

ASSOCIATION FOR WOMEN IN MATHEMATICS
NEWSLETTER

October 1973

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The primary content of this issue is the replies from candidates in the AMS election to questions submitted to them by AWM; however, there are some other very interesting items.

The questions posed by AWM:

1. What is the candidate's position on the following three resolutions, which are on the agenda of the January 1974 business meeting?

A. In cases of alleged discrimination against mathematicians in matters of hiring, promotion, or tenure, for reasons of racial, sex or political bias, the AMS shall pay legal expenses for the complainant in those cases where the complainant, in the opinion of the Council, has made out a prima facie case of such discrimination.

B. The AMS declares itself in favor of the massive transfer of funds from the federal military budget to the support of education, including higher education, and calls upon the Council and staff to engage the Society in lobbying and publicity efforts directed to this end.

C. The AMS views with alarm the present practice of increasing class sizes and teaching loads, and other measures designed to save money by decreasing faculties at the expense of educational quality. The Council and staff of the Society are called upon to seek avenues for inducing colleges and universities to reverse this unhealthy trend.

2. Has the American Mathematical Society made sufficient efforts to carry out the following resolution passed by the January 1972 business meeting of the Society and endorsed by the Council in January 1973?

Resolved that 1) the AMS will work actively for equal opportunities for women in the following areas:

a) employment at all levels: this will include the search for and recruitment of qualified women.

b) advancement and tenure in academic positions.

c) admissions to graduate schools.

d) graduate and postdoctoral fellowships and assistantships.

e) membership on advisory boards and panels

and 2) the Society will include more women on

a) Society programs and panels, including invited speakers and section chairmen.

b) Society committees and governing boards.

3. Should there be blind refereeing for AMS journals?

4. What should the AMS do about the employment problem?

Replies

LIPMAN BERS (unopposed candidate for president-elect)

1.A. I would like to see this resolution amended as follows. Replace "shall pay legal expenses" by "shall contribute toward legal expenses"; add "in arriving at this opinion, the council shall conduct its own investigation whenever necessary."

1.B. I am in favor of the first part of the resolution. (I believe that one ought to transfer funds from the federal military budget for pressing domestic needs. Among them, higher education has a high priority, but not the highest.) Yet I am afraid that an obviously self-serving resolution by an organization of professors will have very little effect. I am against the Society engaging, at this time, in a "lobbying and publicity effort." I do not believe the Society is equipped to do it. Any lobbying of such a nature would have to be done by a much broader coalition of educational and scientific organizations.

1.C. Before forming an opinion on this resolution I would like to know whether the "practice of increasing class sizes and teaching loads" is widespread, and whether it really represents a "trend." The AMS should,

perhaps, conduct a study of the teaching load-class size problem.

2. Yes. I believe the Society has made sufficient efforts to carry out the resolution of the January, 1972 business meeting.

3. No. I do not believe that there is discrimination in refereeing and I am against "blind refereeing."

4. The Society should do the following things (some of which are already being done, and several of which could be done in conjunction with other mathematical organizations):

1. Monitor the employment situation.

2. Supply accurate, up-to-date information on the employment situation to the mathematical community.

3. Continue and expand the efforts to make the job hunting process less painful and more efficient.

4. Initiate discussions and provide guidance concerning a reform of graduate education, aiming at making holders of advanced degrees in mathematics qualified for a broader spectrum of employment.

5. Encourage and perhaps initiate special programs for mathematicians whose employment involves only very elementary teaching or only very routine applications of mathematics. It is important to give these colleagues an opportunity to remain mathematically alive while doing a good job. Professor Bers remarks that he does not consider these to be campaign promises and reserves the right to change his mind if and when presented by convincing arguments or new facts.

JUDY GREEN (Council member-at-large)

As a member of the present generation of young mathematicians I believe that our mathematical future should be a primary concern of the established mathematicians whose students we are, whose teaching assistants we were and whose prosperity rests in large measure on the expansion and proliferation of graduate programs which attracted us into mathematics. The Council of the AMS, presently composed entirely of tenured mathematicians, almost all of whom are employed at institutions oriented toward extensive support of research, has shown itself remarkably insensitive to the problem of the increasing proportion of research mathematicians who lack tenure (or even employment) or whose institutions show little or no interest in the support of research. I am running for the Council in the hope that an infusion of younger and less established people will render it more sensitive to these problems.

1. I support all the resolutions. However I must point out that the first resolution is vacuous until the Council includes more members who are sympathetic to its spirit.

2. I do not believe the Society has made sufficient efforts to carry out the resolution of the January 1972 business meeting. The Society's inclusion of women on programs, panels and committees apparently has increased but this increase does not seem to reflect any change in its patronizing attitude towards women. In particular, the use of the word "qualified" in the resolution itself suggests a double standard by which male mathematicians are presumed qualified and female mathematicians unqualified in the absence of (and sometimes even in spite of) evidence to the contrary. The Society cannot work (actively or otherwise) for equal opportunities for women until it has purged itself of this attitude.

3. Yes

4. Care.

HERBERT B. KELLER (Council member-at-large)

1. I am not in favor of Resolutions A, B and C. While my sentiments are strongly aligned with those suggested by the Resolutions, especially B, I do not think that AMS is the proper forum to push for these things. They are basically political and employee relations matters and should be taken up by organizations directed to those purposes.

2. I do not know the extent to which the Society has made efforts to carry out the resolution of January 1972. However, I have noted some small changes in the right direction and I would hope more can be done faster.
3. I do not think there is any significant discrimination in the Society's refereeing procedures. In fact I think this item borders (sic) on paranoia.
4. Work to produce fewer PhD's and more jobs.

ROBION KIRBY (Council member-at-large)

1.A. I'm very much in favor of fighting discrimination, for non-mathematical reasons, against mathematicians in matters of hiring, promotion, or tenure. It seems appropriate that all mathematicians support this fight through the AMS by paying some legal expenses. It would be a good idea to have a separate legal fund, financed partly through dues and partly through contributions.

B. and C. I would like to see the federal and state governments fund somewhat more mathematicians than they do now; that is, I would like to see them support more mathematicians who are currently doing good research. I'm doubtful that the governments should or will put much more money into higher education. Students, at Berkeley, say, are already among the most advantaged few; they are highly intelligent, and above average in health, and in most desirable personality attributes. Why should they be subsidized, beyond their non-college counterparts, still more than the several thousand dollars per year that they now get? The measures in B. and C., such as decreasing class sizes and teaching loads, increase this subsidy. If we are interested in subsidizing people, we should start with the really disadvantaged, not the most advantaged.

2. The Society should continue to work against discrimination for non-mathematical reasons against any mathematician. The most significant example of institutionalized discrimination I know of is actually pro women. Many good schools set aside a block of graduate admissions or teaching assistantships, or even an instructorship, which only go to women or minorities. I think this sort of thing, in the long run, hurts rather than helps women. Once institutionalized discrimination is gone, one must fight discrimination on a case by case level; Resolution A is useful here. I've seen more women among invited speakers, on the Council, etc., so the AMS has made progress in those areas.

3. I don't know any compelling arguments either for or against "blind refereeing", and would be inclined to continue our present system. Incidentally, "blind" referees would guess correctly many (most?) of the authors, so blind refereeing would not be too effective.

4. The Society should continue to provide accurate information about present employment and predictions about the long range employment trend, so that students can make wise decisions. All mathematicians can push for the training of better, rather than more, Ph.D.'s and for more applied math Ph.D.'s relative to pure math, in the hopes that we will be producing more employable Ph.D.'s. Regarding Resolution B above, note that the present employment problem will be exacerbated by more federal support of higher education rather than practicing mathematicians.

LEE LORCH (Council member-at-large)

1. Support all three. In addition, AMS should seek (but not wait unduly upon) financial and moral support from all appropriate professional and general organizations for the various issues arising. Also, (B) and (C), representing in part efforts to take advantage of the greatly increased numbers of people becoming available for mathematical employment, should be supplemented by further measures in this direction. (a) Initiation of a world-wide UN & UNESCO organized program of massive mathematical assistance, including the supplying of dedicated personnel, to the African, Asian and Latin American countries desiring such help. The nature and content of such help to be determined entirely by the receiving country; finances to come from the developed countries. (b) Organization of a

genuinely comprehensive information retrieval system, systematically classified and cross-referenced. This would inhibit the fragmentation of mathematics, reduce duplication of research and enhance its usefulness. It would require much well-trained personnel and should be a cooperative international effort, either thru some such agency as UNESCO or quadrilaterally with the Soviet scientific information services, publisher of Ref. Zhurnal, and the German (Democratic Republic) Acad of Sciences and the Heidelberg Acad, jointly responsible for the Zentralblatt. (c) Upgrade professional opportunities in all educational institutions, not only in (a relatively few) universities.

2. I have seen no persuasive evidence of either great efforts or great success in improving the situation for women mathematicians. At the Dallas meeting, the AMS employment committee chairman remained unreconstructed in his opposition to affirmative action; a change either in his attitude or in the occupant of his position would be in order. Also, I would favor the creation of tenured part-time positions available to those who wish them, as for example young parents, male and female. Also, I believe, in view of the long-haul needs connected with this issue, that the AMS should be active in securing academic and social changes beginning long before university days, even from the beginnings of schooling, in text-book content and ideas and images projected of male-female roles and capacities. Above all, I would encourage and welcome the ideas of the women themselves, including those of minority groups, as expressed either individually or through AWM, NAM and MAG.

3. If the AWM and/or MAG and/or NAM favor "blind refereeing" I am prepared to support this as a step toward the elimination of whatever discriminatory members of any of these organizations have discerned. If this is introduced, I believe that it should be compulsory "across the board," otherwise it will be too easy to detect the users. I believe also that those who have been the victims of discrimination should raise this explicitly before the AWM, say, in an effort to get organizational support. I recognize that the identity of complainants, especially those without tenure or regular jobs, needs to be kept anonymous.

4. In my comments to the resolutions in question 1, I proposed international UN-channeled aid to developing countries requiring mathematical assistance, this aid to be completely controlled by the receiving country in all ways, including the suitability of the personnel made available, and a massive internationally organized mathematical information storage and retrieval system involving very detailed classifications. The further expansion of educational facilities and opportunities, including large scale expert tutorial help to disadvantaged groups, together with the professional upgrading of jobs within a much larger segment of the educational system, by making the duties in this larger segment compatible with active scholarship in mathematics.

Professor Lorch adds that he would welcome all suggestions from AWM, MAG, NAM as to how to help struggle against discrimination and how to help make mathematics, mathematicians and their organizations play a constructive role in the overall goal of making the world a fit place for the peace and progress of the entire human race.

JANE CRONIN SCANLON (Council member-at-large)

1. On the whole, I favor the three resolutions on the agenda of the January 1974 business meeting.

I would vote for resolution 1 as it stands. However, I would like to have the word "age" inserted after "racial" or "sex".

In resolution 2, I would want to omit the phrase "from the federal military budget." What we are primarily concerned with is obtaining funds for education. If we can "sell" this to the public and the Congress, the more

would probably be taken from the military budget. But if we emphasize this last point, we might alienate people who would otherwise support our views. That is, if people are convinced that larger support for education is a good thing, they may later agree to transfer the funds from the military budget. But if transferral of funds from the military is proposed at the outset, a lot of automatic opposition would be created.

I favor resolution 3 although I think it might be more forceful if such a cliché as "views with alarm" were avoided.

In connection with resolutions 2 and 3, I would like to point out that it is important for professional mathematicians, especially members of the Council and AMS Committees, to realize that the climate of public opinion has changed considerably since the 1960's. There is a rising anti-intellectualism and there is considerably less interest in academic excellence. The fact that the AMS "declares itself in favor" or "views with alarm" may be of little or no interest to people outside the mathematical community. If our views are to be translated into action, I think we must convince the public and the Congress of the value of mathematics to society at large. This is not an original or profound observation, but I think it is true and important. And I see frequent evidence that mathematicians disregard it.

2. I think the Society has made conscientious efforts to carry out the resolution of the January 1972 meeting. However, I do not think that there are basic changes in the opinions of the membership of the Society. (People just do not change that rapidly). It will be necessary, for some years to come, to prod the Society to continued action along the lines suggested by the resolution.

3. I think that discrimination against a number of groups (including the group of women) exists in mathematical journals. I am strongly in favor of "blind refereeing" in the Society's journals as a means to reduce this discrimination. (I think there is no way to eliminate such discrimination entirely).

4. As a means of improving the employment situation, the AMS should do everything possible to convince the public of the value of mathematics to society at large. In particular, we should try to convince people in other disciplines such as physics, medicine, etc., that mathematicians can make real contributions to the formulation and solution of problems in these disciplines. This is scarcely a new suggestion. Unfortunately, it has not been put into practice. There is a significant number of otherwise intelligent professional mathematicians who make strenuous efforts to "put down" people in other disciplines by explaining that no respectable mathematician will work on applied problems. Possibly a first step would be to determine how to prevent such "put downs."

WOLFGANG SCHMIDT (Council member-at-large)

1. Resolution A. The AMS shall give moral support in cases of discrimination against mathematicians for reasons of racial, sex or political bias. I do not know how many law suits are to be expected if the Society pays legal expenses in all cases of prima facie discrimination, and I don't have any estimate of the likely total costs. Also, at the moment my latest information on the finances of the Society is the report of the Treasurer about the year 1971 in the September 1972 issue of the Bulletin. Therefore I am unable to commit myself to the position that the AMS should pay these legal expenses. Resolution B. The AMS should not be a political organization. Therefore, although I myself and perhaps a majority of the members of the Society are in favor of a decrease of the military budget, it would be inappropriate for the Society as a whole to press this view. Therefore, I would reword the statement as follows:

The AMS declares itself in favor of a massive increase of federal funds spent in support of education, including higher education and calls upon the Council and staff to engage the society in lobbying and publicity efforts directed to this end.

Resolution C. I agree with this.

2. I believe that on the whole the Society has made reasonable efforts to carry out the resolution of the January 1972 business meeting. Continued efforts will be needed to keep the pressure up on employers to provide equal opportunities.

3. I doubt whether there is discrimination against women by referees. Referees might be hesitant to recommend against a person with a high reputation, but otherwise I think they are evenhanded at present. I would not mind a trial period of blind refereeing, but I believe there would be many complaints.

4. It would be highly desirable to have more Ph.D. instructors in many 2 and 4 year colleges which up to now were not able to hire such persons. It would also be desirable to have more people with advanced degrees in high schools. The AMS should make lobbying efforts to make this come about. It would create more employment for mathematicians at the Ph.D. and masters level.

PROGRESS REPORT

In view of question 2 which was asked of the candidates, it might be well to review what the AMS has done to implement its resolution.

1. The AMS has changed the form of its employment services several times in the past few years, hoping to make job-seeking less painful and more productive for everyone. There is general agreement that further improvements are required. Moreover, the buddy system still flourishes and the only available figures show that the unemployment rate for women with new Ph.D.'s in math is twice that for men. Further statistics are given in the following article.

2. There do not seem to be any statistics on admissions or assistantships. There are reports of special assistantships set aside for women (see Kirby's statement), but no hard data. Of course, Rhodes are still closed to women and no Sloans have been awarded to women in pure math. The AMS Committee on Employment and Educational Practices could be useful in getting some information on these issues.

3. Again there seems to be no information on the issue of advisory board and panels, but AWM can try to get some from organizations such as the MS, NAS and AAAS. In spite of a court suit, there has been only a slight increase in the number of women on NIH committees and panels.

4. Turning to the second part of the resolution, we note that for the first time in 40 years the AMS has had a woman hour speaker at one of the national meetings; also there is a woman speaker scheduled for the January 1975 meeting. There has also been at least one woman speaker recently at a regional meeting. However, during the same period of time there have been well over 100 men hour speakers. There have been many women serving as section chairmen at all the meetings. Moreover, there is now a woman editor for the Proceedings. While all of these women have been selected on their merits as mathematicians, it seems remarkably that the merits of women have so long been overlooked.

5. Aside from the AMS Committee on Women, the only AMS committees with women as members are CEEP and the committee on the AMS fellowship (one woman on each). More important, there are still no women trustees (the group responsible for financial matters), women presidents or vice-presidents or high-level employees of the Society.

6. One of the charges to the AMS Committee on Women was to present recommendations on how to implement the resolution. So far the committee has compiled a roster of women with Ph.D.'s in mathematics which is available from AMS, P.O. Box 6248, Providence RI 02904, and presented some resolutions to the AMS Council, all of which have passed except one suggesting that women use their maiden names. Mainly they deal with reminding mathematicians that women should not be discouraged from studying math by sexism.

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remarks, etc., but they include opening up the services of the AMS Committee on Academic Freedom, Tenure and Employment Security to complaints from graduate students and job-seekers. If you have a complaint of discrimination in hiring, promotion, tenure, working conditions, award of assistantships and fellowships, etc., write Paul Mostert, Univ. of Kansas, chairman of this committee.

7. One serious difficulty is the neglect of those without Ph.D.'s. The AMS Committee on Women is recommending to the MAA that a joint committee study the problems of such women. Actually, the MAA should be ripe for pressure on issues of concern to women. The new president is Ralph Boas, Northwestern.

AWM EMPLOYMENT SURVEY - SUMMER 1973

Early in August, we again sent our employment questionnaire to 64 Ph.D. granting institutions across the country. From these schools, 61 returns were received last summer and 41 returns have been received to date (October 2) this summer. As ample time has been allowed for the questionnaires to drift back (two months), it seems that there is less interest in the employment situation for women mathematicians. For this reason, AWM must continue its activities.

The following figures are based on returns from 38 colleges and universities:

Faculty	Total	Men	Women	% Women
1971-72	1558.5	1480.5	78	5.0
1972-73	1532.5	1455.5	77	5.0
1973-74	1513.5	1439.5	74	4.9

Despite affirmative action claims and fears of reverse discrimination, the percentage of women has not changed for this sample!

The percentage of new women Ph.D.'s seems to be increasing:

Number of Ph.D.'s granted		total			%W
		M	W		
1971-72 (61 returns)	474	429	45	9.5	
1972-73 (41 returns)	340	302	38	11.2	

The percentage of new women faculty at these institutions shows no increase.

	Total	M	W	%W
New faculty 1972-73 (61 returns)	177	163.5	14	7.9
1973-74 (41 returns)	163	151	12	7.4

It is interesting to note that while these institutions granted 11.2% of their Ph.D. degrees to women in 1972-73, only 7.4% of their new faculty for 1973-74 are women.

J.M. Elkins

JOB SEEKERS AND THOSE WHO KNOW OF OPENINGS

Please send your vita or descriptions of the positions to Judy Green, Rutgers, Camden NJ. Send position descriptions also to the newsletter editor.

***** DUES DUES DUES *****

Starting in January 1974 there will be an increase in dues to \$3 per year for individual memberships, and \$4 per year for family memberships (one newsletter). Institutional memberships (departments or businesses) will be available for \$10 per year. Library subscriptions to the newsletter will go up to \$3 per year. We are asking those who list jobs officially to pay \$5 for three issues if funds are available (same principle as for page charges for journals). Renew your membership if it has expired.

JOBS

- REA MAGNET WIRE COMPANY.** Contact Robert N. Peterson, Corporate Personnel Manager, 3600 East Pontiac St., Fort Wayne, IN 46806.
- UNIVERSITY OF DELAWARE.** Unidel Professor of Mathematics. An applicant must presently hold a senior position and exhibit a record of outstanding scholarship in some area of analysis, preferably applicable mathematics. Major emphasis will be placed on the research interests of the applicants as they compare with the expertise and goals of the department. Teaching load and salary are negotiable. Position available September, 1974. Correspondence should be addressed to W.E. Baxter, Dept of Math, Univ of Delaware, Newark Delaware 19711.
- UNIVERSITY OF MISSOURI-Kansas City.** Director of the computing center. Doctoral degree required. Contact Herwig G. Zauchenberger, Dean, School of Graduate Studies, UMKC, 5305 Holmes, Kansas City MO 64110.
- UNIVERSITY OF NEBRASKA-Omaha.** Asst or assoc prof of computer science to start January 1974. To teach such courses as languages, systems programming, artificial intelligence, OR, Capable of taking leadership role in development of BA degree program in Comp Sci. PhD and work experience required. Contact Dr. Margaret Gessaman, Acting Chairwoman, Dept of Math, UNO, POBox 688, Omaha, NB 68105.
- GENERAL MOTORS CORP.** Openings in applied math, stat, scomp sci. Contact J.B. Sparbank, Personnel Staff Engineer, Research Laboratories, GM, Warren MI 48090.
- SMITHSONIAN INSTITUTION.** Smithsonian fellowships, stipend of \$10,000 per annum and research allowances. History of science and technology, among other fields. Also predoctoral fellowships, \$5,000 per annum. To support research in residence at the Smithsonian Institution. Contact Office of Academic Studies, Smithsonian Institution, Washington, DC 20560.
- SUNY DELHI.** President. Doctorate and teaching and administrative experience in two-year college required. Contact W.S. Stone, DVM, Executive Secretary, Presidential Search Committee, State Univ Agricultural and Mechanical College, Delhi NY 13753.
- LANEY COLLEGE.** President. Contact Paul A. Elsrner, Vice Chancellor, Educational Services, Peralta Community College District, 300 Grand Avenue, Oakland CA 94610.
- HUSSON COLLEGE.** President. Doctorate in business or economics is desirable but not essential, training in the business field and administrative experience required. Teaching experience desirable. Contact Fred Dingley, Chairman of the Presidential Search Committee, Husson College, Bangor ME 04401
- EASTERN MICHIGAN UNIVERSITY.** Associate director of registration. Bachelor's degree and experience in computerized registration, abstract reasoning ability required. Salary \$11,500-16,000 for 12 months. Contact A.P. Marshall, Dean of Academic Services, EMU, Ypsilanti MI 48197.
- WAYNE STATE UNIVERSITY.** Coordinator, engineering programs. Master's in engineering, technology, business or industrial education. \$14,000-18,000. Contact Office of the Dean, College of Lifelong Learning, WSU, Detroit 48202.
- MINNESOTA EDUCATIONAL COMPUTER CONSORTIUM.** Executive director. Experience in education, data processing and computing, administration of complex project, advanced degree desirable. Contact James Pederson, Chairman, MEC 208 State Administration Bldg, St. Paul MN 55155.
- UNIVERSITY OF ILLINOIS.** Systems analysts. Minimum requirements, B.A., 3-4 years experience, 360/370 COBOL. Desirable, experience with administrative systems development, prior project leadership, familiarity with database systems. Salary to \$16,000. Contact Univ of Illinois, Management Information Systems, 409 E. Chalmers Rm 251, Champaign IL 61820.
- UNIVERSITY OF CALIFORNIA, BERKELEY.** Director of analytical studies. Terminal degree with strong quantitative background required. Administrative experience desirable, position available immediately. Contact Joseph W. McGuire, V.P.-Planning, UC, 247 Univ Hall, Berkeley CA 94720.

CONSORTIUM OF METROPOLITAN MINNESOTA COLLEGES. To develop and implement a program in competence-based education for 6 Metropolitan Community Colleges and Minnesota Metropolitan State College. Project director: management skills, master's degree at least, community and 4-year college experience, 18,000 to 22,000. Six staff associates: master's degree minimum, demonstrated commitment to non-traditional education, 16,000 to 18,000. Contact Dr. Douglas R. Moore, Minnesota Metropolitan State College, LL90 Metro Sq., St. Paul MN 55101.

JEFFERSON COMMUNITY COLLEGE. Remediation coordinator, spring 1974. Contact Jane B. Bonney, Jefferson Comm. College, Watertown NY 13601.

UNIVERSITY OF PITTSBURGH. Asst or assoc prof of computer science, artificial intelligence, formal logic, simulation or related fields preferred. Ph.D. required. Contact Gary Lindstrom, Dept of Comp Sci, Univ of Pittsburgh, Pittsburgh PA 15260.

UNIVERSITY OF NEBRASKA, LINCOLN. Dean of graduate studies and research. Contact Graduate Search Committee, Office of the Chancellor, 309 Administration, Univ of Nebraska, Lincoln NB 68508.

CENTRAL INCA COMMUNITY COLLEGE. Dean, liberal arts and sciences. Ph.D. preferred, administrative experience desirable. Contact Dr. Alfred S. Dale, Provost, 211 W. Wacker Drive, Chicago IL 60606.

OLD DOMINION UNIVERSITY. Dean, school of sciences. Contact Dr. Raymond H. Kirby, Chairman of the Search Committee, Dept of Psych, Norfolk VA 23508.

UNIVERSITY OF NEBRASKA. Executive vice president for administration. Position available immediately. Contact President's Office, Univ of Nebr., 3825 Holdrege, Lincoln NB 68503.

UNIVERSITY OF TENNESSEE, CHATTANOOGA. Vice chancellor for academic affairs. Earned doctorate, teaching and administrative experience. Contact George Connor, Chairman, Search Committee, UT, Chattanooga TN 37401.

KENT STATE UNIVERSITY. Dean of the college of arts and sciences. Contact Prof. Eugene Wenninger, Chairman, Dean's Search Committee, Dept of Sociology and Anthropology, Kent State University, Kent OH 44242.

NEW ENGLAND CENTER. Staff assistant, joint operations committee. Conduct research, prepare analyses, etc. for the six New England Land Grant Universities. Master's degree minimum. Contact Donald E. Nicoli, Joint Operations Committee, New England Center, Univ of New Hampshire, Durham NH 03824.

UNIVERSITY OF RHODE ISLAND. Dean, college of arts and sciences. Contact Dr. Nancy Potter, Chairman, A and S Dean Search Advisory Committee, Graduate School, Univ of Rhode Island, Kingston RI 02881.

DUKE UNIVERSITY. Vice provost and dean of Trinity College of Arts and Sciences. Major administrative post with primary responsibilities in areas of undergraduate curriculum, student affairs. Contact Prof. Thomas A. Langford, Chairman, Dean's Search Committee, Duke University, Durham NC 27706.

CENTRAL MICHIGAN UNIVERSITY. Dean of graduate studies. Doctorate and experience with graduate programs and administrative processes are desirable. Contact Graduate Dean Search Committee, Central Mich Univ, Box 117, Mt. Pleasant MI 48858.

UNIVERSITY OF DETROIT. Dean, college of arts and sciences. Contact Henry B. Maloney, Dean of Faculties, Univ of Detroit, Detroit MI 48221.

NEW ENGLAND COLLEGES FUND. Assistant/associate director. Travel, personal contact with business leaders required. Graduate of modest-sized New England liberal arts institution. Contact Exec Director, 581 Boylston St, Boston 02116.

UNION COLLEGE. President and chancellor. Contact Chairman, Board of Trustees, Union College, Schenectady NY 12306.

GRAND VALLEY STATE COLLEGES. Assistant dean, college of arts and sciences. Starting between 1 January and 1 July 1974. At least 3 yrs teaching experience. Salary 16,000-20,000. Contact Dean John Linnell, College of Arts and Sciences, Grand Valley State Colleges, Allendale MI 49401.

DRAKE UNIVERSITY. Dean of University College (evening division). Contact Dr. Eddie Easley, Chairman, Dean's Search Committee, Drake University, Des Moines, Iowa 50311.

WAYNE STATE UNIVERSITY. Office for institutional research--Research associate/master's at least, employment experience in a university, computer experience. Research assistant--to perform statistical analysis, bachelor's at least. Contact Office of Academic Programs and Planning, 1262 David Mackenzie Hall, Wayne State Univ, Detroit MI 48202.

MONROE COMMUNITY COLLEGE. Vice president for student affairs. 22,000 to 30,000 for 12 months. Administrative experience required. Contact Dr. Frank Milligan, Dean, Assistant to the President, Monroe Comm Coll, 100 E. Henrietta Road, Rochester NY 14623.

UNIVERSITY OF KANSAS. Continuing education director, Kansas City area. Ph.D. required. Starting salary apprx. 13,000. Contact Wallace R. May, Continuing Education Bldg, Univ of Kansas, Lawrence KS 66045.

COMMUNITY COLLEGE OF DENVER. Vice president. Contact Director of Personnel, Comm Coll of Denver, 1009 Grant St, Denver CO 80203.

INDIANA STATE UNIVERSITY. Assistant dean, school of technology. Contact Dean of School of Technology, Indiana State Univ, Terre Haute, IN 47809.

UNIVERSITY OF MICHIGAN. Associate vice president for academic affairs, educational resource development. Contact Allan F. Smith, V.P., Univ of Mich, 3080 Administration Bldg, Ann Arbor MI 48104.

UNIVERSITY OF DELAWARE. Senior programmer/analyst (research and instruction). To provide consulting service to the academic community. Bachelor's plus 4 years experience. Contact Robert K. Shaffer, Manager, Academic Services, Computing Center, Univ of Delaware, Newark Delaware 19711. Also, several administrative programming positions, contact John J. Falcone, Manager, Systems and Programming, above address.

COLUMBIA UNIVERSITY. Several Ritt Assistant Professorships. 3 year appointments. Contact Lipman Bers, Dept of Math, Columbia, New York NY 10027.

ANALYTIC SERVICES INC. OR, stat. systems analysts. U.S. Citizens only. Contact President's Office, ANSER, 5613 Leesburg Pike, Falls Church VA 22041.

UNIVERSITY OF MARYLAND. Chairman, dept of Computer Science. Contact W.E. Kirwan, Chairman, Search Committee, Dept of Math, UM, College Park MD 20742.

DANFORTH GRADUATE FELLOWSHIPS FOR WOMEN. Open to women beginning or continuing graduate study leading to a teaching career. At the time of application women must not be either a full-time teacher or graduate student. Applicants must have experienced a break in their education for at least 3 years. Contact Director, Graduate Fellowships for Women, Danforth Fdn, 222 So. Central Ave., St. Louis, MO 63105.

NSF GRADUATE FELLOWSHIPS. For beginning graduate students. Contact NSF, Washington DC.

FORD FOUNDATION FELLOWSHIPS. For Native Americans, Black Americans, Mexican Americans and Puerto Ricans, for beginning and continuing doctoral students.

BUSINESS AND PROFESSIONAL WOMEN'S FOUNDATION. Fellowships to doctoral degree candidates whose proposed research bears on the problems and concerns of work women. Stipends from 500 to 3000. Contact the foundation at 2012 Massachusetts Ave., Washington DC 20036.

GEORGE C. MARSHALL MEMORIAL FUND FELLOWSHIPS. For study in Denmark, U.S. citizens between the ages of 21 and 40 with at least bachelor's degrees. Stipend of 3600. Contact American-Scandinavian Foundation, Exchange Division 127 East 73rd St, New York NY 10021.

WILLIAMSPORT AREA COMMUNITY COLLEGE. President. Salary 27,000-30,000. Contact Search Committee, Intermediate Unit 17, Lyoming County Court House, Williamsport PA 17701.

MOUNT SAINT MARY COLLEGE. Academic dean, doctorate, teaching and administrative experience preferred. Contact Dr. Hedwig Just, Search Committee Chairman, Mount Saint Mary College, Newburgh NY 12550.

UNIVERSITY OF MINNESOTA. Research fellow for collection and analysis of data dealing with energy supply, distribution and use. Contact Prof. Dean Abraham All-U Council on Environmental Equality, 960 Social Science Tower, Univ of Minn, Minneapolis MN 55455.

EDITOR, THE NEWSLETTER, AWM

Most of the membership of AWM is well aware of the tremendous contributions of our past president, Mary Gray. The time and effort she has devoted to AWM from its inception to the present are monumental. Almost singlehandedly she has seen to The Newsletter, The Treasury, the membership roster, voluminous correspondence, organization of activities and meetings of AWM. Much of her effort has been spent in encouraging the active participation of the members and in a few short years, the membership has risen to several hundred. Clearly there was a need for the association and for a vocal spokeswoman; we have been fortunate in having active and strong leadership in these early years.

Directly or indirectly, Mary Gray and AWM can take credit for opening the nominating process of our professional societies to women and for the increased number of women speakers, panelists and council members at the national and regional level.

I am sure the members of AWM join me in appreciation of her tireless efforts for AWM.

Yours sincerely,
Judie Elkins
Executive Committee - AWM

Editor's note: AWM owes Judie a big vote of thanks for her tremendous efforts on the employment service. She is continuing, since it does not appear that the AMS roster will be an adequate replacement, but will be assisted this year by the Philadelphia area AWM, Judy Green in particular.

Judie Elkins also calls attention to the American Council on Education's report Teaching Faculty in Academe: 1972-1973. It makes much of the increase in the percentage of women on the faculty from 1968-1969 to 1972-1973. The increase is from 19.1 to 20.0 percent (for 2-yr, 4-yr colleges and universities).

WOMEN IN MATHEMATICS: WHY SO FEW?

Judith Grabiner of Small College, Dominguez Hills, California, has prepared a talk with this title. Its focus is that of a historico-sociological inquiry. She concludes with the following parable:

In about the year 1000, Pope Sylvester II is said to have tried to introduce the Hindu-Arabic numerals into Europe, to replace Roman numerals. But he was unable to do so. Though Roman numerals are a great inconvenience to any sort of sophisticated calculation, nobody was interested in such calculations anyhow. A great scientific and mathematical civilization existed in the tenth century in the Islamic world; but in western Europe, few people cared.

Let us suppose that, in the year 1000, some Muslim mathematician looked at what happened to the proposed innovation and said, "These western Europeans will never amount to anything as mathematicians. Most of them cannot perform simple multiplication problems. They have no interest in mathematics-- obviously this is because they have no aptitude for it. This lack of aptitude is amply demonstrated by the fact that over the last four hundred years--far back as our records go--they have produced no mathematicians at all." The only good arguments against this view are the arguments we have been making: that social conditions determine the flowering of talent, and that being barred from learning a subject prevents one's later contributing to it.

Now the legal barriers are gone; women can become mathematicians. There remains only prejudice--only the idea that "women can't do mathematics." The strength of prejudice is related to many things, notably ignorance. The knowledge of the causes of the small number of women in mathematics should help dispel the prejudice.

This newsletter is on file at the Women's History Library, 2325 Oak Street, Berkeley, CA 94708.

NASA has begun a series of studies aimed at putting women into space. Among the problems studied are the effects of weightlessness. The initial subjects are 2 Air Force flight nurses.

PUBLICATIONS

- Free and Female by Barbara Seaman, now in paperback.
- Women in Fellowship and Training Programs by Cynthia L. Attwood, available from Association of American Colleges, 1818 R.St. N.W. Washington D.C. 20009.
- Women: A Selected Bibliography, available from Wittenberg Univ, Springfield Ct
- Woman News, a new national newsmagazine to be published by Janet Diedrichs and Associates, 333 North Michigan Ave., Chicago IL 60601, the publishers of The Spokeswoman.
- Breakthrough, newsletter of the Interstate Association of Commissions on the Status of Women, Editor: Dr. Emily Taylor, 220 Strong Hall, Univ of Kansas, Lawrence KS 66045.
- In Touch, newsletter of the New Jersey State Commission on Women, P.O. Box 2768, Trenton NJ 08625.
- Women in 1972, report of the Citizens' Advisory Council on the Status of Women: a 20 member group appointed by the President, may be obtained from U.S. Government Printing Office, Washington DC 20402 for 1.25.
- Research Action Notes, published by Resource Center on Sex Roles in Education, National Foundation for the Improvement of Education, Suite 918, 1156-15th St. N.W., Washington DC 20036.
- NOW Feminist Catalog, one dollar per year from Judith Meuli, 1126 HiPoint St, Los Angeles CA 90036, lists posters, buttons and other items of interest.
- "New Legal Remedies for Women," NEA Journal, December 1972.
- "Sex Discrimination in Schools," NEA Journal, November 1971, by Gail T. McLure.
- Institutional Analysis of Sex Discrimination: a Review and Annotated Bibliography by Lora H. Robinson, ERIC Clearinghouse on Higher Education, George Washington University, Suite 630, One Dupont Circle, Washington DC 20036.

I'M OKAY, YOU'RE OKAY

The August 1973 issue of Psychiatry: Journal for the Study of Interpersonal Processes cites findings of a study of women activists which indicates that they are "outgoing, independent, humanitarian and sexually liberated." In describing them (us?) as well-adjusted it says "While acknowledging their need for men, they do not deny their own needs and aspirations, nor undermine those attributes and personal characteristics which run counter to traditional definitions of femininity but on which are founded their self-respect and self-acceptance." Single issues are available for 5 dollars from The William Alanson White Psychiatric Foundation, 1610 New Hampshire, NW, Washington 20009

LEGAL NEWS

Operation Research, Inc., a consulting firm in Silver Spring MD has agreed to pay more than 53,000 in back pay and court costs to women employees in a consent decree in Baltimore U.S. District Court.

In an article in The Chronicle of Higher Education, 1 October 1973, Richard Chait and Andrew Ford see affirmative action regulations as a threat to established tenure practices. "To receive tenure, a faculty member must satisfy minimum eligibility requirements, demonstrate a certain performance level, and reveal adequate potential for growth and development. As traditionally used, all three bases for awarding tenure are in at least potential conflict with affirmative-action guidelines."

The point is that requirements in terms of degrees, rank, experience tend to perpetuate a previously discriminatory situation and do not relate specifically to job performance. In 1971 in Griggs v. Duke Power Company the Supreme Court invalidated a company policy that required for employment and promotion a high-school diploma and a passing score on a general intelligence since neither could manifestly be related to job performance. In a recent lower federal court decision, Armstead v. Starkville Municipal School District, it was held that a school board had unlawfully discriminated against blacks by tying teachers' appointments and retention to the attainment of a master's degree and specified scores on GRE's that had not been validated as accurate predictors of job

performance. Colleges and universities that hope to maintain present practice must be prepared to demonstrate that conventional criteria--i.e., a terminal degree or its equivalent, a given probationary period, and the holding of a particular rank--are manifestly related to job performance. Moreover, they must be able to show that they use meaningful, concrete, non-discriminatory procedures and instruments for evaluating teaching performance. As construed by the Supreme Court in the Griggs case, the Civil Rights Act provides that "practices, procedures, or tests neutral on their face and even neutral in terms of intent, cannot be maintained if they operate to 'freeze' the status quo of prior discriminatory employment practices."

LEGAL REMEDIES

The following orders and laws contain provisions which can be used to assist women whose rights have been violated.

Executive Orders 11375 and 11246 and Revised Order No. 4. EO 11375 became effective on October 13, 1968, amending EO 11246, which barred employment discrimination by federal contractors on the basis of race, color, religion and national origin to include sex. All institutions with federal contracts of over 10,000 are covered on hiring, upgrading, salaries, fringe benefits, training and other conditions of employment for all employees. Private institutions with contracts totaling more than 50,000 and with more than 50 employees must have a written affirmative action plan; public institutions are not required to file affirmative action programs but the Dept of Health, Education and Welfare has insisted that they submit programs outlining plans to combat past discrimination against and underutilization of women and minority persons. To file individual or class complaints contact Division of Higher Education, Office for Civil Rights, Dept of HEW, Washington D.C. 20201. (Note: Revised Order No. 4 sets forth criteria for affirmative action plans for contractors and HEW has issued interpretative guidelines for educational institutions.)

Equal Pay Act of 1963, Extended in 1972. The Equal Pay Act prohibits wage differentials on the basis of sex. Employees in bona fide executive, administrative, and professional positions, including academic, administrative, and teaching personnel in elementary and secondary schools and in colleges and universities are covered under the extension effective 1 July 1972. The Act provides that where men and women are performing equal work on jobs requiring equal skill, effort and responsibility (or substantially equal, whatever that means), and which are performed under similar working conditions in the same establishment, they must be paid equally and receive equal fringe benefits. Contact the Office of the Wage and Hour Division, Employment Standards Administration, Dept of Labor in your locality for further information on the filing of complaints. Anonymity of complainants will be preserved.

Equal Employment Opportunity Act of 1972. This act, signed 24 March 1972, extends the enforcement powers of the Equal Employment Opportunity Commission and the coverage of Title VII of the Civil Rights Act of 1964. Employers of more than 15 persons including public and private educational institutions, state and local governments, employment agencies, and labor organizations, are covered. Discrimination is forbidden under Title VII in hiring, firing, layoff, recall, recruitment, wages and conditions of employment, promotional opportunities, assignment, sick leave, vacation and overtime, insurance and health benefits, retirement or advertising employment preferences based on sex. If the alleged violation occurred in a state or locality which has a fair employment law which is enforceable in a manner similar to Title VII, then charges are automatically deferred for 60 days to the state or local agency. EEOC (or the state agency) investigates charges and if it is unable to secure a conciliation agreement it may bring a civil action in federal court against private employers. In cases involving discrimination by state and local gov employers, the charge is referred to the U.S. Attorney General who must decide

whether to file a suit. In either case the individual or group may bring suit if the EEOC or Attorney General does not. The EEOC revised regulations provide special guidelines on discrimination against married women and policies relating to pregnancy and childbirth, which are printed in full in the Federal Register, XXXVII, No. 66, 5 April 1972, or are available from EEOC or your Congressman or Senator. Complaints may be filed with the Equal Employment Opportunity Commission, 1800 G St., N.W., Washington, D.C. 20506 or Regional EEOC Office.

Title IX of Education Amendments of 1972. Title IX of Education Amendments of 1972, enacted on 23 June 1972, states, "No person in the U.S. shall on the basis of sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program receiving Federal financial assistance." Some institutions are granted exceptions on admissions policies, but otherwise broad coverage is provided for both faculty and students. Guidelines for enforcement should be available shortly. Complaints may be filed with the Division of Higher Education, Office of Civil Rights, Dept of Health, Education and Welfare, Washington, D.C. 20201 or Regional HEW Office.

Note: Complaints may be filed simultaneously with several agencies under the provisions of various laws and orders. Do not, however, expect quick action. Six months to two years is the usual waiting period. Also, investigate the existence of local or state laws which may have additional provisions (e.g., relating to discrimination on the basis of age, or extending to housing). Other sources of information and help: American Association of University Professors (local chapter or One Dupont Circle, Washington D.C. 20036), National Education Association or its state affiliates, American Federation of Teachers, local chapters of NOW or WEAL (Women's Equity Action League), Committee on Academic Freedom, Tenure and Employment Security of the AMS (P.S. Mostert, Univ of Kansas), American Civil Liberties Union.

Since we did not have space in this issue, we shall include the By-laws in the next issue.

ASSOCIATION FOR WOMEN IN MATHEMATICS
MEMBERSHIP APPLICATION

Name _____	New _____
	Renewal _____
Address _____	Individual (2.00) _____
_____	Family (3.00) _____

Position _____ Institutional affiliation, if any _____

Make checks payable to
ASSOCIATION FOR WOMEN IN MATHEMATICS
and mail to Mary Gray

American University
Washington, D.C. 20016

Department of Mathematics