

WOHRC NEWS

WOMEN'S OCCUPATIONAL HEALTH RESOURCE CENTER

Office Workers Call for Redesign of Jobs

9 to 5 conference hears pleas for humanization of the automated office.

Calls for humanization of the new office technology through redesign and reorganization of the office resounded at a landmark international conference held by office workers in Boston October 28 and 29.

Only such measures can alleviate the health problems, many of them caused by stress, that have arisen with computerized office work, agreed many of the speakers.

Seven countries represented

Those attending the International Conference on Office Work and New Technology sponsored by 9 to 5, the National Association of Working Women, included automation experts and representatives of labor, management, universities, health organizations and computer manufacturers from the United States, Canada, France, West Germany, Norway, Sweden and Italy.

9 to 5 President Karen Nussbaum sounded the keynote when she pointed out that office workers "are the largest sector of the workforce, and the fastest growing. No longer is the typical American worker a man in a hardhat. The typical worker is now a woman at a typewriter — or rather, a keyboard."

"The U.S. is highly developed technologically," she said, "but we are underdeveloped in what the technologists call 'the human factors.' That is the importance of this conference."

Health problems highlighted at some of the conference workshops included eye strain, backaches and stress-related symptoms such as headaches and insomnia. Workshop leaders like Kari Thoresen of the Norwegian Computing Center in Oslo and Olov Ostberg of the Central Organization of Salaried Employees in Sweden discussed job design and

work organization to alleviate stress.

Barbara Cohen, a research psychologist with the U.S. National Institute for Occupational Safety and Health, reported that her studies showed that management and professional staffs, working an equal amount of time on a computer as clericals, showed less "stress and strain." The probable reason, she said, is that the management people were using the computers toward an end result in which they were interested and involved. The clericals, on the other hand, had "little identification with the end product," and also had to contend with "little control over their own work, rigid work procedures and constant pressure to perform."

The frustration caused by machine monitoring was graphically described by Boston University sociologist Roslyn Feldberg. In her study of the use of computers in two New England firms, she said, customer representatives in one had their pace regulated by the compu-

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Hospital workers talk about their jobs and lives in a new book. (P. 5.)

NUHCE

WOHRC Staff Discusses Safety in Magazine

The "accident prone worker" is a myth, declare two writers in a special safety issue of *Occupational Health Nurse* which was written and edited by WOHRC staff members and associates.

Rather than blaming the victim in setting up accident prevention programs, it is necessary to examine such factors as "heat, noise, illumination, toxins, improper training, inexperience, fatigue, shift, the speed of work, the variability of tasks performed, and the type of production incentives used," write Dr. Stephen Zoloth and David Michaels, MPH, in the special issue published last October.

The two writers who are occupational

health specialists on the staff of Montefiore Hospital in the Bronx, were invited to contribute by WOHRC director Dr. Jeanne Stellman who was guest editor of the issue. WOHRC staff members Mary Sue Henifin, Susan Klitzman, Barbara Aufiero and Dr. Barry Snow contributed articles on workplace design, safety hazards in the office, personal protective equipment and safety hazards as occupational stressors.

In their lead article, *Why Do Accidents Happen?* Michaels and Zoloth point to the fact that accident statistics dropped almost 20 percent in the years

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Physical Office Environment Can Affect Psychological Health

The psychological well-being of office workers is adversely affected by such factors in the physical environment as noise, poor air quality and unattractive surroundings, according to preliminary findings of a new study by researchers affiliated with WOHRC.

Environmental factors which the study showed were the strongest predictors of psychological strain are noise, unpleasant appearance, poor air quality; uncomfortable, non-adjustable office furniture, and having others use one's office without one's permission.

The findings were presented to the annual meeting of the American Public Health Association in Montreal in November by Susan Klitzman, one of four researchers who have been working on the two-year study. The other three are WOHRC director Dr. Jeanne Stellman, who is principal investigator; Dr. Gloria Gordon, project director, and Dr. Barry Snow, research psychologist.

Of the variables measured, said Klitzman, discomfort with noise levels seemed to cause the most anxiety and depression. Difficulty in communicating with coworkers because of noise and physical impediments made for feelings of isolation.

The physical environment also played

a part in causing general dissatisfaction with the job, said Klitzman. This is a factor that has frequently been ignored in other studies of job dissatisfaction. It was the lack of such data that gave rise to the present survey, she explained.

The study was conducted among 874 office workers at two different establishments, one a large, modern open-plan office in Canada, the other an older conventional setting in the United States. Employees filled out questionnaires that asked about the characteristics of the physical environment, psychosocial job conditions, opinions and feelings about work and about their physical and mental health.

Lack of windows cited

The researchers found it interesting, said Klitzman, that in spite of the differences between the settings, workers in both most frequently complained about lack of windows and lack of privacy. In addition, she said, "in both the conventional and open plan offices, we found that more than two-thirds of the respondents reported an inability to adjust the ventilation, temperature or lighting, open a window, rearrange equipment, control the number of people entering or passing by, or attain privacy. In the open-plan, the factors which received the highest endorsements related to the ability to adjust the chair and decorate one's workstation."

Previous studies on the health effects of job conditions Klitzman noted, have found that "both lack of control and dissatisfaction with work are associated with adverse mental and physical health consequences, such as fatigue, anxiety, frustration, and over time, to more severe pathologies such as depression and cardiovascular disease."

Results of other aspects of the study, *Office Workers — Health and Well-Being*, were reported to the American Psychological Association convention last August. (See WOHRC NEWS, October/November 1982). □

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1972-80, after engineering controls and new work practices had been mandated by the U.S. Occupational Safety and Health Administration. OSHA was created in 1970.

In discussing the relation of temperature to accidents, they cited one study which showed a 25 percent accident increase with every 5 degrees Fahrenheit rise or fall from an optimal temperature mediated by humidity, airflow and acclimatization.

In an article on *Safety in the Health Care Industry*, Dr. Stellman pointed to excessive accident rates among nurses and kitchen workers. A recent survey in one medical center, she said, showed that nurses accounted for 60 percent of reported accidents although they represented only 33 percent of the workforce. Kitchen workers reported 19 percent of the accidents while representing only 10 percent of the workforce.

Among the hazards she listed are needlestick wounds which allow infections to enter the body, back injuries from lifting, violence against personnel who often work irregular hours in unsafe neighborhoods, improper storage of chemicals in laboratories, poorly installed electrical wires and appliances, and inadequate staff training.

WOHRC psychologist Dr. Barry Snow in an article on *Safety Hazards as Occupational Stressors*, pointed out that "safety hazards may have a negative impact on the worker's physical and psychological well-being in addition to their potential for causing physical injury."

Working under stress, although it may improve performance in the short run, can if carried on for a longer period, produce or exacerbate such stress-related conditions as headaches, insomnia and gastrointestinal disorders, he said.

A recent study of workers at the Three Mile Island nuclear facility after the accident there showed "lower job satisfaction, greater increases in self-reported frequency of periods of anger, extreme worry, and extreme upset" than workers at a comparable nuclear plant. Even six months after the accident at the plant, TMI workers reported "more physical symptoms of upset and distress such as headache and stomach troubles..."

Copies of the October issue of *Occupational Health Nurse* may be ordered at \$5 apiece from WOHRC, Columbia University School of Public Health, 60 Haven Ave., B-1, New York, N.Y. 10032 □

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WOHRC FACT SHEET

WOMEN'S OCCUPATIONAL HEALTH RESOURCE CENTER



The Many Hazards of Waitressing

Waiting on table — one of the most traditional of women's jobs — is frequently hot, hurried and harried. But waitressing also involves health hazards that are not so easily apparent. The list ranges from air pollution to stress from sexual harassment. One recent survey of 130

occupations by the National Institute for Occupational Safety and Health found that waiters and waitresses ranked second in mental health problems.

This is a breakdown of some of the outstanding hazards of the job, and some suggestions for dealing with them.

Lifting

Continual lifting of heavy trays of dishes can do damage to the muscles and ligaments of the back. Once a ligament is torn, it becomes scarred and is more prone to injury a second or a third time.

In lifting heavy objects, it is good to remember that your main strength lies between your shoulders and your knees. It may look elegant to carry a tray with one hand, shoulder level, but it is far safer to carry it inelegantly with two hands, waist-level, forearms close to the body and elbows down. Very heavy trays — those over 30 pounds — should be divided into more manageable parts or wheeled in on serving carts. Stands on which to rest trays while serving are also good, but there should be enough room around the tables so that these do not obstruct traffic flow.

When lifting a heavy tray, push up from the knees, using less easily injured leg, not back muscles. Lift the load slowly in a continuous movement, avoiding fast, jerky motions. Take the same care when putting it down.

Foot care

Waitresses should insist on comfortable, non-slip, low heeled shoes for work. High heels worn consistently can throw the body off-balance, contributing to fatigue, poor circulation, leg cramps and lower back pain.

Infections and skin diseases

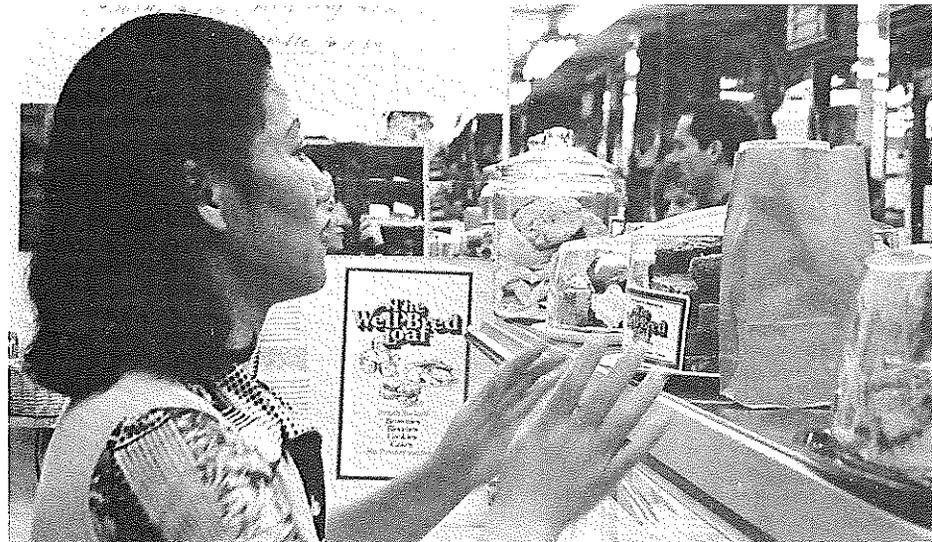
Infections can arise from a variety of sources including dirty dishes, foods and contact with customers with colds and coughs. Some of these are hard to prevent, but maximum good housekeeping in restaurants can lessen sources of infection. If dishes and work surfaces are cleaned frequently, it is also possible to

avoid the use of strong cleaning solutions which can cause skin irritations.

A recent survey of leading occupations for skin disease found hotel and restaurant work placing sixth. In addition

to cleaning solutions, substances which can irritate the skin include some foods, such as fish, fruits, vegetables, cinnamon and vanilla which produce allergies in some people. Prolonged wetting of the hands can also lead to skin problems.

The best prevention for skin irritations is good hygiene — frequent washups with a mild soap, followed by use of a lanolin-containing lotion to replace natural skin oils and fats that may be lost.



Mary Sue Hemfin

The health hazards of waitressing range from air pollution to stress.

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Temperature changes

Both too-hot and too-cold environments are sources of stress to the body. A waitress alternating between a hot kitchen and an air-conditioned dining

room may be subjecting herself to both of these. Waitresses should work with other restaurant employees to ensure that kitchen temperatures and humidity be kept as low as possible. Many kitchen workers experience temperatures over 90 degrees F., a heat level that causes undue stress. Humidity from cooking steam and dishwashers only aggravates the problem. Hoods, exhaust fans and air ducts are recommended on and near vapor-producing appliances.

Air pollution

Air pollution in restaurants can come from:

- Carbon monoxide from cigarette smoke and improperly ventilated stoves, ovens and charcoal broilers. This chemical asphyxiant robs your body of needed oxygen and can cause headaches, nausea and dizziness.

- Carbon dioxide from insufficient



Burns are a constant hazard.

fresh air. This can also cause headaches, nausea and dizziness.

- Smoke and dusts from powders, burning substances and cigarettes. These can cause eye and throat irritation, coughing and, if particularly heavy, lung disease.

- Microbes (bacteria, fungi and viruses) from cooling water used in the ventilation system. These can cause colds, influenza and such infectious diseases as Legionnaires' Disease.

- Oxides of nitrogen from cooking gas and stoves can cause watery eyes and irritation of the respiratory system.

Most modern ventilation systems are designed not to remove pollutants, but simply to supply and circulate fresh air. They may reduce the level of pollution to safe levels, but only if functioning properly. Special scrubbers or filters may be needed if air pollution is high.

To find out if your workplace has adequate ventilation, check to make sure there are air ducts and vents in the walls or ceiling. You can tell if the system is on by holding a tissue up to one and seeing if it moves. The air exchange should be continuous, and the ducts unblocked by furniture.

Trips and falls

In hurrying to and from a work station there are innumerable opportunities for a waitress to slip, trip or fall. Some important places to check are:

- "In" and "Out" doors to kitchens. There should be two, and they should be clearly marked. If only one is available it should have safety glass panels that allow good visibility.

- Traffic lanes between tables and between table and kitchen should be wide enough to pass easily and kept free of wires and other obstructions.

- The floor surface should be slip resistant and kept clean and dry. Cracks and worn areas should be repaired before

they can cause an accident. The manufacturer's cleaning instructions should be followed so that cleaning methods do not reduce the safety of non-skid floors.

- Floor areas around sinks, dishwashing machines and vegetable preparation areas should have proper drainage. If they cannot be kept dry, special grid pattern floor mats should be used.

- Frequent spills should be investigated so that their causes can be prevented. Until then, they should be covered quickly with sawdust.

- Lighting should be good enough to prevent accidents. Lighting fixtures should be kept clean and in good working order. Dirty fixtures can filter out 20 percent of the light, and bulbs that are wearing out can also reduce light output.



Bettye Lane

Infections can arise from a number of sources including dirty dishes.

Burns and electrical wires

Electrical appliances, stoves and other hot surfaces present a constant hazard. Waitresses, like all other restaurant workers, should be instructed in the proper handling of appliances and cookware. They should never plug in any appliance with wet hands or while standing on a wet surface.

Particular care should be taken that appliances and electrical equipment, especially those found on metal counter tops, are properly grounded. These include toasters, blenders, hand-mixers, fans, refrigerators and radios. Many of these items are designed for household use and need special grounding when used in industry.

Extension cords, too, should be properly grounded and should be used only in temporary or emergency situations. They should never be substituted for permanent wiring.

First Aid and Fire Precautions

Every kitchen should have a properly stocked first aid box in the charge of a responsible person who has been trained

in first aid. In large establishments, the location of the nearest box and the name of the person responsible should be posted.

Every restaurant should have a fire certificate specifying means of escape in a fire. Fire exits should be clearly marked, and means of escape should be properly maintained and kept free of obstruction. Fire-fighting devices should be available, and regular fire drills should be held for all employees.

Stress

Workers with little control over their jobs suffer the greatest amount of stress, according to the latest findings by occupational health specialists. Waitresses rank high among women workers with such stress-related health problems as heart disease, hypertension and headaches.

Besides low control over their jobs, waitresses suffer stress from the pressure of the work, boredom with the routine, noise, low pay and little feedback to tell them that they are doing a good job. Night work and rotating shifts, especially if they disrupt social patterns, can cause digestive and sleep problems.

Sexual harassment is another stress that particularly affects waitresses. Employers may encourage this unwelcome attention from customers by forcing waitresses to wear revealing uniforms.

As sexual harassment has become a public issue, waitresses like other women workers are fighting back and winning significant victories. In 1980, waitresses in the Detroit airport brought suit against their employer on the grounds that their scanty uniforms subjected them not only to cold but to gross verbal and physical assault. The employer had to provide different uniforms.

Collective action does not always have to go as far as a court to win relief from stress. But only as waitresses, like other low-status workers, gain more control of their jobs will they be able to relieve many of the conditions that are dangerous to their health. □

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Japanese Women Workers Described by Professor



Mary Sue Henifin

Professor Hiroko Hayashi

More than a third of the Japanese labor force today is composed of women, and more than half of these are employed in small industries with typically poorer working conditions, a visiting Japanese law professor told WOHRC staff recently.

Hiroko Hayashi, who is director of the Institute of Foreign Affairs at the Kumamoto University of Commerce, is a former Fulbright exchange scholar at Yale Law School now doing research at the New York State School of Industrial and Labor Relations at Cornell University. She said that more than half of Japanese women over 20 are in the labor force and that 60 percent of employed women are married.

Protective safety and health legislation for Japanese workers is particularly strict for women, reported Professor Hayashi. Most are restricted by law from working nights, holidays and for more than 48 hours per week for more than six days a week. There are exceptions, however, for those employed at night, such as nurses, telephone operators and women in radio and television.

Japan's Occupational Safety and Health Act was passed in 1972, said Hayashi. Prior to that many of its provisions had been part of the Labor Standard Act of 1947. The law protects all workplaces, regardless of the number of employees. One of its most interesting provisions requires every workplace with 50 or more employees to have a worker-organized health committee. Their main function, reported Hayashi, is

to provide forums for discussion of hazards; the committees are not permitted to inspect the workplace for infractions of the law.

However, workplaces designated as particularly dangerous, such as those in mining, construction and manufacturing, are subject to more regulation. All workplaces with more than 1,000 employees are required to have a doctor on staff.

Under the Japanese worker's compensation law, the employers' contribution to the compensation fund is determined on the basis of a merit system. Those with better safety records or in less dangerous occupations pay less into the fund. The government controls the fund.

However, said Hayashi, there is a tradition among many large Japanese industries, especially in shipbuilding, construction and electronics, to employ layers of subcontractors so that the identity of the actual employer is masked. This complicates not only worker's compensation cases but all kinds of contract negotiations.

CUPE Requests Grant To Study Causes of Cancer

The Canadian Union of Public Employees is asking its federal government for a \$300,000 grant to conduct a three-year study of the causes of cancer among its 277,000 members. If approved, the study will be the largest of its kind ever undertaken by a Canadian union.

The proposed study will monitor cases of cancer among the union's employees and attempt to find any links with their occupations. It will also provide a computer link with the National Cancer Statistics Data Centre in Ottawa, so that the union statistics can be compared with those in the general population.

CUPE members include many maintenance workers in public buildings, as well as nurses, teachers, police officers, day care center and nursing home workers. A union spokesperson said there have been several cancer fatalities among members in recent years, some of them apparently connected with asbestos, formaldehyde and other chemicals.

The proposal was announced by CUPE President Grace Hartman at the union's second National Health and Safety Conference October 25-27.

CORRECTION: In the fact sheet on Ethylene Oxide in our October/November issue, the WOHRC recommendation for exposure should have been .5 ppm rather than .05.

BOOKS

The New Nightingales: Hospital Workers, Unions, and New Women's Issues, by Patricia Cayo Sexton. Enquiry Press, New York, 1982. 219 pp.

"In an eight hour day, an aide lifts about 3,000 pounds — incredible. She gives maybe 20 baths in the morning, and lifts more than a man in an auto assembly plant. That's why her back goes."

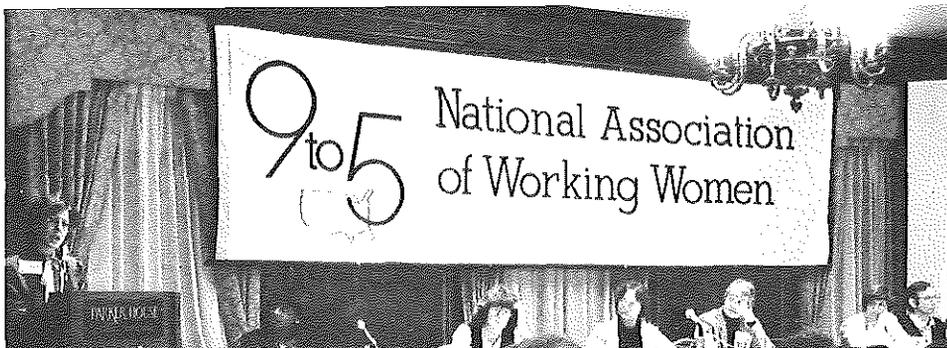
Women non-professional hospital workers who assist in patient care, type, clean, cook, and keep the hospital running are given a forum to speak out about their working lives in this new book. Most of the story is told eloquently in the words of Service Employee International Union members, such as the nurse's aide quoted above.

Patricia Cayo Sexton, Professor of Sociology at New York University and a trade unionist, has skillfully woven interviews around such topics as job discrimination and segregation, childcare, wages, stress, and health and safety. Information gleaned from interviews with national and local union leaders, management, and a survey of women workers in a California and Pennsylvania hospital gives additional perspective.

What emerges from this research sponsored by the Coalition of Labor Union Women is not a scientific study but, as Sexton puts it, a "family portrait" of women and their union, one that is highly personalized... rather than abstract and general.

Hours of work are a major concern: *"How can you sleep when one week you're on days and the next on nights? And how do you arrange your family life? You can't plan anything."* Health and safety topics are addressed: *"People get toxic reactions from the gas used in sterilizers. Administrators like to talk about all the protective gear they'll give the workers, but they never talk about changing the kind of gas used so workers won't need protection."* Stress is also a common theme: *"There's more stress in hospitals than in other places... Even if you had enough help, which you don't, you are in crisis all day."*

This book deserves a wider audience that its title may draw. "The New Nightingales" is not a label that adequately reflects the strength and diversity of the women hospital workers we meet in these pages. (Books continued)



At the 9 to 5 conference the workshop on occupational health included (l. to r.) Mary Mitchell, Boston 9 to 5 (speaking); Cheryl Wainwright, National Association of Working Women; Lisbeth Hjort, Public Health Sector, Norwegian government; Mary Sue Henifin, WOHRC; Kari Thoresen, Norwegian Computing Center; Barbara Cohen, National Institute for Occupational Safety and Health; and Olov Ostberg, Central Organization of Salaried Employees, Sweden.

Conference continued from page 1

ter. If clients asked difficult questions which kept them on the phone their daily production goal was affected.

In another case, she said, operators were instructed to enter material into the computer exactly as they received it, without being allowed to make corrections of the errors which they could clearly see.

American office workers usually have little or no control over introduction of the new machinery, noted Feldberg. "We've been in places where people get a memo on Friday saying that there will be a new system in place on Monday," she reported.

In contrast, union and management representatives of *Svensk Televerket*, the Swedish telephone company, reported that before the company brought in computers, a working committee of union and management representatives was

established to decide everything from the optimum height of tables to the color of the room and style of curtains and carpets. Workers at the company helped to establish not only better lighting but frequent rest breaks, said Berit Westman, the union speaker. □

Books continued from page 5

Biological Woman — The Convenient Myth, a collection of feminist essays and a comprehensive bibliography, edited by Ruth Hubbard, Mary Sue Henifin and Barbara Fried. Schenkman Publishing Co., Cambridge, Mass., 1982. 376 pp.

This provocative collection of essays, edited by a professor of biology at Harvard University and two of her former students, was inspired by their discovery that "women's biology not only is not

destiny, but is often not even biology."

"Our biology was not created by God the Father," the editors declare in their preface, "but by his human sons. As a result, it contains a number of convenient myths that bolster sexist social practices."

A number of these myths are vigorously and fascinatingly dissected in the book. They include a critique by Professor Hubbard of male bias in Darwin's theory of evolution and an examination by Ms. Fried, now an editor of the *Harvard Women's Law Journal*, of the use of sex-biased language in so-called "neutral" scientific research. There are also essays on attitudes toward the menstrual cycle, menopause and black women's health.

Of most probable interest to readers of this newsletter is an essay on *Social Bodies: The Interaction of Culture and Women's Bodies* by Professor Marian Lowe of Boston University in which the author shows how the way in which people live — their diet, work and exercise — can quite literally shape their biology.

Also of particular interest is an essay by Mary Sue Henifin and WOHRC director Dr. Jeanne Stellman on employment discrimination based on reproductive hazards in the workplace.

In addition to the twelve essays, there is an 84-page bibliography on women, science and health. The far-ranging subjects include aging, cancer and surgery, disabilities, menstruation, menopause, occupational health, pregnancy and sex differences.

Copies of *Biological Woman* are available from WOHRC at \$11.25 apiece plus \$1 for postage and handling. □

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