 1982). Later, in the 1930s, when a close association

was postulated between the endocrine system and the autonomic nervous system, Japanese physicians comfortably adopted this idea and postulated a connection between *kônenki* and disturbances in the autonomic nervous system, an association that the majority of Japanese physicians and women recognize to this day (Lock, 1993). The dominant discourse in Japan is one in which menopausal symptoms are not linked directly to a decline in estrogen levels but are believed to be mediated by a destabilization of the autonomic nervous system.

Another factor that no doubt worked in Japan against the construction of a narrowly focused discourse on the aging ovary and declining estrogen levels was that Japanese doctors, unlike their Western counterparts, practiced little surgery prior to the twentieth century, a specialty that was disparaged by the powerful, physiologically oriented herbalists of the traditional medical system (Lock, 1980). Furthermore, anatomy as it was conceived in Enlightenment medical discourse in Europe had relatively little impact in Japan until the twentieth century, and autopsies and dissection were not widely practiced. Japanese gynecologists did not have first-hand experience of removing and dissecting many hundreds of ovaries as was the case for many late nineteenth-century European and North American gynecologists (Jordanova, 1989), and their medical “gaze” remained predominantly physiologically rather than anatomically oriented (Kuriyama, 1992).

These differences have ensured that medical and popular accounts about *kônenki* are markedly different from those created about menopause in North America. Stiff shoulders, headaches, ringing in the ears, tingling sensations, dizziness, and so on—symptoms associated with a destabilization of the autonomic nervous system—form the core of the *kônenki* experience. An experience in which hot flashes and other so-called vasomotor symptoms assumed to be characteristic of menopause occurs infrequently. It is evident to most Japanese gynecologists that *kônenki* is not the same thing, either conceptually or experientially, as menopause. More than one gynecologist inquired of me as to why “Western” women are so disturbed by hot flashes.

It is assumed that discourse on female aging, professional and popular, is shaped everywhere by largely unexamined beliefs

about the functioning of the female body and its uses to society—in the Japanese case as the prime nurturer of other family members. This has ensured that in Japan individual aging is made secondary to the impact of aging on the family as a whole. Aging is, above all, experienced as a social process. But the end of reproductive life cannot be ignored, nor in a modern, medicalized society, can the end of menstruation. Subjective experience at the end of menstruation is constituted in part from culturally informed expectations about this stage of the life cycle. These expectations include ideas about what are the “normal” physical sensations and changes associated with the aging female body. Such expectations are produced in part from knowledge that circulates freely among women, but they are also derived today from medical commentary and publications.

Japanese doctors must deal every day with middle-aged patients whose symptoms and experience differ quite markedly from what medical texts written in Europe or North America tell them is “normal” for menopause. A few doctors have come to believe that the problem lies with Japanese women who simply are “old fashioned” and do not pay proper attention to their bodies. The majority, however, are comfortable with arguments that recognize a biological difference sufficiently marked so as to have an effect on (but *not* determine) the production of medical and popular discourse. With respect to vasomotor symptoms this difference is clearly quantitative but nevertheless contributes to a different set of expectations and experiences.

With its emphasis on stiff shoulders and dizziness, Japanese accounts about the end of menstruation sound bizarre to North Americans and Europeans. It is tempting to Orientalize this discourse and dismiss it as anomalous, resultant perhaps from Japanese diet and an odd attachment to the importance of the autonomic nervous system. The danger, of course, is that the “Western” body remains unproblematized. But increasingly research suggests that perhaps it is this body that should be thought of as anomalous, just as it should be with respect to milk metabolism.

In all, this research strongly suggests that the end of menstruation should not be conceptualized as an invariant biological transformation, that local biologies are at

work, and that it is appropriate to think of biology and culture as in a continuous feedback relationship of ongoing exchange, in which *both* are subject to variation. Nor should populations of post-menopausal women be assumed to be equally at an increased risk for heart disease, osteoporosis, or other late-onset chronic problems. These findings clearly have profound implications for the current pathological medicalized view of menopause and the desire to medicate all women over 50 with hormone replacement therapy until the day they die.

LITERATURE CITED

- Adlercreutz H, Hämäläinen E, Gorbach S, Goldin B. 1992. Dietary phytoestrogens and the menopause in Japan. *Lancet* 339:1233.
- Avis NE, Kaufert PA, Lock M, McKinlay SM, Vass K. 1993. The evolution of menopausal symptoms. *Bailliere's Clin Endocrinol Metab* 7:17–32.
- Avis NE, McKinlay SM. 1991. A longitudinal analysis of women's attitudes towards the menopause: results from the Massachusetts Women's Health Study. *Maturitas* 13:65–79.
- Barnes R. 1873. A clinical history of the medical and surgical diseases of women. London: J. and A. Churchill.
- Boulet MJ, Oddens BJ, Lehert P, Vemer HM, Visser A. 1994. Climacteric and menopause in seven south-east Asian countries. *Maturitas* 19:157–176.
- Chirawatkul S, Manderson L. 1994. Perceptions of menopause in northeast Thailand: contested meaning and practice. *Soc Sci Med* 39:1545–1554.
- Chompootweep S, Tankeyoon M, Yamarat K, Poomsuvan P, Dusitsin N. 1993. The menopausal age and climacteric complaints in Thai women in Bangkok. *Maturitas* 17:63–71.
- Currier AF. 1897. The menopause. New York: D. Appleton and Company.
- Deutsch H. 1945. The psychology of women, Vol. 2. New York: Grune and Stratton.
- Eto J. 1979. The breakdown of motherhood is wrecking our children. *Jpn Echo* 6:102–109.
- Goldman D. 1995. Aldehyde dehydrogenase deficiency as cause of facial flushing reaction to alcohol in Japanese. *Alcohol Health Res World* 19:48–49.
- Halford H. 1813. On the climacteric disease. In: *College of Physicians in London, Medical transitions*, Vol. 4. London: Longman. p 317.
- Higuchi K. 1985. Women at home. *Jpn Echo* 12:51–57.
- International Health Foundation. 1977. *La ménopause: étude effectuée en Belgique auprès de 922 femmes entre 45 et 55 ans*. Geneva: International Health Foundation.
- Jordanova L. 1989. Sexual visions: images of gender in science and medicine between the eighteenth and twentieth centuries. Madison: University of Wisconsin Press.
- Kaufert P. 1988. Menopause as process or event: the creation of definitions in biomedicine. In: Lock M, editor. *Biomedicine examined*. Dordrecht: Kluwer Academic Publishers. p 331–349.
- Kaufert P, Gilbert P, Tate R. 1992. The Manitoba Project: a re-examination of the link between menopause and depression. *Maturitas* 14:143–155.
- Kuriyama S. 1992. Between mind and eye: Japanese

- anatomy in the eighteenth-century. In: Leslie C, Young A, editors. *Paths to Asian medical knowledge*. Berkeley: University of California Press. p 21–43.
- Lock M. 1980. *East Asian medicine in urban Japan: varieties of medical experience*. Berkeley: University of California Press.
- Lock M. 1993. *Encounters with aging: mythologies of menopause in Japan and North America*. Berkeley: University of California Press.
- Lock M, Kaufert P, Gilbert P. 1988. Cultural construction of the menopausal syndrome: the Japanese case. *Maturitas* 10:317–332.
- Marmot MG, Davey Smith G. 1989. Why are the Japanese living longer? *Br Med J* 299:1547–1551.
- Mochida T. 1980. Editorial comment, Focus on the family. *Jpn Echo* 3:75–76.
- Novak ER, Seegar Jones G, Jones HW. 1975. *Novak's textbook of gynecology*. Baltimore: Williams and Wilkins Company.
- Ogawa N. 1988. Population aging and medical demand: the case of Japan. In: *Economic and social implications of population aging. Proceedings of the International Symposium on Population Structure and Development*, Tokyo. New York: United Nations. p 254–275.
- Ross PD, Norimatsu H, Davis JW, Yano K. 1991. A comparison of hip fracture incidence among native Japanese, Japanese Americans, and American Caucasians. *Am J Epidemiol* 133:801–809.
- Shea JL. 1998. Revolutionary women at middle age: an ethnographic survey of menopause and midlife aging in Beijing, China. Doctoral dissertation. Cambridge, MA: Harvard University.
- Sômuchô (Office of the Prime Minister). 1997. *Kôrei shakai hakusho (White Paper on the Aged Society)*. Tokyo: Sômuchô.
- Statistical Bulletin of the Metropolitan Insurance Company. 1999. *Stat Bull Metropol Ins Comp* 80:13–21.
- Sukwatana P, Meekhangvan J, Tamrongterakul T, Tanapat Y, Asavarait S, Boonjitrpimon P. 1991. Menopausal symptoms among Thai women in Bangkok. *Maturitas* 13:217–228.
- Suzuki S. 1982. *Jiritsu shinkei shichôshôno nazo—ishi no setsume ni, komaru byôki no shotai (The riddle of instability of the autonomic nervous system: the disease even doctors can't explain)*. Tokyo: Tokyo Daigaku Igakubu Ishi.
- Tilt E. 1870. *The change of life in health and disease: a practical treatise on the nervous and other affections incidental to women at the decline of life*. London: John Churchill and Sons.
- Van Keep PA, Greenblatt PB, Albeaux-Fernet M (editors). 1976. *Consensus on menopause research*. Lancaster: MTP Press.
- Whitehead M. 1994. The Pieter van Keep Memorial Lecture. In: Berg G, Hammar M, editors. *The modern management of the menopause: a perspective for the 21st century*. New York: The Parthenon Publishing Group. p 1–13.