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INTELLECTUAL INTERSECTIONS: GENDER AND HEALTH IN THE PACIFIC

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Abstract—Intriguing intellectual intersections offer the promise of enriching medical geography and making it both more theoretically sophisticated and more policy relevant. Employing a socio-ecological model of health, this paper explores several of these intersections, including the incorporation of gender into our research frameworks. As a context, the complex reasons for the increased interest in women's health over the past two decades, including the persistent tensions surrounding this interest, are reviewed. Drawing not only from conventional sources but also from literature on gender relations, domestic violence and aging in the Pacific as well as recent reports on health and socioeconomic development, key issues for women's health in the Pacific Islands are addressed. © 1998 Elsevier Science Ltd. All rights reserved

Key words—medical geography, gender and health, socio-ecological model of health, gender relations, domestic violence, aging, Pacific Islands

Geographers involved in addressing questions of human health find themselves at a number of exciting intellectual intersections that promise to enrich the field and render their work both more theoretically sophisticated and more policy relevant. Employing an expanded socio-ecological model of health,* this paper draws from cognate social sciences, including a rich body of literature on gender relations in the Pacific, as well as recent works on health, socioeconomic development, violence and aging in the Pacific Islands region to explore several of those intersections. With this as context, questions about the health of women, and more generally society, in the Pacific are framed and explored. Before turning to the gendered nature of health and ill health in the Pacific, the attention that women's health has, belatedly, received is reviewed, underscoring some of the tensions that persist despite the heightened interest. A brief overview of recent debates within medical geography provides the opportunity for suggesting productive

avenues for the incorporation of gender in the reformulation of our research questions.

GENDERED NATURE OF HEALTH AND DISEASE

The explicit focus of this paper is on the health of women. I am concerned with the "gendered" nature of the experience of health and ill health. The deceptively easy yet complex reason for this focus is that until relatively recently the health of women has been ignored. While many offer the excuse that this has occurred because white males have provided a convenient research "norm", Krieger and Fee (1994) argue that the lack of research on white women, and men and women in non-white racial and ethnic groups, has not resulted from that perception. Rather than as an assumption of similarity, they contend that these omissions must be read as evidence of a logic of difference.

With roots that can be traced back decades, in the later half of the 1980s, the health of women made its way firmly onto the political—and research—agenda. Slowly, the almost exclusive focus on reproductive and maternal and child health, the World Health Organization's Maternal and Child Health (MCH) and "safe motherhood" is giving way to an expanded model (or perhaps models) of women's health that includes all aspects and stages of women's lives within a context that addresses physical, mental, social and economic health, in shorthand, "safe womanhood" (Lewis *et al.*, 1994).

This has resulted in a plethora of meetings, publications and initiatives (American Journal of Public

*I refer here to a model of health that includes the social, economic, cultural and political dimensions of health (Canadian Institute for Advanced Research, 1990; Commission on Health Research for Development, 1991; World Bank, 1993). Previously I have argued that medical geographers have major contributions to make to "health transition" research (Lewis and Rapaport, 1995), a concept that embraces a socio-ecological model of health and builds on earlier theories of the demographic and epidemiological transitions to include the cultural, social and behavioral determinants of health (Caldwell, 1993; Caldwell *et al.*, 1990; Chen *et al.*, 1994).

Health, 1993; Asia and Pacific Development Center, 1989; Doyal, 1994; Fee and Krieger, 1994; Heise *et al.*, 1994; International Center for Research on Women, 1989; Kettle, 1996; Koblinsky *et al.*, 1993; Leslie, 1992; McElmurray *et al.*, 1993; McElmurray and Parker, 1995; Pan American Health Organization, 1990; Paolisso and Leslie, 1995; Rathgeber and Vlasoff, 1994; Satow, 1995; Tinker *et al.*, 1994; Vlasoff and Bonilla, 1994; World Health Organization, 1992) including a number of special issues of *Social Science & Medicine*, 1992a,b, 1993a,b,c, 1996. Collectively, these suggest a multitude of intriguing research questions. Giving but one example, the special issue of *Social Science & Medicine* (1993b) and related work (Vlasoff and Bonilla, 1994) addressing women and tropical diseases* present timely questions for a revitalized "disease ecology" agenda within the social sciences including medical geography, one that explores the differential impacts of infectious disease (including those that are emerging/resurgent) on women. Expanding on that theme, we could also explore the links between global change, not only environmental, but also political, social and economic and women's health, e.g. the health impacts of the globalization of the garment industry (Lewis *et al.*, 1994), in turn enhancing our understanding of the "political ecology" of women's health.

Increased interest with persistent tensions

Throughout the 1980s, groups, including many feminist organizations, became increasingly vocal globally, kindled in part by the "second wave of feminism" the previous decade (Doyal, 1995). In the North, on the biomedical and clinical fronts, pressures led to the creation of the Office for Research on Women's Health and the Women's Health Initiative at the National Institutes of Health (NIH) in the U.S. in belated recognition of the almost exclusively male focus of clinical research. Federal, provincial and territorial working groups were set up in Canada and a number of research centers for women's health have been established in Canada, Australia and elsewhere.

Today, in the international political arena, the focus has shifted largely to the South where the impact of recession, structural adjustment and environmental degradation have exacerbated the health and social crises with special consequences for women. A number of tensions exist despite expanded definitions and an increased interest in the health of women. The reasons for the increased interest and the resultant tensions both have com-

plex roots. Social activists have focused the spotlight on the status of women including their health, nationally and internationally. Socio-ecological models of health have gained increasing prominence and, paradoxically, the identification of women's economic "value" by international funding agencies, e.g. the World Bank, U.S. A.I.D., etc. has escalated the interest in their health (Schultz, 1989; Leslie *et al.*, 1985). While a great deal of women's work still cannot be counted, women's economic "value" is acknowledged and women are proposed as key to the solution of economic and environmental crises. Yet with the failure of many development schemes, the identification of health as a necessary precursor to development may actually increase the burdens on and responsibilities of women as the primary producers of health for their families and their societies.

A related set of tensions includes alternative analyses of the root causes of and solutions to, incremental or radical, inequality at the national, local and individual levels with attendant implications for women (Dyches and Rushing, 1996; Gallin and Govindasamy, 1993). In the North, as the vocal baby boom generation of women enters its fifth decade, with no answers, e.g. to the efficacy of hormone replacement therapy on cardiovascular health, we can expect a new surge of political voices calling attention to women's health. It is worth speculating, however, on how truly representative these voices will be, speaking for "all" women's health.

A basic and inherent tension also exists between activists and researchers employing socio-ecological models of health and what is perceived to be—and often is—a biomedically based, narrow interpretation of women's health and women's health concerns. As narrow, biomedically based models have been replaced with socio-ecological models of health this has been accompanied by the increasing recognition of the value of social science research (Caldwell, 1993; Caldwell *et al.*, 1990; Chen *et al.*, 1993) and, perhaps less widely, the recognition of the value of multidisciplinary and transdisciplinary approaches, in which social science is key (Bell and Chen, 1994; Eckardt, 1994; Rosenfield, 1992. *Social Science & Medicine*, 1992a). In practice, these developments are in their infancy and the nature of multidisciplinary research creates its own inherent tensions. The degree to which gender is explicitly incorporated into these frameworks of analysis varies (Caldwell and Caldwell, 1994). Often it has largely been ignored. Differences of class, race, sexual orientation and disability are equally important in attempting to understand both women's and men's health.

These tensions are paralleled by tensions that echo feminist arguments concerning the analysis of difference. An editorial in the *American Journal of Public Health* (Ruzek, 1993, p. 6) called for a social model of health that puts women's health needs at

*Both were the result of a project to incorporate women as the subjects of research inquiry in the study of tropical disease by the WHO Special Programme for Research and Training on Tropical Disease and the International Development Research Centre (IDRC) of Canada.

the center of the analysis and focuses attention on the diversity of women's health needs over the life-cycle. It cautioned that we cannot rely on "sameness" with respect to education, income, culture, ethnicity or race and suggested that "not to address these differences is to mistake some women's health for all women's health". In the global arena, this caution is more crucial. Certainly that would be the argument of many feminists from the South.

Finally, employing expanded definitions of health leads to some additional conceptual and methodological tensions. While we are concerned with all phases of women's life care must be taken not to medicalize or compartmentalize women's lives by uncritical utilization of lifecycle approaches in which the richness of gender differences, class, geography, religion, politics and sexual preference may be lost (Clarke, 1990). We must also understand the sociocultural definitions of life stages (Lane and Meleis, 1991). This is certainly true in the Pacific, where "generation" must be added to gender if we are to understand the reality of women's experience.

While there has been progress and the health of women has received increased attention and research interest, this is not the time for complacency. Women's health was included in discussions at the U.N. Conference on the Environment and Development in Rio de Janeiro (1992), was central to the debates at the U.N. conference on Population and Development in Cairo (1994), a major component of the Platform for Action at the Fourth World Women's Conference in Beijing (1995) and, broadly defined, also included at Habitat II in Istanbul (1996). The resounding message from the Fourth World Women's Conference in Beijing was that health is a human right and women's rights are human rights. Nonetheless, efforts and programs focused on women's health, including those at both the Pan American Health Association and the World Health Organization are under funded and understaffed, although PAHO's gender sensitivity training appears to be having a significant impact within that organization. It should also be noted, that while the concern with women's health reaches far beyond reproductive health, the annual global estimates of maternal mortality have risen from 500,000 to 600,000. A more comprehensive conceptualization of women's health which starts with prenatal concerns of the

girl child should lead, overtime, to reductions in maternal mortality.

GENDER AND MEDICAL GEOGRAPHY

In recent years medical geographers have been engaged in a discussion of the nature and perhaps even survival, certainly relevance, of the subdiscipline, "wither" or perhaps "whether" medical geography. This has ranged from a debate about the theoretical, or atheoretical stance of medical geography dating back several decades (Dorn and Laws, 1994; Litva and Eyles, 1995; McGlashan, 1972; Mayer, 1982, 1992), to an active and productive engagement employing aspects of contemporary social theory and new frontiers in cultural geography in exploring both the nature and meaning of place with respect to health, and health care, and the role of gender, age and class in the multiple health transitions in a given society (Jones and Moon, 1993; Kearns, 1995, 1996; Kearns and Joseph, 1993). Kearns' 1993 review of the field escalated the debate (Kearns, 1993, 1994; Mayer and Meade, 1994; Dorn and Laws, 1994).

I have argued previously that gender awareness should not only be incorporated into conventional methodological approaches within medical geography but also contribute to redefining its questions (Lewis and Kieffer, 1994). This has begun to happen (Armstrong and Armstrong, 1991; Craddock, 1996; Dyck, 1992; Elliot, 1995; Geoforum, 1995*; Lewis and Kieffer, 1994; Rosenberg, 1988). However, recently Litva and Eyles (1995) argued that while there are feminists doing medical geography, there is no feminist medical geography. Although I will not attempt to answer the question here, it is worthwhile asking, what does it take beyond feminists "doing" medical geography to develop a feminist medical geography? Dorn and Laws (1994) made some suggestions including reclaiming the body as the site of resistance. Certainly there is much to be learned from the feminist tradition within geography as well as feminist theory and method grounded in other social sciences. This paper employs the extensive literature on gender relations in the Pacific to develop an expanded understanding of women's health in the region.

Geographers have explored related theoretical and methodological issues that have implications beyond the discipline. The "Focus" dialogue in the *Professional Geographer*, "Should women count? The role of quantitative methodology in feminist geographic research" (*Professional Geographer*, 1995), could inform the discussions surrounding the vociferous debates about the measurement of women's health. Michael Hayes called for a framework for critical research on health and health care incorporating spatiality (Hayes, 1994) in response to the empiricist ontology of the Canadian Institute

*See special issue of *Geoforum*, edited by Stephen Matthews, "Geographies of women's health", with articles on chronic disease among women immigrants in Canada, women, health care and immigration in the 19th century, community-university partnerships, needs assessment for low income women, access to birthing health care among Native American and white women and economic restructuring and reproductive health in New York City.

for Advanced Research, 1990) (CIAR) "determinants of health" (which he argues are "indeterminants"). Such a framework could be used to incorporate gender into contemporary discussions of population-based approaches in public health. Our position as researchers and the inclusion of our "subjects" (in this context women) in a discussion "with" rather than "about" them (Kearns, 1994) is a political and ethical issue as much as, or perhaps more than, it is a methodological one. These considerations are central to the nature and framing of our endeavor. As we move forward, both explicitly critical feminist approaches and more general gender awareness must be central to the definition of our questions. Similarly, new ways of exploring the terrain between qualitative and quantitative methodologies and research designs that employ both need to be developed (Elliot and Baxter, 1994). Finally, (medical) geography's contribution to "inter" or "multi" or "trans" disciplinary research on health and health care must be explicitly addressed (Rosenfield, 1992). Transdisciplinary research is crucial if we are to begin to understand the complex and comprehensive nature of the issues that determine women's health or ill health. All these challenges demand epistemological and methodological pluralism (Curtis and Taket, 1996; Litva and Eyles, 1995).

As we are beginning to explore ways in which medical geography can contribute to expanded socio-ecological models of health, we can envision a number of ways in which medical geographers, depending on their expertise and theoretical orientation, could contribute to multidisciplinary research endeavors, employing such models, ranging from "classical" disease ecological approaches to critical analysis. The introduction of our concern with the multifaceted meanings of "place" and "space" and a recursive understanding of space and place in health and health care (Dyck, 1992; Gesler, 1991, 1992; Kearns, 1991; Kearns and Joseph, 1993) offers geographers one important avenue for contribution. Kearns and Joseph (1993) advocate a marriage between current sociospatial and humanistic views of space and place while at the same time acknowledging the traditional views of space, properly contextualized, are important to the understanding of health and health care.

While I am not sure that I would use the metaphor of marriage, both will enrich geography's contribution to transdisciplinary research generally and specifically to an understanding of the health of women. Based, in part, on an exploration of both

the meaning and definition of the concept of "community", another contemporary theme to which medical geography can contribute is the incorporation of local researchers, in this context, particularly women, and local communities in the identification of research questions and the design of research frames and by doing so, building indigenous capacity, not only in the South but also in the multiple communities of the North (Del Vechicco-Good, 1992; Franks, 1983; Kearns, 1991; Social Science & Medicine, 1992a).

HEALTHY PACIFIC WOMEN? DIVERSITY, DIFFERENCE AND DEFINITION

The Pacific has provided fertile ground for scholars "deconstructing" the colonial experience including that of women, albeit, paradoxically, most frequently white women (travelers, writers and missionaries) with Pacific women appearing only as background. Feminists from the South, including the Pacific, would tell the story and frame their questions differently. Caroline Ralston in "The study of women in the Pacific" noted that since the early work of Malinoski, Mead, and Bateson, the Pacific, especially Melanesia, has attracted a plethora of anthropologists interested in women and in gender relations (Ralston, 1992). As it focused attention on women's health, the second wave of feminism (in the 1970s) also drew the gaze of an increasing number of humanists and social scientists toward women in the Pacific. In the 1980s this work became more interdisciplinary. Linnekin's *Sacred Queens and Women of Consequence* is a good example of the integration of research on the symbolic construction of Pacific women and materialist sociological and anthropological perspectives, two themes that dominate this body of work (Linnekin, 1990; Ralston, 1992). Largely due to the small size of Pacific populations and their isolation, it is only in the last decade that a critical mass of indigenous scholars has emerged. In the 1990s we find an increasing number of Pacific Island women scholars addressing their experience, although as yet, much is available only in conference proceedings.*

The region

The Pacific Islands (Oceania) span a vast region of the Pacific ocean. Thirteen thousand kilometers separate Western New Guinea from Easter Island, 8500 km Hawaii from New Zealand (Fig. 1). The islands are characterized by small land areas, fragmentation and distance from major land masses, predominately tropical maritime climatic regimes, attenuated but often unique biotas, generally small populations, and in much of the region, great cultural diversity.

Eurocentric cartographers divided the Pacific into Melanesia, Polynesia and Micronesia. These oceanic

*For example, the July 1996 Pacific History Conference in Hilo, Hawaii, where there were several sessions on gender and the colonial experience. At least one-third of the papers that were presented at that meeting were presented by Island scholars and women were well represented among them.

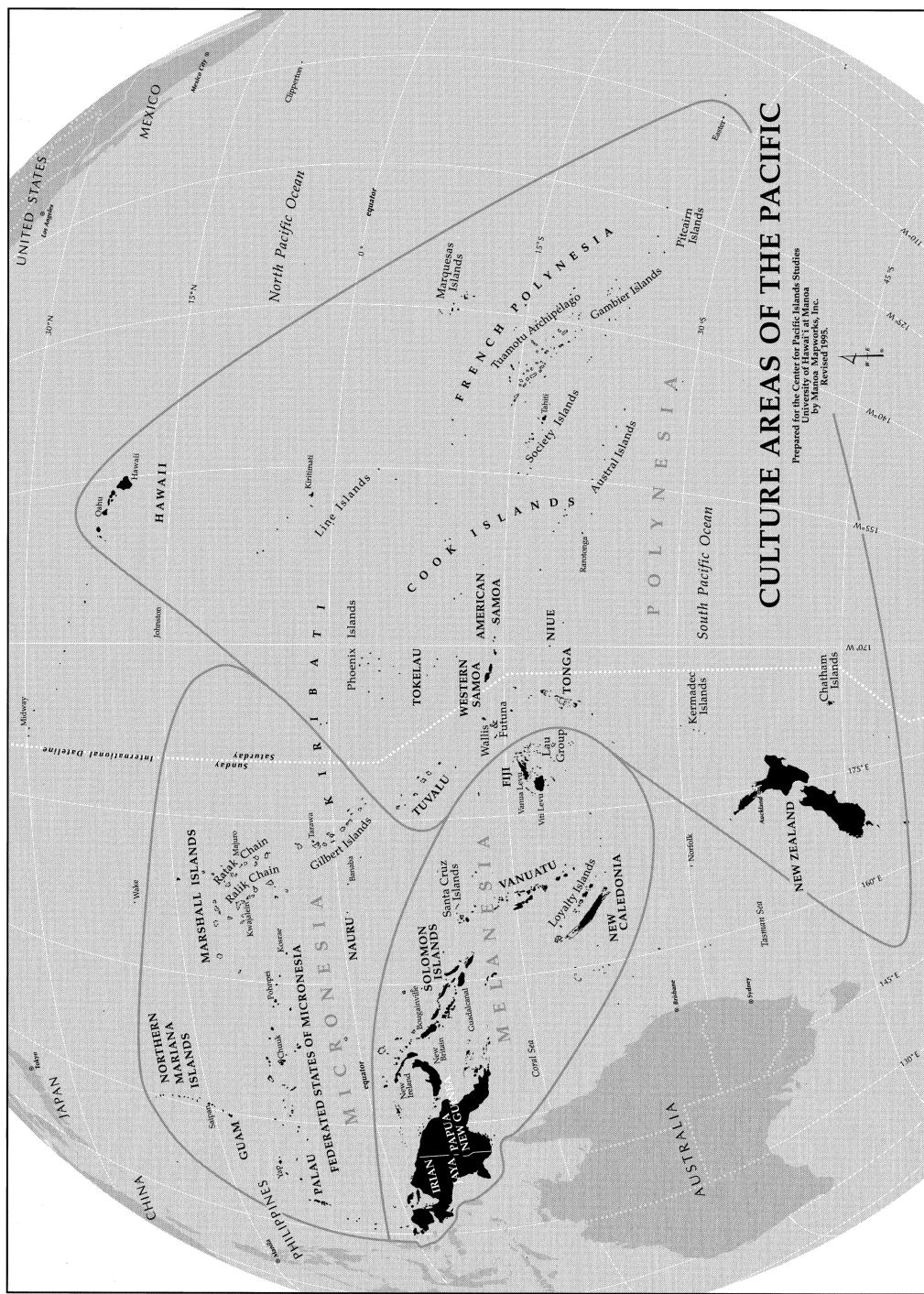


Fig. 1. The Pacific Islands.

Table 1. Pacific Islands: demographic, economic and political indicators

Country	Population 1992 ^a	Land area km ² ^a	Pop density (per/km ²) ^a	% Urban ^b	GDP/capita (U.S.\$) ^b	Political status
MELANESIA						
Fiji	757,000	18,272	41	39	1826	Independent
New Caledonia	178,000	19,000	9	70	13,083	Dependent (Fr.)
Papua New Guinea	4,100,000	462,243	9	15	1042	Independent
Solomon Islands	373,000	27,990	14	13	587	Independent
Vanuatu	166,000	12,000	14	18	1103	Independent
POLYNESIA						
American Samoa	53,000	200	265	48	4529	Dependent (U.S.)
Cook Islands	19,000	240	79	58	3870	Associated (N.Z.)
French Polynesia	210,000	3300	54	57	15,796	Dependent (Fr.)
Niue	2000	259	8	30	1056	Associated (N.Z.)
Tokealau	2000	10	200	0	478	Dependent (N.Z.)
Tonga	97,000	720	135	31	1038	Independent
Tuvalu	10,000	26	384	42	966	Independent
Wallis and Futuna	14,000	255	55	0	16	Dependent (Fr.)
Western Samoa	163,000	2934	56	21	749	Independent
MICRONESIA						
Federated States of Micronesia	110,000	701	157	26	1374	Associated (U.S.)
Guam	146,000	541	270	38	8414	Dependent (U.S.)
Kiribati	76,000	810	106	35	557	Independent
Marshall Islands	52,000	181	287	65	1030	Associated (U.S.)
Nauru	10,000	21	476	100	17,934	Independent
Commonwealth of the Northern Marianas	57,000	471	121	28	8739	Associated (U.S.)
Palau	16,000	494	32	69	2424	Associated (U.S.)

^aSource: Ahlburg (1996).

^bSource: Pirie (1994).

containers do represent, in broad brush, three geographic, cultural and linguistic groupings, but they also mask vast differences, a masking that has perhaps been exacerbated in the past not only by European explorers and European, American, and Japanese colonisers but also by Islanders themselves who, for varied reasons, have been proponents of the "Pacific Way".

As of mid 1994 the regional population was 6.6 million (Table 1).* Melanesia, made up of Papua New Guinea (P.N.G.), the Solomon Islands, Vanuatu, New Caledonia, and Fiji represents 84% of the regional population (and 98% of the land area). Papua New Guinea alone is home to more than 62% of the region's population. Melanesia is by far the largest, longest inhabited, most populous, and most diverse of the three regions, over twelve thousand languages are spoken there. Papuan speakers began arriving in Melanesia 40,000 years ago, followed 7000 years ago by Austronesian speakers who ultimately reached the remote corners of Polynesia and Micronesia. The three nations of Papua New Guinea, the Solomons and Vanuatu are also the only Pacific states to fall in the "low human development category" in the United Nations Pacific Human Development Report (United Nations Development Programme, 1994).

*While I refer to the Polynesian populations of Hawaii and New Zealand in describing patterns of morbidity, they are not included in the regional analysis.

This is a significant distinction because these three countries represent 70% of the Pacific region's total population. Melanesia is the least "developed" and least healthy, although by Pacific standards, it is rich in natural resources.

The peoples of Polynesia (9% of the regional population; 1.4% of the land area; Table 1) who peopled the vast reaches of the Pacific are the most genetically, culturally and linguistically similar. Those of Micronesia (7% of the regional population; 0.6% of the land area; Table 1) are diverse with affinities to the peoples of Southeast Asia, especially in Palau and the Marinas in the east, and, in the western islands, to Polynesia. The limitations of the atolls and small islands which they inhabit have led, however, to a similarity in material culture in much of Micronesia.

While Pacific peoples share some commonalities, they exhibit rich and complex genetic, linguistic, cultural, and social differences and they have also had different experiences with explorers, colonisers, missionaries and their own decolonization and incorporation into the global economy. Fertility, mortality and mobility profiles are indicative of very different demographic experiences. The island states are also differentially endowed with natural resources and they have achieved different levels of "development" or "modernization". My exploration of the health of women in the Pacific is set against this diversity.

The health of Pacific women in the 1990s

The picture I paint here of women's health in the Pacific is drawn not only from conventional sources, such as vital statistics, epidemiological reporting and case studies, but also from regional reports (South Pacific Commission, 1985, 1993b, 1994, 1995a,b; United Nations Development Programme, 1994; South Pacific Regional Environmental Programme, 1992) that have addressed human development and poverty, STDs/HIV/AIDS, the environment and the status of women, as well as contemporary academic scholarship on gender relations, domestic violence and aging in the region (Counts and Counts, 1985; Counts, 1990; Jolly and McIntyre, 1989; Panapasa and McNally, undated; Ralston, 1992; Strathern, 1972). While a considerable amount of information exists, in the regional and national reports it is largely descriptive and often relies on earlier incomplete or partial reporting. Pieced together here from multiple sources, this collage is a far cry from trans-disciplinary research. It may, however, suggest some clues as to how such research might be crafted in the future including ways in which medical geographers could contribute to such efforts.

Before continuing, two caveats must be expressed. First, I am using Western, if expanded, definitions of health and "safe womanhood" and in the future, spaces have to be created that allow Pacific women to tell us what health and healthy places mean to them. Second, while I have attempted to be sensitive to the great differences and diversity within this vast region, given the length and scope of this paper, I can only hope to achieve partial success. Future investigations at scales that allow more in-depth analysis must keep diversity and difference at the center of the analysis of Pacific women's health.

The status of women in the Pacific

Gender relations and the status of women are far from uniform across the Pacific, an important marker of the diversity of the region. Many factors influence women's status and the worlds that they experience. While the majority of Pacific societies are patrilineal, women's status and influence are generally higher in Polynesia than in Melanesia. In Micronesia, the social relationships are more varied, but closer, in most instances, to those of Polynesia. It is important to reiterate that contemporary gender relations have been influenced by the colonial experience and the colonisers' concepts of women and the domestic sphere. The impacts and influence of colonization, Christianity and modernization have been pervasive and, some would argue, have had largely negative impacts on women's lives and rights (Feinberg, 1986).

As we attempt to understand contemporary Pacific reality as it influences health, it must also be

stressed that the "politics of tradition and gender" are intertwined and colored by colonial and missionary definitions of female and domesticity. Grace Mera Molisa, a ni-Vanuatu poet writes: "Custom, misapplied, bastardised, murdered, a frankenstein, corpse, conveniently, recalled, to intimidate, women" (Molisa, 1983, quoted in Schoeffel, 1994, p. 370). Ralston (1992) argues that men have imbibed the colonizer's attitudes and behavior toward women. A return to tradition (especially as reinterpreted) may not be a return to pre contact patterns of gender relations nor in women's best interests. The following is necessarily an oversimplification and does not do justice to the rich literature on gender relations in the Pacific (Counts, 1990; Jolly and McIntyre, 1989; Lepowsky, 1993; Lockwood, 1995; Ralston, 1992; Strathern, 1972).

In the majority of Melanesian societies, the payment of a large bride-price by the husband's family gives men rights to women's labor and reproductive capacity. In much of Melanesia, women are viewed as property. Furthermore, by and large, men operate in the public sphere and women in the private. Women tend to be excluded from community management where activity was traditionally focused on communal men's houses. These inequities are reflected in, for example, the sharing of food and access to education. On Goodenough Island in Papua New Guinea, girls are referred to as bouncing coconuts and boys are seen as house posts, future owners and inheritors of the village; they are thus allocated a greater share of available resources (Young, 1989). Across the Pacific, access to primary education is generally good and literacy rates are relatively high. They are lowest, in Melanesia, e.g. 60% for men and 32% for women in Papua New Guinea. Women's access to secondary and higher education, wage employment and the political sphere is also limited. In Papua New Guinea only 15% of university places are held by women and only three women have ever been elected to the National Parliament. In both Papua New Guinea and the Solomon Islands, most secondary schools are boarding schools and cost and cultural values keep girls at home.

Polynesian societies are typically hierarchical societies where rank and age can be as important as gender. Furthermore, in Western Polynesia (Samoa and Tonga), there is a unique relationship between women and their brothers which accords sisters great respect and support. Women can hold higher rank than their brothers and even become chiefs, reversing status inequality. In modern times in Western Samoa high rank has been bestowed on women for achieving higher educational levels than their male relatives (Schoeffel, 1994). Throughout the region, today's reality reflects the impact of the colonial experience and for many the shift from subsistence to market economies which may, in turn, increase the burdens on women and in some

Table 2. Pacific Islands: health and population growth

Country	IMR/1000 (1990) ^c	IMR/1000 (1995) ^d	L.E. (Female) ^d	L.E. (Male) ^d	TFR ^c	% Pop growth/yr 1974–1991 ^c
MELANESIA						
Fiji	26	22	74	70	3.5	1.9
New Caledonia	21	20	75	70	2.9	2.0
Papua New Guinea	67	65	58	56	5.1	2.2
Solomon Islands	43	25	73	69	6.4	3.7
Vanuatu	52	43	68	65	5.3	2.4
POLYNESIA						
American Samoa	18	n/a	n/a	n/a	4.5	3.8
Cook Islands	25	25	74	70	5.2	1.1
French Polynesia	20	16	73	68	3.9	2.5
Niue	20	12	n/a	n/a	4.3	-5.3
Tokealau	15	n/a	n/a	n/a	n/a	-1.3
Tonga	47	17	70	66	3.8	0.5
Tuvalu	41	41	67 ^e	67 ^e	3.4	2.3
Wallis and Futuna	45	n/a	n/a	n/a	4.6	1.2
Western Samoa	47	61	70	67	4.5	0.3
MICRONESIA						
Federated States of Micronesia	52	23	71 ^e	71 ^e	5.6	3.2
Guam	23	8	79	73	3.0	2.2
Kiribati	65	54	66	61	3.8	1.2
Marshall Islands	57	n/a	n/a	n/a	7.2	4.2
Nauru	31	26	n/a	n/a	n/a	2.3
Commonwealth of the Northern Marianas	19	9	68 ^e	68 ^e	4.3	6.1
Palau	26	25	67 ^e	67 ^e	3.5	1.8

^cSource: South Pacific Commission (1993a).

^dSource: ESCAP (1995).

^eAvailable only for females and males combined.

instances undermine their status. Other changes mentioned below, e.g. urbanization, wage labor and aging populations may also have implications for the health of women.

Health indicators

The health of populations has typically been measured by indicators of death, e.g. infant mortality, maternal mortality or life expectancy, although there is an increasing interest in developing indicators beyond conventional mortality indices. Those involved in formulating research on women's health are also concerned with indicators, although there is debate about what those indicators could and should be (Lewis *et al.*, 1994). Especially but not exclusively for developing world, data on the health status of women is most often woefully inadequate. Indicators cannot tell the full story but they are important. As noted earlier, geographers have addressed the place of quantification in feminist research. Numbers are important because they can reveal "broad contours of difference and similarity that vary not only with gender but also with race, ethnicity, class and place" and provide a basis for informed policy making and progressive political change (McLafferty, 1995, p. 438).

Accessing accurate health data for the 21 nations and states of the region poses a considerable challenge. In a study where we had access to not only official statistics but a wide range of country reports and unpublished data (Taylor *et al.*, 1989), we were

able to present, with reasonable certainty, sex disaggregated mortality data and life expectancy for females and males in the Pacific circa 1980, but not sex disaggregated data on morbidity. A decade later, using officially published reports only, disaggregated estimates of life expectancy were not available for all countries in the region (Table 2). In the earlier study we found, as would be expected, that the differentials in mortality (women/men) were greatest in the more modernized parts of the Pacific, e.g. American Samoa (eight years), New Caledonia (six years), reaching 13 years in Nauru and least in the least developed parts, Papua New Guinea (two years), Solomons (0) and a reversal in Vanuatu where male life expectancy was 2.5 years greater than female. In general the differentials were least in the countries with the lowest life expectancies, reflecting overall lower levels of health.

While the data are less complete, not surprisingly, this pattern persisted in the 1990s, and the greatest gains in life expectancy were in the lesser developed parts of the Pacific, most notably the Solomon Islands where the gains for women and men were 19 and 14 years, respectively. For those states where we have data, in no country was male life expectancy greater than female. Life expectancy data (Table 2) can be used to illustrate for the Pacific the "broad contours of difference" referred to above (McLafferty, 1995). For women, the lowest life expectancy, 58 years, is found in Papua New Guinea, the largest and least developed country in the region. The highest, 79 years, is found in the

Table 3. Maternal mortality, contraceptive use and female literacy: selected Pacific Island countries

Country	MMR/1000 ^a	Contraceptive prevalence ^a %	Female literacy ^a %
Fiji	68–150	27–32	75
Papua New Guinea	700–1000	10–20	32
Solomon Islands	549	10–25	45
Vanuatu	92–138	3–25	48
Kiribati	127	27–38	92
Tonga	70–80	23–39	99
Western Samoa	46	20	n/a
All developing countries	420	49	49

^aSource: Ahlburg (1996).

American territory of Guam followed by the French Overseas Territory of New Caledonia (75 years), modernized places by Pacific standards (although the rates for New Caledonia probably disproportionately represent rates for the large proportion of the population of European descent and underrepresent the rates for indigenous Kanaks). The greatest differential between women and men, six years, is also found in Guam. It remains two years in Papua New Guinea. It should be noted that much of the mortality data, especially in the less developed part of the Pacific, reflect hospital-based mortality, and women may be under represented in these populations, (Gillet, 1990).

Infant mortality (for which we do not have sex disaggregated data, Table 2), indirectly a measure of women's health, has declined throughout the region since 1980 with decreases of more than 20/1000 in the Solomon Islands, Vanuatu, French Polynesia, Tonga, Federated States of Micronesia, Kiribati and the Commonwealth of the Northern Marianas Islands (C.N.M.I.). There was an apparent increase in Western Samoa but this may be due in part to better reporting. Fertility remains relatively high, with very high levels of adolescent pregnancy in some states, e.g. Papua New Guinea, Solomon Islands, Vanuatu, Cook Islands, and the Marshall Islands. The Solomons and the Marshall Islands, where women still bear an average six to seven children have among the highest fertility rates in the world. In the past four decades however rates have fallen in Fiji, Guam and in much of Polynesia (Ahlburg, 1996). Contraceptive use is lower than in many developing regions, although there are major variations within the region (Table 3).

Maternal mortality varies greatly across the region and the rates mirror general levels of health (Table 3). In Papua New Guinea, where it is the leading cause of hospital mortality for women, the rate is estimated to be 700/100,000 following only six West African countries, Bhutan and Nepal. It is also elevated in the Solomon Islands where some estimates are as high as 600–700/100,000. In both of these countries, endemic malaria is a contributing factor. Malaria, endemic only in Papua New Guinea, the Solomon Islands, and with less endemicity, Vanuatu, is in fact a major health variable

within the region, relevant here because of its consequences for pregnant women and infants and young children. The estimated regional maternal mortality rate is 525/100,000, influenced heavily by the large population and high rate in Papua New Guinea (South Pacific Commission, 1993b), a good example of how the statistics from this large nation influence those of the region as a whole. According to Ahlburg (1996), Papua New Guinea spends twice the proportion of its national budget on health as do developing countries in general, yet life expectancy is 13% lower and the maternal mortality rate is more than three times that of the average rate for all developing countries. It is estimated that 35% of all children are malnourished. While data are not available for girls and boys separately, it might be reasonable to speculate, given the status of women in Papua New Guinea and some intra-country life expectancy data, that malnutrition is higher among girls in some parts of the nation.

In addition to gender, there are many other differences masked by the way mortality data are collected in the Pacific. Data are not disaggregated by sex, and generally not by ethnicity, e.g. ethnic groups in Fiji (indigenous Fijians and Indo-Fijians brought to Fiji from India beginning in the late 1800s to provide labor for the sugar plantations), Guam (Chamorros and others) and New Caledonia (Melanesians or Kanaks and Europeans). In addition to these major categories, there are other ethnic enclaves in the region not captured in the mortality reporting, largely also products of the colonial past, e.g. Melanesian enclaves in Polynesia, the result of the "blackbirding" labor trade in early colonial times, and ethnic Chinese throughout the region. More recently in Micronesia, there have been major demographic shifts with large numbers of islanders from the former Federated States of Micronesia and from the Philippines and Korea seeking work in Guam and the Commonwealth of the Northern Marianas (including women seeking work in tourist industry and the growing garment industry). In C.N.M.I. there has been a 250% population increase since 1980 and only 35% of the population is native-born.

There are also spatial differences within the region, generally with outer island populations

being at a disadvantage with regard to health, or at least health care. In Vanuatu, infant mortality rates are 45/1000 on the main island of Efate, 82/1000 on more isolated Santo and Malo islands and 103/1000 in the Banks and Torres group, isolated islands where there is significant male out-migration. Life expectancy in Papua New Guinea is 59/1000 for girls (60 for boys) in the North Solomons (a province of P.N.G.), 47/1000 for girls (41/1000 for boys) in the South Highlands and 43/1000 for girls (41 boys) in West Sepik (Gillet, 1990).

Infectious and parasitic diseases

Pacific populations' first experience with Western contact, particularly in the central and eastern reaches of the Pacific, resulted in drastic population declines in these "immunologically virgin" populations. Today, a number of infectious and parasitic disorders previously prevalent in the region, e.g. filariasis, yaws, tuberculosis and leprosy have experienced a decline. Malaria, dengue, acute respiratory infections and sexually transmitted diseases remain serious problems. The differential impact of such diseases on women is a subject that is receiving increasing attention (Social Science & Medicine, 1993b; Vlasoff and Bonilla, 1994) and one to which, as I suggested earlier in this paper, medical geographers, some with training in both the natural and social sciences, have a contribution to make. For women in the Pacific, malaria and sexually transmitted diseases, including HIV/AIDS, are particularly important.

Of the infectious and parasitic diseases, malaria may be responsible for the greatest morbidity in the region. Because of its severe impact on pregnant and lactating women (and infants and children), it is one that affects the health of women and men dif-

ferentially. As noted, endemic malaria is not found across the region but confined to island chains of Papua New Guinea, the Solomons and to a lesser extent Vanuatu, where several species of the anopheline vectors are found.* Maternal mortality, discussed earlier, is influenced by malaria prevalence as are infant mortality rates. Infant mortality rates of as high as 400/1000 have been reported in the Sepik Valley of P.N.G. Previously endemic primarily in lowland areas, there was an outbreak in the highland area of Chimbu in 1995. As a result of both increased mobility between the lowlands and highlands and possible global warming, malaria may be an increasing problem in highland P.N.G. with attendant consequences for women. Within the context of the human dimensions of climate change, this presents another research agenda for medical geographers.†

The information available on sexually transmitted diseases (STDs) in the Pacific is very sketchy, although the World Health Organization is currently undertaking a regional assessment. In some Pacific populations STDs have reached epidemic proportions. In a comprehensive women's health survey in the Marshalls, 7.7% of the women tested between the ages of 15 and 19 years tested positive for syphilis (South Pacific Commission, 1985). However, four of the countries that have been most consistent in reporting (Cook Islands, Fiji, French Polynesia and Guam) indicate a downward trend from 1983 to 1992 (Sarda and Gallwey, 1995). The figures represent cases seen in the public system and reported to Ministries of Health and are likely the tip of the iceberg, although the observed trend may be real.

The situation has been exacerbated by HIV/AIDS, although paradoxically the prevention and education efforts addressing HIV, in a region where talking openly about sex and sexual activity has not been easy, may encourage safer sex and thus lead to an overall decline in STDs. By February 1995, 221 AIDS cases and 612 HIV infections had been reported (South Pacific Commission, 1995a,b).‡ The largest number of HIV infections was in the large nation of P.N.G. (236). There has been minimal testing there and the numbers are undoubtedly grossly under reported. The other states with the largest number of cases, French Polynesia (144), Guam (64) and New Caledonia (110) all still have strong ties with a metropolitan power and heterogeneous populations. In these, the main patterns of transmission have been homosexual transmission and IV drug use, the latter especially in French Polynesia and New Caledonia. In Papua New Guinea the main pattern of transmission is heterosexual with perinatal transmission as high as 20%. Approximately equal numbers of men and women are affected and the clinical course of AIDS follows the "wasting disease" found in Africa (Malau *et al.*, 1988). In Fiji where the numbers are smaller (21),

*Reported prevalence rates are 372/1000 in the Solomon Islands, 194/1000 in Vanuatu and 28.4/1000 in Papua New Guinea (World Health Organization, 1992). While it is a very serious health problem in P.N.G., the lower rate is based on the population as a whole and reflects the fact that until recently malaria was largely confined to lowland regions. There are large population concentrations (in part perhaps reflecting malaria endemicity) in the highlands. Given health coverage, there is undoubtedly also under reporting in the lowland regions.

†The author and two collaborators, Michael Hamnett and Usha Prasad, University of Hawaii, have just received a U.S. National Oceanographic and Atmospheric Administration grant to look at the relationship between El Niño Southern Oscillation (ENSO) events and water-related and arthropod-borne disease in the Pacific region.

‡By December 1995, HIV infection was reported to be 485 in P.N.G., 189 in New Caledonia and 175 in French Polynesia. *The Time to Act. The Pacific Response to HIV and AIDS*, published in January of 1996 by several UN Agencies in Fiji, was not available at the time of writing in Hawaii, but it will contain more up-to-date information.

approximately equal numbers of women and men are infected.

As with other risks to health, the incidence of HIV/AIDS is not uniform across the region and the dimensions of the problem are not fully understood. Since the late 1980s the World Health Organization and other UN agencies (*Time to Act* United Nations, 1996), the U.S. Agency for International Development, and the South Pacific Commission have given the impending crisis serious attention. A special issue of *Pacific Health Dialog*, 1995 devoted to HIV/AIDS appeared in 1995 and the South Pacific Commission publishes AIDS Alert.

Elsewhere I have dealt with a number of specific concerns for the Pacific (Lewis and Bailey, 1992). Particularly with respect to women, these include their status and their inability to negotiate sexual practices, low condom use (only 12% of women in P.N.G. have ever used a condom and 74% had never seen one; Jenkins and National Sex and Reproduction Research Team, 1994), increased commercial sex, poorly understood patterns of sexual behavior, bisexuality (Ahlburg and Larson, 1995), cultural and legal barriers to the discussion of sex and sexually transmitted diseases and, e.g. in Papua New Guinea, the association of sexually transmitted diseases with witchcraft and sorcery. The looming crisis is further exacerbated by considerable population movement within and outside of the area. The situation in Papua New Guinea is particularly critical given the hundreds of cases despite limited testing, low level of development, mining and logging schemes with associated mobile populations and prostitution,* and the marginal status of women in that country.

*A thorough examination of the nature and dimensions of prostitution or commercial sex work in the Pacific is beyond the scope of this paper. Jenkins and National Sex and Reproduction Research Team (1994) explored patterns of prostitution in P.N.G. They found that it was common to exchange sex with tourists, sailors, business people, regional and foreign executives and rural residents visiting town for both goods and money. In the capital of Port Moresby the customers were most commonly government workers and business men. In Lae, sailors and truckers were the most common customers, perhaps foreshadowing the grim pattern of HIV/AIDS along transport routes found in South Asia and Africa. Thirteen percent of the providers were younger than 20. In P.N.G. Plange (1990) found that young people between 14 and 18 sell sex to pay school fees and buy clothes. There are young male sex workers and in the poorest families very young girls (10–14) are offered to paying customers. In patterns reminiscent of elsewhere in the developing world, girls are recruited from rural villages a few hours' drive from Port Moresby.

†A more controversial project, the Human Genome Diversity Project, is currently capitalizing on the genetic diversity of the region.

Non-communicable and chronic disease—diseases of modernization

More than 30 years ago, the Pacific generated some of the initial questions concerning the roles of genetic and behavioral factors in chronic disease (Prior and Davidson, 1966) and this interest continues (Baker *et al.*, 1986; Prior, 1981; Zimmet *et al.*, 1981) based on the genetic similarities in Polynesian (and some Micronesian) populations, their wide dispersal across the Pacific in varied environments, and their differential placement on the continuum of development. The differences in rates were used to substantiate the hypothesis that there is a mismatch between bodies evolved to hunt and gather (and in the Polynesian and Micronesian context, voyage over vast stretches of ocean and establish viable populations on remote islands) and modern lifestyles (Baker, 1984; Eaton *et al.*, 1988).† While these studies did look at difference in prevalence rates between women and men and less frequently looked at other factors, e.g. daily patterns of activity and exercise, they did not address gender per se. Only in the last few years have researchers begun to explore social and cultural factors including stress, and their interplay with hormonal differences in an understanding of chronic disease and its prevention. In the Pacific this would include, but not be limited to understanding the role of sex specific patterns of behavior and the cultural definition of appropriate behaviors, e.g. alcohol and tobacco use (Pinhey *et al.*, 1992).

The data that are available on differences in cardiovascular disease in women and men in the Pacific is incomplete. In an earlier review (Taylor *et al.*, 1989) cardiovascular disease was found to be the leading cause of death in 13 of the 21 states and typically in those countries that were more developed, e.g. 37% in Guam in comparison to 7% in Papua New Guinea. In Fiji, it was found that ischemic heart disease was the main cause of mortality in males, but that valvular disease, cardiac failure and stroke were more common causes of death in women. In Samoa, studies indicated that for males cardiovascular disease was positively correlated with education, opposite of findings in the United States. Baker *et al.* (1986) in their Samoan studies found that once adjusted for age, the rates of cardiovascular disease were lower than rates in the United States despite obesity and elevated rates of hypertension in Samoans.

There have been numerous prevalence studies on adult onset diabetes (diabetes mellitus II) in the Pacific. Empirical evidence suggests a genetic predisposition in some Polynesian and Micronesian populations and perhaps the Indian migrants to Fiji. DM II remains rare in Melanesian populations in highland Papua New Guinea, while there are elevated rates in coastal communities which are linguistically and genetically related to Polynesian and

Micronesian populations with similar genetic dispositions to diabetes (King, 1992). High prevalence was also found to be higher in Indo-Fijians (8.1%) than Melanesians (3.5%), also possibly due to genetic factors. Rates also tend to be higher in urban than rural areas (Taylor *et al.*, 1991) implicating lifestyle factors including diet and activity levels. As elsewhere in the world, rates are to be higher in women than men, although the difference may be less elsewhere. Adult prevalence rates in Nauru were 36.8% for females and 31.8% for males, higher than Pima Indians (Zimmet *et al.*, 1977) previously thought to have the highest rates in the world. Obesity is a recognized risk factor in the Nauru population. Nauruans also have the highest hypertension rates in the region and increasing evidence of heart and cerebrovascular disease, as well as elevated rates of mortality due to accidents (primarily alcohol-related motor vehicle accidents) and cancers. The population of Nauru has received significant compensation for phosphate mining for decades. At one time during the 1980s, this island state had the highest per capita income in the world. However declining resources, extreme environmental degradation and bad overseas investment have brought the nation close to financial collapse. It remains entirely dependent on imported food (consuming twice the recommended daily caloric intake), and it may represent the most extreme example of the negative health impacts of "modernization" in the region (Zimmet *et al.*, 1980).

Data on cancer incidence in the Pacific is incomplete, but some gender relevant patterns emerge. Several cancers common in industrialized countries, particularly lung and pancreas, both linked to smoking, and cancers of the colon and breast linked to diets high in protein and animal fat, occur in Polynesia and Micronesia, but are rare in Melanesia. Rates of liver cancer are high throughout the region due to chronic hepatitis B infection, and oral cancer, linked to betel nut chewing (more common in men but not prohibited to women), is elevated in lowland Melanesian and some western Micronesian populations. Rates from all cancers in Fiji, including breast cancer in Fijian females are lower than in the region as a whole, and breast cancer is also low in females in Papua New Guinea. However, there are deaths due to cervical cancer are elevated throughout the region including Fiji attributable in part to lack of screening. In Vanuatu, cervical cancer is the most commonly reported cancer, responsible for 25% of all malignancies, followed by cancer of the breast. In multi-ethnic Hawaii, while the rates of breast cancer are not the highest in the Hawaiian and part-Hawaiian population, the mortality rates in these populations lead the state, reflecting later detection and broad social, economic and health inequalities (Papa Ola Lokahi, 1992).

Another concern that can be mentioned only in passing due largely to a lacuna in data is occupational health. It, too, offers a research agenda for medical geographers and other social scientists. In the Pacific as elsewhere, this is a "gendered" issue in both rural and urban areas. The health impact of women's multifaceted roles in the tourist industry, key in a number of Pacific countries, deserves serious attention. In recent years the globalization of the garment industry has resulted in an increasing number of garment factories in the region, especially in Micronesia and Fiji. Urinary tract infections are reputed to be common in women working in Fiji garment factories, attributed in part to restrictions on the use of toilets. Eye problems have also been reported with managers lending women a percentage of the cost of eyeglasses as an inducement (?) to continued employment. Changes in land tenure and agricultural practices have as yet received little attention with regard to the health of women, a fertile field (no pun intended!) for geographic inquiry. A gendered approach to mental health is also called for in the Pacific, but because there is insufficient data, it will be dealt with here only indirectly in relation to domestic violence and suicide. Mental health researchers could take a clue from Pacific women themselves, as well as the research on both decolonization and gender, and explore the tension between maintaining one's Pacific identity and the stresses of modernization.

Aging

The aging of Pacific populations has implications that may differentially affect the health and well-being of women within the region. Both the proportion and absolute number of people over 60 are increasing. In 1985, 4.9% of the region's population was sixty or older. By 2000, 6.3% of the population will have reached 60 and by 2025, 9.4% will have reached that age.

As alluded to earlier, generation may be as important as gender in determining status in some Pacific societies. Counts and Counts (1985), in a monograph on aging in the Pacific, present a series of studies that document that men and women in the region experience age differently. In general, the status, influence and power of women in Melanesia increases after menopause, when women are less likely to be viewed as capable of pollution. Sinclair (1985) argues that for the Maori of New Zealand (Polynesians) there is actually a gender reversal with age in which women's social universe expands and that of the males contracts. In most Pacific societies status in old age is achieved rather than ascribed and not dependent on chronology or relative age; active participation in community life helps to define successful aging (Barker, 1994; Zimmer, 1990). Complex kin relationships in the many Pacific societies determine responsibilities for

and prescriptions concerning the care of the frail elderly (Rubinstein, 1994).

Aging brings additional health consequences for women. In general, there is no social safety net for the elderly in the Pacific. Panapasa and McNally (undated) argue that for the Pacific, as elsewhere in the developing world, both research on the elderly and the development of policy toward the elderly lag. Policy makers have argued that the size of the elderly population has not warranted serious attention when there are other serious social and health problems. This stance of "non-issue" is also based on assumptions about the roles of traditional extended families and their role in support. Jolly and McIntyre (1989) refer to this as the "unchanging cultural core". In a changing world, the support role of the traditional family cannot be taken for granted and to the degree to which it fulfills that function, it may double or triple the burden of adult women as they fill the gaps in the support network for the provision of care. Panapasa and McNally suggest that government policy must target traditional values and reward and assist families taking care of elders, rather than rely on direct subsidies, economically unfeasible in much of the region. I would caution that these policies must be sensitive to the realities of women's lives within a context of increasing wage employment, migration, etc.

Additionally, because women live longer than men and their status and access to resources may change with divorce and widowhood, their personal situations may render them particularly vulnerable. At the individual and family level, the implications of aging are rendered even more complex in much of Polynesia (and to a lesser extent Micronesia) where there is significant circular migration between the island states and metropolitan nations resulting in skewed demographic pyramids, reallocation of resources, and in some cases, small island populations with large numbers of elders and young children and consequently elevated dependency ratios (Barker, 1994). The diversity of the region and its cultural complexity demands micro-level studies addressed at demographic structure, aging, women and poverty. Poverty is not limited to older women. In a survey of the urban informal sector in Fiji, of those living in poor housing and in fringe areas, 55% of the female headed households were living in poverty. In Vanuatu, it is estimated that 25% of those living in the urban areas are living in slums (Bryant, 1993).

Accidents and violence

Accidents are responsible for more than 10% of deaths in a number of the states. Mortality due to accidents is significantly higher in men than in women. The leading cause of death is road traffic accidents, more than 50% of which are alcohol-related. The cultural complexity of the region masks

differences, but in some parts of the Pacific, young men traditionally engage in risk taking behavior e.g. on Niue in Polynesia where they are expected to engage in *fuata* which epitomizes aggressive competitive behavior (Barker, 1993). This can result in injury and death. Suicide and attempted suicide enjoy a degree of cultural sanction in some parts of the region and are a common theme in myth. There is an extensive literature on suicide in the Pacific. It is astonishingly high among young men in Micronesia and parts of Polynesia (Rubenstein, 1995, 1992). Particularly in Micronesia, the male to female ratio is extremely high, 13:1 (in comparison to 2:1 or 3:1 in North America and much of Europe; Rubenstein, 1995). For our discussion, it is worth noting however that there are significant variations within Micronesia. In Yap, where women's status is low and they have little power, the ratio is 5:1. In the Marshall Islands where women are accorded higher status the ratio is 50:1 (Rubenstein, 1995). This suggests that it is extremely important to understand the cultural context and patterning of suicide.

Domestic violence

Domestic violence is a pervasive problem in many Pacific societies and not only a contemporary one, although the stresses of modern life may exacerbate situations, e.g. among "young elite couples" living as nuclear families in Palau (Nero, 1990). A volume of *Pacific Studies* (1990) explored the issue. Throughout the region, where traditional extended kin networks exist, that network and a fear of retribution by relatives (or the requirement to provide substantial compensatory payment) may sometimes serve to contain the level of violence. The distance between a woman and her kin (hours rather than days) may be an important variable. Hoff (1992) attributed the lack of support shelters in Palau and the Marshall Islands to the availability of supportive networks of kin. Other reasons should be examined including cultural and social values, political will and economic constraints. Political developments, e.g. the series of coups in Fiji in the late 1980s with associated militarization and economic crisis, may also increase domestic and other forms of violence against women (Lateef, 1990).

Counts (1990) in her conclusion to the *Pacific Studies* volume noted that many Pacific societies consider a certain level of family (not exclusively between husband and wife) violence to be normal and acceptable, although there are Pacific societies where violence is rare including some in Melanesia, e.g. the Wape of Sanduan West Sepik, and the matrilineal Nagovisi of Bouganville, both groups in Papua New Guinea. In societies where violence is an acceptable expression of anger, e.g. the Ujelang of the Marshalls and the Tungaru of Kiribati, and in Palau (all in Micronesia), domestic violence is, as would be expected, more common. Among the

diverse societies of the region, the reasons for domestic violence differ. In some the role of social control is of paramount importance, while in others, domestic violence is primarily related to gender roles and male domination. Reasons for domestic violence include sexual jealousy related to adultery and polygyny and the failure of women to meet their perceived obligations (Counts, 1990).

Women's status influences the pattern of domestic violence. As noted earlier, in Melanesia the paying of a bride-price legitimizes men's control over their wives, often taking precedence over legal provisions. Wife bashing is a serious problem in Papua New Guinea. Between 1979 and 1982, almost one third of all homicides in Papua New Guinea were women killed by their husbands. The majority of all rural adults sampled (66.5% of men and 56.5% of women) thought bashings (beatings) were a normal, acceptable part of married life (Toft and Bonnell, 1985). Domestic violence does not only occur in societies in the Pacific where unequal status is the rule. In Palau, where women enjoy high status and women have complimentary roles in economic, social and political life, wife battering is, as noted, not uncommon. Women in matrilineal societies are not necessarily less likely to experience domestic violence than those in patrilineal. Lateef (1990) argued that the ideology of the "Pacific Way" is used to justify structured inequalities and legitimize the gender inequalities experienced by the "Pacific woman".

For Indo-Fijian women (close to 50% of the women in Fiji), Lateef (1990) argues that violence is part of being female (Lateef, 1990). Family structure in Fiji follows a patrilineal and patrilocal Hindu family pattern and purdah determines patterns of relationships.* Although many are employed, women are seen as both sexually vulnerable and sexually impulsive and ideally relegated to the domestic sphere. Women gain more equal status with age but this perpetuates older women's power over younger, especially the mother-in-law. While mothers-in-law do not typically beat their daughters-in-law, they may incite their sons to do so (Lateef, 1990). Suicide, which tends to be a primarily male phenomenon in the Pacific (Rubenstein, 1992) is common among Indo-Fijian women. In a five-year period in the mid 1980s, with approximately equal representation in the population, there were 203 suicides by Indo-Fijian women and 25 by indigenous Fijian women, an eightfold difference.

Counts (1990) suggests that modernization has led to an increase in domestic violence, especially when economic crises hit modernizing Pacific Island societies. The relationships between female edu-

cation, greater economic independence, changing social values and domestic violence are complex in the Pacific as elsewhere. Modernization is also often accompanied by the increasing use of alcohol and drugs. In a feminist analysis Hoff (1992) argued that the abuse of alcohol should not be viewed as the cause of abuse, but rather that patriarchal values provide the context for domestic violence. Pacific Islanders themselves do consider alcohol to be a major cause of domestic violence (Toft, 1985; Nero, 1990).

Health and health care

This is not the arena for a full discussion of women's roles in health promotion and the accessibility and utilization of health care in the region. The health systems in the region are by and large a legacy of colonial systems, hierarchically designed, hospital-based systems although there have been attempts at decentralization (Denoon, 1989; Kolehmainen, 1992; Lewis, 1990). The provision of health care in these remote, diffuse states presents a number of challenges and questions of both equity and equality (Waddington and Newell, 1987). Schoeffel (1984) recounted the history of public health in Western Samoa where the *komititumama* (women's committees) which had been the backbone of early public health programs were rendered less effective with the bureaucratization and professionalization and male dominance in public health.

There are few studies of hospital utilization that deal with differential utilization between men and women for the Pacific. Franks (1983), in study of attendance at the dispensary on isolated Abemama atoll, Kiribati found that utilization of health services was higher by women than men. Women viewed hospital visits as a social occasions. The author suggested that the low status of the female health worker in a male-dominated, non-interventionist society may have been a contributing factor to the difference in utilization. In the example cited before from Goodenough Island in Papua New Guinea, Young (1989) found that boys were twice as likely to be taken to outpatient facilities as girls because they have higher social value. Two intriguing and very different areas that could be explored by social scientists working in the Pacific are the intra-household allocation of resources for health (who receives what, when and why) and the deconstruction of the health care experience of women—and men. Answers to both types of questions would be enriched by the participation of indigenous scholars.

Globally, estimates suggest that women provide 75% of health care although medicine is still a male-dominated field in most of the world. This is certainly true in the Pacific although the situation is beginning to change. In its 100 plus year history, up until 1985, only 19.4% of the graduates of the Fiji School of Medicine were women, 92% of whom

*The majority of the immigrants came from North India, primarily from the United Provinces and Bihar (Lahl, 1983) in north India where women's status is also low.

were from Fiji. Of these three-fourths were Indo-Fijian. Most of these women chose pediatrics, obstetrics and internal medicine, mirroring patterns elsewhere. In 1992, 37% of the 112 students enrolled in the medical school were women and in paramedical fields, women and men were equally represented. At the Pacific Basin Medical Officers Training Program in Pohnpei, Federated States of Micronesia, the projected number of graduates by the 10-year program's end in 1996 was 32 women and 40 men, or 44% women. Three of them represent the first women physicians from Chuuk and Pohnpei (Federated States of Micronesia). There is also much to be learned about indigenous medical knowledge in the region. Medical geographers could join their colleagues in anthropology and other social and biological sciences in exploring the role of indigenous practice, including herbal healing, and the interface of traditional and Western medicine, focusing on the role of women it is practice and perpetuation in the Pacific.*

CONCLUSION

I began this paper by suggesting that current debates in medical geography could be enriched by a closer examination of a number of intellectual intersections. By way of example, I explored the gendered nature of health and disease in the Pacific embedded in a socio-ecological model of health. This drew not only from traditional sources, but also from the rich literature on gender and gender relations in the Pacific. Social theory, political ecology, feminist epistemologies, humanistic perspectives and the "new cultural geography" are already reshaping our subdiscipline and redefining its questions. In an overview of some of the current debates that intrigue us, I suggested several areas for the incorporation of gender into our research questions. More concrete examples were presented in the Pacific context. While I argued that medical geographers have a contribution to make to transdisciplinary research, this paper was not the result of such research, but a collage from may sources which may indirectly suggest ways in which we might proceed towards such a model and some of the partnerships that we might form in the future.

Litva and Eyles (1995) argued that there is no feminist medical geography. In the Pacific context, one rather straightforward example of how we might expand our horizons and redefine our questions is to explore the work of feminist scholars on gender relations and on domestic violence. As medi-

cal geographers explore the terrain defined by these intellectual intersections in the Pacific and elsewhere, employed creatively, their disciplinary expertise should enable them to engage in productive dialogues with colleagues from both within and outside the discipline. This should lead to the development of theoretical frameworks and methodological approaches that will help us to better understand the health of women and men, communities and societies, at various scales from the local to the global, and also contribute to transdisciplinary paradigms.

Reflecting on how this exploration might affect my own work, in an earlier paper, I suggested a risk framework (Lewis and Kieffer, 1994) that attempted to identify the temporal and spatial spheres through which women move (spheres of activity) and the risks to their health. I realize now that in the Pacific, a Pacific that I have presented through my Western gaze, such a framework would be greatly enhanced by expanding it to include "life spaces" imbued with the meaning of place and space (Kearns, 1993; Kearns and Joseph, 1993). Pacific voices would propose much richer definitions of health and healthy places, more akin to complex socio-ecological models, than to linear biomedical ones, places made meaningful by complex webs of individuals and kin, relations and reciprocity, and ties to the spirit of the 'aina or the land.

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*The first Ph.D. awarded to a Native Hawaiian woman in the Department of Geography at the University of Hawaii was awarded to a medical geographer, Nanette Kapulani Judd, in May 1997. Her dissertation was entitled *Laau Lapaau: A Geography of Hawaiian Herbal Healing*.

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