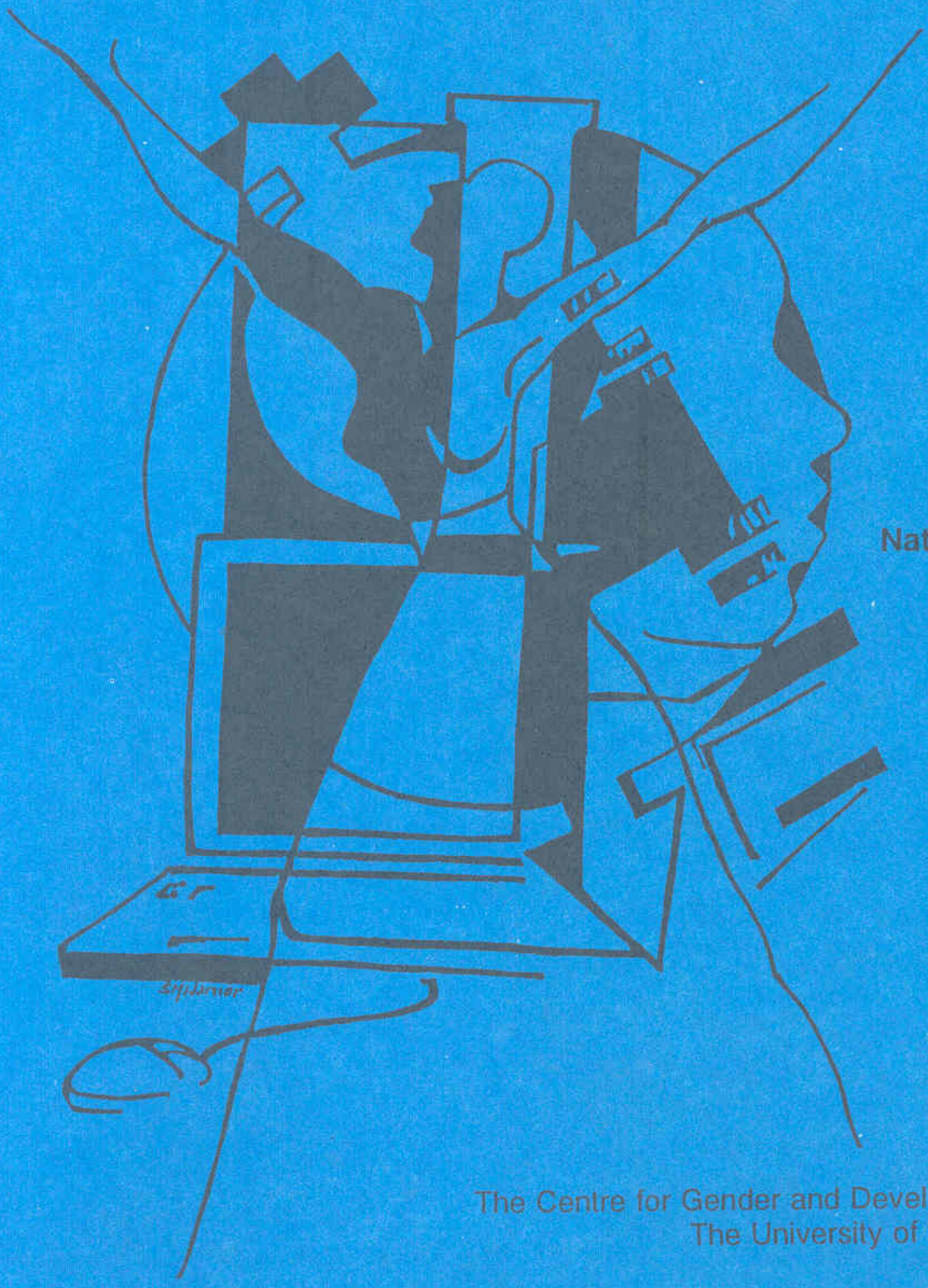
GENDER, SCIENCE & TECHNOLOGY

A BIBLIOGRAPHIC GUIDE
1993-1996



Compiled by

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The Centre for Gender and Development Studies
The University of the West Indies
St. Augustine
Trinidad and Tobago

GENDER, SCIENCE AND TECHNOLOGY

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Publication Date

February 1997

ISBN 976-620-071-8

Cover design by Sheldon Warner

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FOREWORD

The Centre for Gender and Development Studies of the University of the West Indies has identified five areas for research concentration. One of these is the area of Gender, Science and Technology. This is a new and exciting area for us although some preliminary work in this area has already taken place, for example the regional seminar on the same theme which was held on the UWI Mona campus in 1994.

This bibliography is one of a number of occasional bibliographies prepared first by the Women and Development Studies Group and now by the Centre for Gender and Development Studies. It can be seen as a follow-up to the earlier bibliography prepared by Lutishoor Salisbury entitled *Women, Science and Technology* which carried titles available up to 1993. The fact that so many more titles have been published since then is testimony to the vitality of this field of research. Its publication was made possible through a grant from the CIDA/UWI Institutional Strengthening Programme.

Like all the bibliographies published in the Centre, the aim is to provide prospective teachers and researchers with an overview of the available resources. This allows them to identify texts for use in their work and provides an awareness of the issues and debates and the lacunae in the research data.

We hope that this and the other bibliographies will also be useful to libraries and documentation centres as they seek to expand and develop their collections. It should also be remembered that this published collection represents the beginning of a database which is now ready for further development and expansion in various directions. I hope that this annotated bibliography will be useful to you.

Rhoda Reddock
St. Augustine

February, 1997

INTRODUCTION

This bibliography contains 456 references all dated between 1993-1996. It exists both as a printed document, as well as, a CDS/ISIS database at the Centre for Gender and Development Studies.

The references have been organised into 12 sections, some of which, have been further divided into two or more sub-sections. The **general** category contains 165 entries on broad aspects of the gender, science and technology theme. Issues explored include gender equity in the industrial sector and the academic environment. In both realms, there is inequity with respect to employment, salaries and promotion rates among men and women. The records in the **general** category also describe the role of scientific and international organisations in promoting gender equity in science. The records are from many different countries such as those of Europe, North America, Africa and Asia. The literature thus encompasses a cross-cultural perspective on gender, science and technology. Subsections within this large category include the history and philosophy of science which has 23 works demonstrating the feminist epistemological standpoint on science and technology, as well as, the history of women in science. The other two subsections contain biographies of scientists and inventors, in addition to, bibliographic works on gender, science and technology.

Whilst the majority of records fall into the **general** category, two other categories, namely **science education** and **computer science** also have a substantial number of references. The **science education** section contains 69 entries, 35 of which are in a subsection on recruitment and career guidance. This subsection describes measures to encourage and retain women in scientific fields. They include fellowship and summer programmes for college and high school students. The literature also focuses on the use of mentoring programmes, where students interact with successful women who are already well established in a particular scientific field. Many of the programmes described in the literature, have been carried out in the United States, most of

which have been initiated by the National Science Foundation. Descriptions of these programmes and related research have been published in journals such as *AWIS, The Magazine of the Association of Women in Science*, *NWSA Journal*, and *Initiatives, Journal of NAWE*. Gender issues in **science education** also focuses on the difficulties students experience in science classrooms. The records document the different learning styles of the sexes and the lack of gender fairness in textbooks. Gender issues are in fact gaining prominence in education magazines such as *Science Teaching* and *The Education Digest*.

In recent years, there has been an increasing amount of literature on gender issues in the field of **computer science** (80 entries). Issues documented include computer use and access amongst men and women. Problems faced by women in the computing industry such as discrimination and glass ceilings are also described. Subsections include biographies and studies of individuals in computer science, computer science education and online usage. Computer science education focuses on the creation of intervention programmes to encourage girls' participation in computer science. The references in the online usage subsection describe differences in communication styles of the sexes on the internet. There are also references describing cyberspace forums and other internet resources for women. Closely linked to the section on **computer science** is the section on **information technology** (27 entries). This category focuses on the information superhighway and the media.

There is less information on specific subject areas such as **mathematics** (14 entries), **physics** (9) and **chemistry** (5). In these cases, the literature records the lack of women in these fields especially **physics**, and describes intervention strategies to increase the number of female scientists. The references in the **mathematics** category focus less on careers, and more on math learning and understanding. New techniques and strategies to increase girls' understanding and participation in this field are described. The **chemistry** category focuses on women in academic chemistry and demonstrates women's lack of tenure and lower salaries.

Other specific subject areas include **natural, biological and life sciences**

(35 records) and **medical and allied sciences** (27 references). The former category documents the role of women as biologists, ecologists, conservation biologists, primatologists and ichthyologists, the latter showcases gender discrimination and stereotyping in the medical community. Additionally, women's roles as nurses, doctors, veterinarians and physiologists are described.

The category **engineering** (14) entries, showcases the problems faced by women engineers and especially focuses on the role of engineering organisations in assisting women engineers. Organisations include the Society for Women Engineers and the Women in Engineering Programme Advocates Network. Research in this category is published in magazines such as *SWE Magazine.*

The other three categories in the bibliography document gender issues in various technological areas. These include: **reproductive technology** (4 entries), **rural technology** (7) and **entertainment technology** (5).

Generally speaking, there is a large and ever increasing body of information on gender, science and technology. This bibliography whilst not exhaustive, seeks to draw together a comprehensive compilation of research articles in this subject area. From my own position as a female in a scientific environment, the compilation of this bibliography has provided some exposure to contemporary gender issues and concerns in this field, as well as, an alternative perspective on established scientific epistemology. It is my hope that this document will prove useful to other individuals interested in this area and that it will serve as an effective launching pad for the commencement of their research.

ACKNOWLEDGMENTS

This bibliography was made possible through a grant provided by the CIDA/UWI Institutional Strengthening Project. I would also like to thank Dr. Rhoda Reddock, Dr. Grace Sirju-Charran and Ms. Ramona B. Shah for their advice and support. I am also grateful to Ms. Sandra John of UNECLAC for her technical assistance with CDS/ISIS.

GENERAL

*** 1
Aldous, P. 1994. **The Backbreaking Work of Scientist-homemakers**. Science. Vol. 263. 11 March. p.1475.

Germany turns a disapproving eye on women who attempt to make a life outside of children, the kitchen and the church. Women with jobs find they have to choose between having a career and having children. Working women have to contend with schools which have only morning hours and stores which open during working hours. Daycare is also limited. Those women who are able to have both children and a career, rely heavily on support from family members. The situation in Germany is changing however, as programmes are being put in place to assist women with children.

*** 2
Aldous, P. 1994. **Leveling the Playing Field in Stockholm.** Science. Vol. 263. 11 March. p.1482.

In Sweden, there are relatively high numbers of female scientists. At Stockholm University for instance, half of the senior biology faculty are women. The main reason for this phenomenon is the benevolence of the welfare system which allows for subsidized childcare and more than a year's paid leave after childbirth. However, while there are a lot of women in biology programmes, there are still few women in fields such as physics. Additionally, the appointment process for professors is still heavily influenced by the old boys network, thus often excluding women from these positions.

*** 3
Amarasuriya, N. R. 1993. **Science and Technology For Women.** Status of Women (Sri Lanka). March. p.62-74.

*** 4
American Association for the Advancement of Science. 1993. **Science in Africa: Women Leading From Strength.** Report of the forum organized by the American Association for the Advancement of Science. Sub-Saharan African Program. May. Washington DC.

*** 5
Appleton, H. 1995. **Gender and Technology.** Appropriate Technology. Vol. 22. No. 1. June. p.1.

*** 6
Appleton, H. 1994. **Technical Innovation by Women: Implications For Small Enterprises**. Small Enterprise Development. Vol. 5. No. 1. p.4-13.

Presents case studies from Sri Lanka, Peru and Zimbabwe which showcase the value of a gender analysis of technology used in women's small enterprises.

*** 7
Approtech. 1993. **Mainstreaming Women in Science and Technology.** Report of the International Symposium of Women in Science and Technology Development and Transfer, Thailand, July 1992. Asian Alliance of Appropriate Technology Practitioners (Aprotech-Asia) and Women in Science and Engineering Forum of Thailand (WISE-T).

*** 8
Austin, K. 1993. **Increasing Visibility of Women at Scientific Meetings.** AWIS Magazine. Vol. 22. No. 4. July/August. p.10.

*** 9
Barinaga, M. 1994. **Surprises Across the Cultural Divide.** Science. Vol. 263. 11 March. p.1468.

Recent work has suggested that national culture influences women in science. This includes the level of economic development in the country, the status of science, class structure and educational systems. In many developing countries there is a higher

percentage of women in science, than in developed countries. This has been attributed to the fact that in industrialized countries science has been firmly established as a male domain, whereas in newer nations, science has only begun to develop during the twentieth century, when society is more open to women's participation in all areas. Nevertheless women in both developed and developing countries experience similar problems. These include a glass ceiling, as most of the women are concentrated in lower level positions. Additionally many of the women in developing countries are in academic science which has low status and low pay. Men by contrast are found in the more lucrative private corporations.

*** 10

Barinaga, M. 1993. **Is There a Female Style in Science ?** Science. Vol. 260. 16 April. p.384-391.

There have been noted differences in the behaviour of male and female scientists. Women are supportive of their students, they also tend to discourage rivalry amongst them. Male scientists in contrast, are more likely to have their students competing with each other. Male faculty members are also more competitive and they shun collaborative research. The author suggests that competition among males may be linked to the fact that the men view their careers more as a vehicle for financial stability and professional status, than women do.

*** 11

Bazler, J. A. 1993. **Gender Equity in Science Textbooks.** Proteus. Vol. 10. No. 2. Fall. p.39-42.

*** 12

Bell, S. E. 1994. **Translating Science to the People: Updating The New Our Bodies, Ourselves.** Women's Studies International Forum. Vol. 17. No. 1. p.9-18.

*** 13

Benjamin, M. ed. 1993. **A Question of Identity: Women, Science and Literature.** New Brunswick, NJ: Rutgers University Press

Focuses on the literary uses of scientific knowledge to construct gender. Includes pieces by Sylvana Tomaselli, John Mullan, Marie Mulvey Roberts and Londa Schiebinger.

*** 14

Benston, M. L. 1993. **A New Technology But the Same Old Story.** Canadian Women's Studies. Women in Science and Technology: The Legacy of Margaret Benston. Vol. 13. No. 2. Winter. p.68.

*** 15

Birke, L. 1995. **Feminism, Animals, and Science: The Naming of the Shrew**. 167p. London: Taylor & Francis

*** 16

Bloom, L. 1993. **Gender on Ice: American Ideologies of Polar Expeditions.** 163p. Minncapolis: University of Minnesota Press

Bloom shows how race, gender and nationalism combine to construct scientific truths.

*** 17

Board on Science and Technology for International Development (BOSTID). 1994. **Barriers Faced By Developing Country Women Entering Professions in Science and Technology.** Report from the Workshop Sponsored by the Board on Science and Technology for International Development (BOSTID) National Research Council. March. Washington, D.C.

*** 18

Bolarsky, C., Grove, L., Northrop, B., Phillips, M., Myers, F. and Earnest, P. 1995. **Women in Technical/Scientific Professions: Results of Two National Surveys.** IEEE Transaction on Professional Communication. Vol. 38. No. 2. June. p.68-76.

Discusses the results of two national surveys on women in technical and scientific fields. The studies examine women's interpersonal communication styles and the relationship between their professional and personal lives. Results indicate that there is little difference between male and female communication styles in the workplace. Female employees are also changing, in that they are

becoming adept at working in traditionally male dominated organizations.

*** 19

Branhart, A. 1995. **The Science and Technology Labor Market: Changing Expectations.** AWIS Magazine. Vol. 24. No. 4. July/August. p.14.

*** 20

Bryne, E. 1993. **Women and Science: The Snark Syndrome.** 208p. Great Britain: Burgess Science Press.

The Snark Syndrome occurs when an idea is repeated so many times, that it becomes accepted as truth even though the initial assertions were groundless. Eileen Bryne suggests this is the case with respect to women and science. As it has been repeatedly said that females are not as adept in scientific and technological fields, the idea is now widely accepted even though there is no supporting data. This Snark assertion in turn, has lead to the development of inappropriate policies and low numbers of women in these disciplines.

*** 21

Burnell, B. S. 1993. **Technological Change and Women's Work Experience: Alternative Methodological Perspectives.** Wistport, CT: Bergin & Garvey

*** 22

Christiansen-Ruffman, L. 1993. **Community Base and Feminist Vision: The Essential Grounding Science in Women's Community.** Canadian Women's Studies. Women in Science and Technology: The Legacy of Margaret Benston. Vol. 13. No. 2. Winter. p.16.

*** 23

Cockburn, C. and Ormrod, S. 1993. **Gender and Technology in the Making.** 185p. Thousand Oaks, CA: Sage

The author examines the role of gender in shaping technological outcomes using the example of the microwave oven. In the microwave the state-of-the art masculine technology comes in contact with women's technology, that is, cooking.

*** 24

Cockburn, C. and Dilic, R. F. eds. 1994. **Bringing Technology Home: Gender and Technology in a Changing Europe.** Buckingham: Open University Press.

*** 25

Committee on Women in Science and Engineering, National Research Council. 1994. **Women Scientists and Engineers Employed in Industry: Why So Few?: A Report Based on a Conference.** 130p. National Academy Press

*** 26

Condron, L. 1993. **Women and Technology: Feminist Perspectives.** Bulletin of Science, Technology & Society. Vol. 13. No. 3. p.139-141.

*** 27

Culotta, E. 1993. **Women Struggle to Crack the Code of Corporate Culture.** Science. Vol. 260. 16 April. p.398-404.

In the past, most of the women in science have stayed in academia. In recent times however, there are many women graduating with degrees in engineering and related fields, all of which have commercial applications. Subsequently they are entering the industrial sector in a flood. Traditional women's fields such as biology are also becoming increasing industrial. This includes the rapidly growing biotechnology sector. The climate for women in industry ranges from warm to arctic. Women are often more comfortable in younger companies where there is no well established old boys network. Youthful industry and scientific disciplines are particularly woman friendly, as there are fewer existing stereotypes.

*** 28

Davidson, G. and Skidmore, L. C. 1993. **Organizations Encouraging Women in Science and Engineering.** Washington, DC: National Research Council.

*** 29

Davis, F and Steiger, A. 1993. **Feminist Pedagogy in the Physical Sciences.** Montreal: Vanier College

*** 30

Dean, B. A. 1994. **Women, Science and Environmentalism.** [Paper presented at] Women, Politics and Environmental Action: An International Symposium, Moscow, Russia, June 1-3, 1994.

Examines the role of women scientists in environmental organizations in the former USSR.

*** 31

Dennis, P. A. 1995. **Gender, Science and Technology: The Role of Scientific Organizations.** Sistren. Vol. 17. No. 3. p.13.

The institutions in which science and technology are taught, have a significant role to play in encouraging an attitude of critical enquiry regarding scientific phenomenon. This includes the universities and extends to workplaces where the development of scientists must be continued. There must also be steps to increase the number of female scientists in leadership or decision making positions within these institutions.

*** 32

Didion, C. J. 1994. **The Current Climate For Women in Science.** Journal of College Science Teaching. Vol. 23. March/April. p.272-273.

*** 33

Donini, E. 1995. **Feminisms, Contextualization, and Diversity: A Critical Perspective on Science and Development.** Women's Studies International Forum. Vol. 17. No. 2/3. Mar/Jun. p.249-256.

*** 34

Dresselhaus, M. S. 1993. **Barbie Dolls, Math, Science and Women** AWIS Magazine. Vol. 22. No. 2. March/April.

*** 35

Erinsho, S. Y. 1994. **Nigerian Women in Science and Technology.** Gender and Education. Vol. 6. No. 2. p.201-213.

Profiles women in science and technology in Nigeria, including both career women and undergraduate students. The profiles reveal that many of the women came from similar social backgrounds, that is a mother with a high educational level and a father in a scientific field. Additionally they all had a confident and positive attitude towards science.

*** 36

Etzkowitz, H., Kemelgor, C., Neuschatz, M., Uzzi, B. and Alonzo, J. 1994. **The Paradox of Critical Mass For Women in Science.** Science. Vol. 266. October 7. p.51-54.

In any field once a minority group surpasses a certain "critical mass" there is usually a qualitative improvement in conditions for that group. This critical mass is usually fifteen percent of the larger population. With respect to women in scientific fields, the authors found that critical mass only partly improved conditions. Women were still hampered and isolated by organizational structures within departments.

*** 37

Etzkowitz, H., Kemelgor, C., Neuschatz, M. and Uzzi, B. 1994. **Barriers to Women in Academic Science and Engineering.** IN Who Will Do Science? Educating the Next Generation. Edited by W. Pearson and I. Fletcher. Baltimore: John Hopkins University Press.

Describes the experiences of women faculty members in Ph.D. Programmes. The authors focus on the disadvantages experienced by the women during their doctoral training.

*** 38

European Commission. 1993. **Women in Science**, Report of the International Workshop, Brussels, 15-16 February 1993.

*** 39

Gabay, M. 1995. **Women, Science and Technology.** Sistren. Vol. 17. No. 3. p.23.

In the past, women's interaction with science has been mainly through the utilization of applications and techniques for example microwaves, videos and medicines for children. Since the mid-seventies their interaction has evolved. They have exploded onto the job market and are now found in all areas of science and technology.

*** 40

Gattiker, U. ed. 1994. **Women and Technology**.

Berlin: de Gruyter.

*** 41
Gender Working Group of the United Nations Commission on Science and Technology for Development (GWG-UNCSTD). 1995. **Missing Links: Gender in Science and Technology**. IDRC. IT Publications and UNIFEM.

*** 42
Gender Working Group of the United Nations Commission on Science and Technology for Development (GWG-UNCSTD). 1995. **Science and Technology For Sustainable Human Development: The Gender Dimension.** Paper presented for the United Nations Commission on Science and Technology in Development.

*** 43
George, J. M. 1994. **The Interplay of Traditional Science and Traditional Knowledge in the Life of a Rural Woman.** [Paper presented at] Gender, Science & Technology Seminar, Mona, Jamaica, February 23-25.

Documents research done in a village in North East Trinidad. The author examines how traditional practices and beliefs in the village intermingle with conventional science.

*** 44
Ginorio, A. B. 1995. **Warming the Climate For Women in Academic Science**. 38p. Washington, DC: Association of American Colleges and Universities, Program on Status and Education of Women.

*** 45
Grady, P. 1995. **Trends in NIH Support For Women Scientists.** AWIS Magazine. Vol. 24. No. 3. May/ June. p.24.

*** 46
Grint, K. and Gill, R. 1995. **The Gender-Technology Relation: Contemporary Theory and Research.** 216p. London: Taylor & Francis.

*** 47
Groot, Gertjan de and Schrover, M. 1995. **Women Workers and Technological Change in Europe in the Nineteenth and Twentieth Centuries.** 206p. London: Taylor & Francis.

*** 48
Grundy, F. 1994. **What is to be Done? A Feminist Critique of Science, Technology and Computing.** GATES (Greater Access to Technology, Engineering and Science Journal). No. 1. Deakin University, Victoria, Australia.

*** 49
Hanson, S. 1996. **Lost Talent: Women in the Sciences.** Philadelphia: Temple University Press.

*** 50
Harding, S. ed. 1993. **The Racial Economy of Science: Towards a Democratic Future.** Bloomington: Indiana University Press.

Part three addresses gender issues i.e. "Who gets to do science?".

*** 51
Harding, S. and McGregor, E. 1996. **Science By Whom?** IN The Gender Dimension of Science and Technology. World Science Report 1996. Edited by H. Moore. p.303.

The authors describe women's position in science and technology in 1996. Women still do not have equal access to higher education and within formal systems they face many obstacles including discrimination. In the workplace they are hampered by "microinequities" which contribute to a chilly climate.

*** 52
Harding, S. and McGregor, E. 1996. **Science For Whom?** IN The Gender Dimension of Science and Technology. World Science Report 1996. Edited by H. Moore. p.305.

Discusses the applicability of science and technology solutions in solving social issues. The authors suggest that instead of concentrating on providing girls with access to careers in science and

technology, more emphasis should be placed on determining the value of science and technology to the majority of the worlds' peoples. They also suggest that science and technological solutions may be most useful when they are used in association with local knowledge.

*** 53

Howes, R. H and Herzenberg, C. L. 1993. **Women in Weapons Development: The Manhattan Project.** IN Women and the Use of Military Force. Edited by R. H. Howes. and M. R. Stevenson. p.95-110. Boulder, CO: Lynne Reiner.

*** 54

Hubbard, R. 1995. **Profitable Promises: Essays on Women, Science and Health.** 237p. Monroe, ME: Common Courage Press.

*** 55

Hubbard, R. 1993. **Of Genies and Bottles: Technology, Values, and Choices.** Canadian Women's Studies. Women in Science and Technology: The Legacy of Margaret Benston. Vol. 13. No. 2. Winter. p.82.

*** 56

IDRC. 1994. **Gender in Science and Technology For Sustainable and Equitable Development: A Guide to Issues Networks and Initiatives.** Vols. 1 & 2. Ottawa: IDRC.

*** 57

Ives, R. 1995. **Gender Inclusive Science.** Melbourne: Equal Opportunity Unit, University of Melbourne.

*** 58

Kahn, P. 1994. **Turkey: A Prominent Role on a Stage Set by History.** Science. Vol. 263. 11 March. p.1491.

At Bosporus University in Turkey, one third of the physicists and mathematicians are women. Additionally, in the scientific and medical professional workforce there is a higher percentage of women than men. In fact, almost one third of Turkey's scientists are females. The success of women in scientific fields is partly due to strong support from universities, and an educational system which keep girls in science.

*** 59

Kearns, E.V. 1996. **Women Scientists.** Nature. Vol. 381. No. 6580. p.271.

*** 60

Kleinman, H. K. 1993. **NIH Women and Men Scientists Still Not Equal in Pay, Tenure, Promotion and Visibility.** AWIS Magazine. Vol. 22. No. 4. July/Aug. p.8.

*** 61

Lane, N. et al. 1994. **The Rising Tide: A Report on Women in Science, Engineering and Technology.** London: Her Majesty's Stationery Office.

*** 62

Lederman, M. 1993. **Structuring Feminist Science.** Women's Studies International Forum. Vol. 16. No. 6. p.605-613.

*** 63

Lomperis, L. and Stanbury, S. eds. 1993. **Feminist Approaches to the Body in Medieval Literature.** Philadelphia, PA: University of Philadelphia.

*** 64

Lykke, N. and, Braidotti, R. 1996. **Between Monsters, Goddesses and Cyborgs. Feminist Confrontations With Science, Medicine and Cyberspace.** 240p. London: Zed Books

Discusses the socio-cultural implications of recent scientific and technological developments including cyberspace and reproductive technologies.

*** 65

Macpherson, C. 1993. **Women in Scientific Research in Australia: A Case Study.** 87p. Geneva: ILO. Salaried Employees and Professional Workers Branch.

Presents information on female researchers in the Commonwealth Scientific and Industrial

Research Organization, an Australian government agency.

*** 66

Mahood, L. 1993. **Reconstructing Girlhood: Putting "Clever Girls in Science".** Canadian Women's Studies. Women in Science and Technology: The Legacy of Margaret Benston. Vol. 13. No. 2. Winter. p.91.

*** 67

Makhubu, L. P. 1993. **The Potential Strength of African Women in Building Africa's Scientific and Technological Capacity.** Keynote Address, Science in Africa, Women Leading from Strength. Washington, DC: AAAS

*** 68

Makhubu, L. P. 1996. **Women in Science: The Case of Africa.** IN World Science Report 1996. Edited by H. Moore. p.329-333. UNESCO

The promotion of women in science and technological fields is not only an equity issue, but a means of strengthening Africa's scientific capabilities. Most of the women are concentrated in the biological and life sciences, but the author sees this as beneficial to the region in light of pressing problems such as inadequate food production, poor health and environmental degradation.

*** 69

Makhubu, L. P. 1993. **Women Leading From Strength: A Forum Organized by the AAAS Sub-Saharan Africa Program, Washington, DC, May 18, 1993.** 175p. Washington, DC: American Association for the Advancement of Science

Describes the proceedings of the meeting on "Science in Africa". The main issue was women's potential contribution to building the science and technology capacity in Africa. There is a significant under-representation of women in these fields which may be corrected by the revitalization of science and technology education.

*** 70

Mark, H. F. L. 1995. **The Plight of Women in Science Continues.** The Scientist. Vol. 9. No. 18. Nov. 18. p.13.

*** 71

Martin, E. 1996. **The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles.** IN Feminism and Science. Edited by H. Longino and R. Doell. New York: Oxford University Press.

*** 72

McGregor, E. and Harding, S. 1996. **International Players and Initiatives.** IN The Gender Dimension of Science and Technology. World Science Report 1996. Edited by H. Moore. p.336. UNESCO

The authors suggest that international institutions are potentially powerful agents for change. United Nations agencies in particular, have a great potential role in organizing towards issues in gender, science and technology.

*** 73

McGregor, E. and Harding, E. 1996. **The Potential to be Realized.** IN The Gender Dimension of Science and Technology. World Science Report 1996. Edited by H. Moore. p.325.

Outlines the goals for gender equity in science and technology as described by the Gender Working Group of the United Nations Commission on Science and Technology. These goals include basic education and equal opportunities with regards to institutions, policy and decision making.

*** 74

Menzies, H. 1993. **Science Through Her Looking Glass.** Canadian Women's Studies. Women in Science and Technology: The Legacy of Margaret Benston. Vol. 13. No. 2. Winter. p.54.

*** 75

Mitter, S. 1995. **New Technology and Working Women.** Appropriate Technology. Vol. 22. No. 1. June. p.2.

*** 76

Mitter, S. 1995. **What Women Demand of Technology.** New Left Review. Vol.205. p.100- 110.

Argues that new technology can be a powerful vehicle for gender equality.

*** 77

Morgall, J. M. 1993. **Technology Assessment: A Feminist Perspective.** Philadelphia: Temple University Press.

*** 78

Morse, M. 1995. **Women Changing Science: Voices From a Field in Transition.** New York: Insight Books.

*** 79

Mutima, N. 1995. **Women in Science and Technology (WIST): Workshop on Professional Development and Project Formulation.** Discovery and Innovation. Vol. 7. No. 2. June. p.104-106.

*** 80

Nakamura, M. 1994. **Technology Change and Female Labour in Japan**. 217p. United Nations.

*** 81

Ney, C. 1995. **Feminist Visions: Humor in a Science Video?** Feminist Collections. Vol. 17. No. 1. Fall. p.12.

*** 82

Ng Choon Sim, C. and Hensman, R. 1994. **Science and Technology: Friends or Enemies of Women?** Journal of Gender Studies.Vol. 3. No. 3. p.277- 287.

*** 83

NSF. 1993. **93-22 National Conference on Diversity in the Scientific and Technological Workforce.** NSF Directorate for Education and Human Resources. June. Arlington, VA: National Science Foundation.

*** 84

NSF. 1993. 93-126 **Activities for Women and Girls in Science, Engineering and Mathematics. NSF Directorate for Education and Human Resources.** October, Arlington, VA: National Science Foundation.

*** 85

NSF 1994. 94-333 **Women, Minorities and Persons with Disabilities in Science & Engineering.** 404p. November. Arlington, VA: National Science Foundation.

Describes the status of groups under-represented in science and engineering including women, minorities and persons with disabilities. For minority groups, under-representation in these fields can be linked to a lack of exposure to advanced classes. For females however, it is their general attitude which is the crucial factor. Girls are less confident of their ability and less interested in science and engineering. Their attitudes in turn can be linked to family and societal biases as well as a lack of role models.

*** 86

Oglov, V.and Ching, H. 1993. **Voices of Women on Science.** Canadian Women's Studies. Women in Science and Technology: The Legacy of Margaret Benston. Vol. 13. No. 2. Winter. p.48.

*** 87

Osborn, M. 1994. **Status and Prospects of Women in Science in Europe.** Science. Vol. 263. 11 March. p.1389.

*** 88

Paulin, K. and Gwen, J. 1995. **The Scientific Con. Broadsheet.** No. 205. Autumn. p.46.

Presents a feminist perspective on the abuse of scientific research.

*** 89

Pena, D. G. **The Terror of Machine: Technology, Work, Gender and Ecology on the U.S.-Mexico Border**. Monroe, ME: Common Courage Press.

*** 90

Preston, A. E. 1994. **Why Have All the Women Gone? A Study of the Exit of Women From the Science and Engineering Professions.** The American Economic Review. Vol. 84. No. 5. p.1446-62.

*** 91

Ramasubban, R. 1996. **Women in Science: the Case of India.** IN World Science Report 1996. Edited by H. Moore. p.334-335. UNESCO.

India has a large number of scientific and technical personnel. Women are making progress in these areas but there is still a long way to go before their expectations are equal to those of their male colleagues. Female scientists face a myriad of problems including family commitments. They also tend to be stuck in low level positions for long periods of time.

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Rose, H. 1994. **Love, Power, and Knowledge: Towards a Feminist Transformation of the Sciences.** Indiana UP: Bloomington.

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Rosser, S. V. 1993. **Diversity Among Scientists-Inclusive Curriculum-Improved Science: An Upward Spiral.** Initiatives. Journal of NAWE. Vol. 55. No. 2. p.11.

The author describes how changes in curriculum and teaching techniques can lead to a different composition in the pool of scientists who will hold modified theoretical perspectives on science. This modification may in turn further change the curriculum and teaching techniques, ultimately ending up with a community of scientists representing the diversity of races, classes and genders.

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Schlesinger, S. 1994. **Women Scientists in Vietnam.** AWIS Magazine. Vol. 23. No. 1. January/February. p.10.

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Science. 1993. **Special Section on Women in Science 93- Gender and Culture**. Vol. 260. p.383-430.

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Science. 1994. **Special Section on Women in Science 1994- Comparison Across Cultures.** Science. Vol. 263. 11 March. p.1467-96.

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Sharma, K. 1994. **India: Is Overcoming "Diffidence" the Route to Success?** Science. Vol. 263. 11 March. p.1495.

In India, there is a professional organization for women in science. In its many years of existence however, there has not been a case of gender discrimination brought before it. The author blames this on the diffidence which exists within the female scientific community. She believes this must be overcome if the myriad of problems faced by women scientists are to be resolved.

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Sibley, D. 1995. **Gender, Science, Politics and Geographies of the City**. Gender, Place and Culture. A Journal of Feminist Geography. Vol. 2. No. 1. p.37-50.

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Sonnert, G. and Holton, G. 1995. **Gender Equity in Science: Still an Elusive Goal.** Issues in Science and Technology. Vol. 12. Winter. p.53-58.

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Sonnert, G. and Holton, G. 1996. **Gender Equity.** Issues in Science and Technology. Vol. 12. Spring.

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Stabile, C. A. 1994. **Feminism and the Technological Fix.** 185p. Manchester: Manchester University Press

Discusses genetic engineering, reproductive technology, virtual reality and other related technologies. The author shows how these cutting edge technologies affect the way we perceive our bodies and how they influence the concepts of self and gender. She also discusses issues such as ecofeminism and cyborg politics.

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Stine, D. D. 1995. **Women on the U.S. Congress Science Committees.** AWIS Magazine. Vol. 24. No. 3. May/June. p.8.

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Suchman, L. 1994. **Supporting Articulation**

Work: Aspects of a Feminist Practice of Technology Production. IN A-57 1994 Proceedings of the IFIP TC9/WG9.1 Fifth International Conference on Women, Work and Computerization: Breaking Old Boundaries-Building New Forms, Manchester, UK, Jul. 2-5, 1994. p.7-21. London: Chapman & Hall.

The author suggests that articulation work is important in system design consistent with feminist analyses.

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Suite, W. and Taylor, G. B. 1994. **Women in Agriculture, Food and Engineering: Challenges, Perceptions and Strategies.** [Paper presented at] Gender, Science & Technology Seminar, Mona, Jamaica, February 23-25.

Reviews the involvement of Trinidadian women in three science based economic fields that is agriculture, food processing and engineering. In particular, the study focuses on employment patterns and the role and function of women. Some of the challenges faced by women are outlined and strategies to cope with them are discussed.

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Sundin, E. 1996. **Gender, Technology and Local Culture: Tradition and Transition in a Swedish Municipality.** Gender, Place and Culture. Vol. 3. No. 1. p.61-76.

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Talapessy, L. ed. 1993. **The Position of Women in Scientific Research Within the European Community: Report of the Commission of the European Communities.** Brussels, Belgium: Directorate General for Science, Research and Development.

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Tilghman, S. M. 1993. **Science vs. Women- A Radical Solution.** AWIS Magazine. Vol. 22. No. 3. May/June. p.10.

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Tuana, N. 1993. **The Less Noble Sex: Scientific, Religious and Philosophical Conceptions of Women's Nature.** Bloomington: Indiana University Press.

Discusses the Western view of women as inferior human beings.

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Tuana, N. **Forum: Feminism and Science.** NWSA Journal. Vol. 5. No. 1. 1993. p.56-64.

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UNIFEM.1993. **Women, Science and Technology: New Visions for the 21st Century Report** of the Expert Group Meeting New York, 14-18 December.

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UNIFEM. 1994. **Review of UN Agency Activities in the Field of Gender, Science and Technology, June 1994.** UNIFEM.

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UNIFEM. 1993. **The Rising Tide: A Report on Women in Science, Engineering and Technology,** HMSO.

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United Nations Commission on Science, Gender Working Group. 1995. **Missing Links: Gender Equity in Science and Technology for Development.** 371p. Ottawa, Canada: International Development Research Centre (IDRC)

Consists of a series of essays done by authors in various fields. Each author discusses the issues of gender, science and technology in their particular field, focusing on the impact of technological change on the lives of men and women. The chapters deal mainly with cases in developing countries, however there is some mention of related issues in the developed world. The book also discusses environmental issues from a gender perspective including sustainable and equitable development, indigenous knowledge and energy planning for development. Other issues highlighted, include women in small and medium-sized enterprises and the overall education and empowerment of women.

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Vitug, M. D. 1994. **The Philippines: Fighting the Patriarchy in Growing Numbers.** Science. Vol. 263. 11 March. p.1491.

In the Philippines there is a strong machismo culture which is reinforced by Catholicism. Women in scientific fields are faced with the general perception that women should stay at home. In spite of this, women are branching out into traditionally male dominated scientific fields. At the high school level as well, girls are catching up in the science subjects. It was also noted that while women are gaining ground in the academic science they are being kept out of industry as large corporations prefer to hire men. The perceived biological role of women reduces their marketability in private sectors.

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Wagner, I. 1994. **Connecting Communities of Practise: Feminism, Science and Technology.** Women Studies International Forum. Vol. 17. No. 2/3. p.257-265.

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Wallander, D. 1993. **A Science Career and a Family Too- There are Options.** AWIS Magazine. Vol. 22. No. 3. May/June. p.8.

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Webster, J. 1994. **Gender and Technology at Work: 15 Years on.** p.311-324. London: Chapman & Hall Ltd.

Workplace technology has been introduced into offices since about the late 1970's. The author describes research into workplace technology, focusing on its impact on gendered divisions of labour and gender relations as a whole. She also discusses how workplace technology has been shaped by gender.

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Wickramasinghe, A. 1993. **Women and Indigenous Technology.** Canadian Women's Studies. Women in Science and Technology: The Legacy of Margaret Benston. Vol. 13. No. 2. Winter. p.59.

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Bindocci, C. G. 1993. **Women and Technology: An Annotated Bibliography**. New York: Garland.

Includes works on the relationship of women to food and agricultural technology, communications, ecology, engineering, architecture and industrial work.

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Ebben, M. and Mastronardi, M. 1993. **Women and Information Technology: An Annotated Bibliography.** IN Women, Information Technology, and Scholarship. Edited by J. H. Taylor, C. Kramarae. and M. Ebben. Urbana, IL: Women, Information Technology, and Scholarship Colloquium, Center for Advanced Study.

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Malanchuk, O. 1993. **Women in Mathematics and Physics: Annotated Bibliography.** Ann Arbor: Centre for the Education of Women, Dept. of Mathematics and Dept. of Physics, University of Michigan.

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Ogilive, M. B. 1995. **Women and Science: An Annotated Bibliography**. New York: Garland.

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Prestwidge, K. J. 1994. **Women in Science, Engineering and Health Professions: A Bibliography.** Oberlin, OH: NASA Central Operation of Resources for Educators.

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Weisbard, P. H. and Apple, R. D. eds. 1993. **The History of Women and Science, Health, and Technology: A Bibliographic Guide to the Professions and the Disciplines. 2nd ed.** Madison: University of Wisconsin Women's Studies Librarian.

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Yarrison-Rice, J. M. 1995. **On the Problem of Making Science Attractive for Women and**

Minorities. An Annotated Bibliography. American Journal of Physics. Vol. 63. March. p.203-211.

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Zanish, T. L. 1995. **Archives of Women in Science and Engineering.** Feminist Collections. Vol. 16. No. 3. Spring. p.14.

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Bailey, M. J. 1994. **American Women in Science: A Biographical Dictionary.** Santa Barbara, Ca: ABC-CLIO.

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Balka, E. 1993. **Cappuccino, Community and Technology: Technology in the Everyday life of Margaret Benston.** Canadian Women's Studies. Women in Science and Technology: The Legacy of Margaret Benston. Vol. 13. No. 2. Winter. p.62.

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Eversley, S. 1995. **A True Renaissance Women: Lilia Abron, Ph.D., P.E.** AWIS Magazine. Vol. 24. No. 4. July/Aug. p.10.

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Gallop, N. 1993. **Science is Women's Work: Photos and Biographies of American Women in the Sciences.** Windsor, CA: National Women's History Project.

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Grinstein, L. S., Rose, R. K. and Rafailovich, M. H. 1993. **Women in Chemistry and Physics : A Biobibliographic Source Book.** Wesport, CT: Greenwood Press

Presents biographies of seventy-five chemists and physicists. Each biography is accompanied by a bibliography on the individual and her work.

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Horning, B. 1993. **The Controversial Career of Evelyn Fox Keller.** Technology Review. Vol. 96. Jan. p.58-68.

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Johnson, W. 1995. **A Short Account of Some Women in Mathematics, Engineering and Astronomy.** Acta Mechanica Sinica. Vol. 11. No. 3. p.284.

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Koblitz, A. H. 1993. **A Convergence of Lives-Sofia Kovalevskaia: Scientist, Writer, Revolutionary.** New Brunswick: Rutgers University Press.

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Logan, G. B. 1994. **The Desire to Contribute: An Eighteenth-century Italian Woman of Science.** The American Historical Review. Vol. 99. June. p.785-812.

Laura Maria Caterina Bassi (1711-1778) was an eighteenth-century Italian scientist who contributed greatly to the scientific community of Bologna. The author suggests that Bassi's success was in part, due to the support of men who encouraged the active participation of women in science.

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McGrayne, S. B. 1993. **Nobel Prize Women in Science: Their Lives, Struggles, and Momentous Discoveries.** New York: Birch Lane Press.

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Moussa, F. 1995. **Inventive Women from the Philippines and Selected Developing Countries.** Geneva, Switzerland: IFIA

Documents the lives and activities of eleven Filipinas and eleven women from other countries.

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Rossiter, M. W. 1995. **Women Scientists in America: Before Affirmative Action, 1940-1972.** Baltimore: John Hopkins University Press.

Discusses the history of American women scientists from the time of World War II and beyond.

The author describes the scientists' contributions to their fields and their confrontations with patriarchal structures.

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Sonnert, G., and Holton, G. **Who Succeeds in Science? The Gender Dimension.** 1995. New Brunswick: Rutgers University Press

Presents the life histories of ten men and ten women in scientific fields.

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Stanley, A. 1993. **Mothers and Daughters of Invention: Notes for a Revised History of Technology.** 1,116p. Metuchen, NJ: Scarecrow Press.

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Yount, L. 1994. **Contemporary Women Scientists.** New York: Facts on File.

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Yount, L. 1996. **Twentieth-Century Women Scientists.** New York: Facts on File.

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Abir-Am, P. G. 1996. **Women in Modern Scientific Research.** IN The Gender Dimension of Science and Technology. World Science Report 1996. Edited by H. Moore. p.348.

Describes the involvement of women in scientific research from the seventeenth to the twentieth century. The author notes that women's participation in science has varied throughout history. In the seventeenth century there were a fair number of females in scientific research, but their numbers dwindled in the eighteenth century. The twentieth century had only a few pioneers such as Marie Curie and Lise Meitner, up until the 1970's, where affirmative legislation encouraged many more women to enter scientific fields. In the 1980's the under-representation of women in science became a matter of national priority in many countries. Even so, women are still concentrated in the observational sciences such as botany and astronomy.

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Barinaga, M. 1993. **Feminists Find Gender Everywhere in Science.** Science. Vol. 260. 16 April. p.392-393.

The author suggests that cultural perspective influences one's perception, thus, there may be no such thing as value free science.

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De Marco, R. et al. 1993. **Feminist Critique: Searching for Meaning in Research.** ANS, Advances in Nursing Science. Vol. 16. No. 2. p.26-38.

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Epstein, V. **History of Women in Science for Young People.** Denver, CO: VSE Publisher

The author describes the history of women in science in a manner suitable for pre-schoolers to 5th-grade students.

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Gay, H. 1993. **Saving the Phenomena and Saving Conventions: A Contribution to the Debate Over Feminist Epistemology.** Canadian Women's Studies. Women in Science and Technology: The Legacy of Margaret Benston. Vol. 13. No. 2. Winter. p.37.

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Gorham, G. 1995 **The Concept of Truth in Feminist Sciences.** Hypatia. Vol. 10. No. 3. p.99-116.

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Gross, B. R. 1994. **What Could a Feminist Science Be?** IN Thematic issue on Feminist Epistemology. The Monist. Vol. 77. No. 4. Oct. p.433-444.

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Hubbard, R. and Wald, E. 1993. **Exploding the Gene Myth.** Boston: Beacon

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Jordanova, L. 1993. **Gender and Historiography of Science.** The British Journal for the History of Science. Vol. 26. No. 91. p.469-483.

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Keller, E. F. and Longino, H. E. eds. 1996. **Feminism and Science.** New York: Oxford University Press.

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Longino, H. 1993. **Subjects, Power, and Knowledge: Description and Prescription in Feminist Philosophies of Science.** IN Feminist Epistemologies. Edited by L. Alcoff and E. Potter. New York: Routledge.

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Lorrigan, G. 1995. **Science- Whose Knowledge?** Broadsheet. No. 205. Autumn. p.24.

The author discusses the reasons why many women shun science.

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McCaughey, M. 1993. **Redirecting Feminist Critiques of Science.** Hypatia. Vol. 8. No. 4. p.72-82.

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Nelson, J. and Nelson, L. H. 1994. **No Rush to Judgment.** IN Thematic issue on feminist Epistemology. The Monist. Vol. 77. No. 4. October. p.486-508.

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Nelson, L. H. 1995. **A Feminist Naturalized Philosophy of Science.** Synthese. Vol. 104. No. 3. September. p.399-422.

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Pinnick, C. L. 1994. **Feminist Epistemology: Implications for Philosophy of Science.** Philosophy of Science. Vol. 61. No. 4. Dec. p.646-658.

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Rose, H. 1994. **A Feminist Science?** New Statesman and Society. Vol. 7. No. 302. May 13. p.29-30.

Discusses the application of feminist values to science.

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Rose, H. 1994. **Alternative Knowledge Systems in Science: Can Feminism Re-Build the Sciences?** Keynote address at the Gender, Science and Technology Seminar. University of the West Indies, Kingston: February 23-25th 1994. 23p.

The paper looks at the radical science movement of the 1960's and 1970's which struggled against racist, sexist, militarized and polluting science. The author notes that the growing body of feminist scholarship developed partly in cooperation with, then partly against the androcentric voice of the radical science movement. Many women do in fact believe that modern science and technology often serve to dominate women instead of facilitating their liberation.

*** 161
Shepard, L. J. 1993. **Lifting the Veil: the Feminine Face of Science.** Boston: Shambala

Showcases the feminist perspective on science. The author chronicles the development of science including the work of seventeenth century scientists such as Bacon and Francis. These scientists advocated a reductionist view of science which sought to dominate and control nature. Feminists by contrast, suggest a humble approach to nature. They believe that research can be based on a love of nature rather than a desire to control it. The author believes that feminist insights can also draw attention to values and ethics in scientific fields. Ethical factors are essential as the author suggests that knowledge for the sake of knowledge is not sensible in that one must consider the consequences of a particular avenue of research.

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Soble, A. 1994. **Gender, Objectivity, and Realism.** IN Thematic issue on Feminist Epistemology. The Monist. Vol. 77. No. 4. October. p.509-530.

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Steinberg, D. L. 1994. **Power, Positionality and Epistemology: Towards an Anti Oppressive Feminist Standpiont Approach to Science, Medicine and Technology.** Women: A Cultural Review. Vol. 5. No. 3. p.295-307.

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Stengers, I. **From Describing Falling Bodies to Understanding People: What is Scientific Objectivity? Metamorphoses of Science: Feminism and Shifts of Paradigms.** Working Paper No. 7, Feminist Research Network, Gender-Nature-Culture. Odense University, Denmark.

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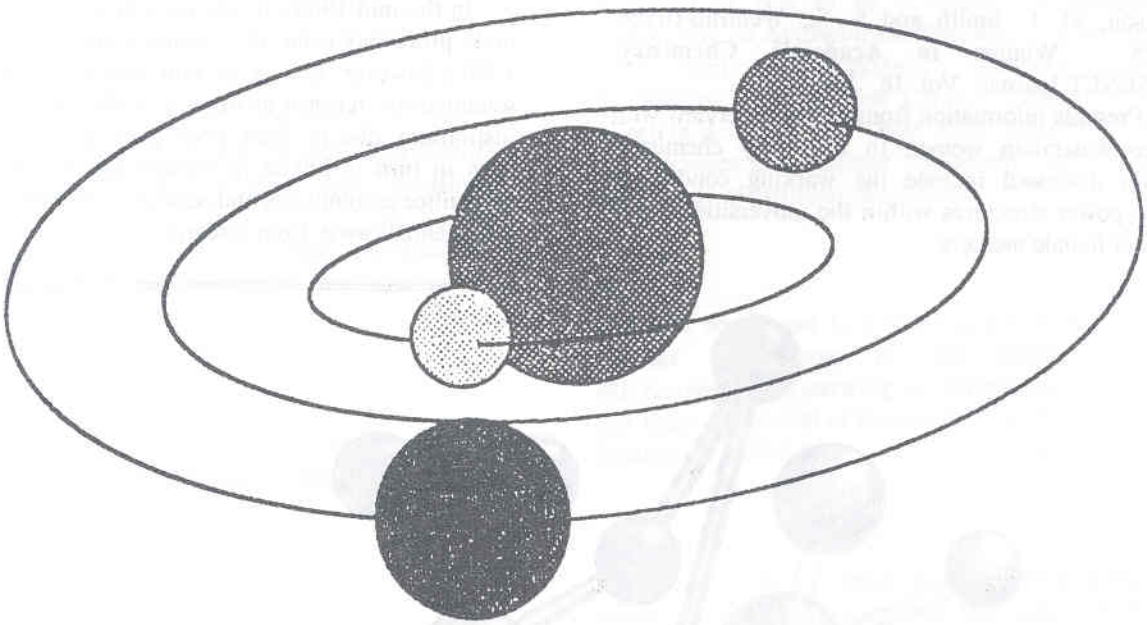
Tuana, N. 1995. **The Value of Science: Empiricism From a Feminist Perspective.** Synthese. Vol. 104. No. 3. Sept. p.441.



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Adam, A. 1993. **Gendered Knowledge: Epistemology and Artificial Intelligence.** AI and Society. Vol. 7. p.311-322.

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Adam, A. 1995. **Embodying Knowledge: A Feminist Critique of Artificial Intelligence.** European Journal of Women's Studies. Vol. 2. No. 3. August. p.355-377.

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Adam, A. 1994. **Who Knows How? Who Knows That? Feminist Epistemology and Artificial Intelligence.** IN Women, Work and Computerization: Breaking Old Boundaries, Building New Forms. Edited by A. Adam et al. p.143-156. New York: Elsevier.

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Astone, M. K. 1995. **Gender Stereotyping of Computing.** Ph.D. Dissertation, Auburn University. 122p.

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Benavides, M. 1993. **Excerpt from "Reflections, Perspectives and Challenges for the South on Computer Technology and Human Services in the 1990's: A Feminist Position".** Computers In Human Services. Vol. 9. No. 1-2. p.9-15.

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Breene, L. A.1993. **Women and Computer Science.** Initiatives: Journal of NAWE. Vol. 55. No. 2. May. p.39-44.

Discusses issues concerning women in computer science education, the problems they encounter in the workplaces, sexual stereotyping by software designers and the sexual bias in computer science curriculum. The author concludes that the computing environment has not improved for women over the last two decades. She however thinks that progress will come in time as there is a lot of research being done, and a lot of myths are being debunked.

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Cooper, C. and van Dam, K. 1994. **To Be (Certain) or Not to be (Certain): A Feminist Perspective on Artificial Intelligence.** IN Women, Work and Computerization: Breaking Old Boundaries, Building New Forms. Edited by A. Alison et al. p.157-169. New York: Elsevier.

.Discusses how feminist philosophy might relate to the study of artificial intelligence.

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D'Amico, M., Baron, L. J. and Sissons, M. E. 1995. **Gender Differences in Attributions About Microcomputer Learning in Elementary School.** Sex Role. A Journal of Research. Vol. 33. No. 5/6. September. p.353-386.

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Debare, I. 1996. **Women in Computing: Logged on or Left out?** A Sacramento Bee Special Report. Jan. 21.

Profiles women online and in the computer industry. Also discusses girls' use of video games and their involvement in computing.

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Dholakia, R. R. 1994. **Putting a Byte in the Gender Gap: Men Use Home Computers More**

than Women Do, But Women May Have Greater Potential. American Demographics. Vol. 16. No. 12. December.

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Flack, D. ed. 1994. **Open Computing.** Vol. 11. No. 12. December.
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Fryer, B. 1994. **Breaking Into the Men's Club.** Open computing. Vol. 11. No. 12. Dec. p.35.
Discusses why there are few women in high positions in the information sciences.

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Fryer, B. 1996. **What It Takes.** Women in Computing. No. 2. p.7-11.
Suggest strategies for breaking the glass ceiling in computing.

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Gaio, F. J. 1995. **Women in Software Programming: The Experience of Brazil.** IN Women Encounter Technology: Changing Patterns of Employment in the Third World. Edited by S. Mitter and S. Rowbotham. p.205-232. New York: Routledge .

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Grundy, F. 1994. **Women in the Computing Workplace: Some Impressions.** IN Women Work and Computerization: Breaking Old Boundaries, Building New Forms. Edited by A. Adam et al. p.349-363. New York: Elsevier.

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Hapnes, T. and Sorensen, K. H. 1995. **Competition and Collaboration in Male Shaping of Computing: A Study of a Norwegian Hacker Culture**. IN The Gender Technology Relation: Contemporary Theory and Research. Edited by K. Grint and R. Gill. p.174-191. Briston, PA: Taylor & Francis.

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Kantrowitz, B. 1994. **Men, Women and Computers.** Newsweek. Vol. 123. May 16. p.48-52.
Showcases a gender gap in the way men and women use computers.

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Katsikides, S. and Pohl, M. 1994. **Dichotomous Thinking, Women, and Technology.** p.35-43. London: Chapman & Hall. Ltd.
Examines gender differences in attitudes and performance with respect to computer systems.

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Kerner, J. T. and Vargas, K. 1994. **Woman and Computers: What We Can Learn From Science.** SIGSE Bulletin. Vol. 26. No. 2. June 1. p.52-56.

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Klawe, M. and Leveson, N. 1995. **Women in Computing.Where Are We Now?** Communications of the ACM. Vol. 38. No. 1. January. p.29-35.
Discusses problems faced by women in computing, such as, their difficulties in obtaining funding. The author suggests that one possible solution is the development of a community of helpers to assist women in problematic situations.

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Lehman, S. 1994. **I Dreamed I Had a Computer Just Like the Kids: Access to Computing for the Older Woman.** IN Women, Work and Computerization: Breaking Old Boundaries, Building New Forms. Edited by A. Adams et al. p.269-276. New York: Elsevier.
Describes the experiences of older women in computer use and learning.

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Markussen, P. 1995. **Constructing Easiness: Historical Easiness: Historical Perspectives on Work, Computerization and Women**. IN The Cultures of Computing. Edited by S. L. Star. Cambridge, MA: Blackwell.

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Michaelson, G. 1994. **Women & Men in Computer Cartoons from PUNCH: 1946-1982.** IN Women, Work and Computerization: Breaking Old Boundaries, Building New Forms. Edited by A. Adam et al. p.171-184. New York: Elsevier.

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Milic, A. 1994. **Women Technology and Societal Failure in Former Yugoslavia.** IN Bringing Technology Home: Gender and Technology in a Changing Europe. Edited by C. Cockburn and R. F. Dilic. p.147-164. Philadelphia: Open University Press.

Discusses the devaluing of women's work in the former Yugoslavia, focusing on rural housewives and computer engineers.

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Includes statistics on the percentage of female students and percentage of female graduates.

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Newman. L. S., Cooper, J. and Ruble, D. N. 1995. **Gender and Computers. II. The Interactive Effects of Knowledge and Constancy on Gender-Stereotyped Attitudes.** Sex Roles. A Journal of Research. Vol. 33. No. 5/6. September. p.325-352.

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Oechtering, V. and Behnke, R. 1995. **Situations and Advancement Measures in Germany.** Communications of the ACM. Vol. 38. No. 1. Jan. p.75-82.

The paper looks at women in computing in Germany, examining such issues as women's presence in this field, the integration of a women's group into professional society and women's advancement at universities. Other issues include professional training and childcare.

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Pearl, A. ed. 1995. **Women in Computing.** Communications of the ACM. Vol. 38. No. 1. January. p.26.

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Perenson, M. J. et al. 1994. **What Do Women Want? : Software for Women and Girls.** PC Magazines. Vol. 13. No. 19. November 8.

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Shade, L. R. 1993. **Gender Issues in Computer Networking.** [Paper presented at Community Networking: the International Free-Net Conference, Carleton University, Ottawa, Canada, August 17-19, 1993.

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Sonnetag, S. 1994. **Team Leading in Software Development: A Comparison Between Men and Women.** IN A-57 1994 Proceedings of the IFIP TC9/WG9.1 Fifth International Conference on Women, Work and Computerization: Breaking Old Boundaries- Building New Forms, Manchester, UK, Jul. 2-5, 1994. p.379-391. London: Chapman & Hall..

Examines the work situation of male and female team leaders in software development. It was noted that there were differences in work activities between men and women, but no differences in terms of psychology and well being. In terms of team leadership, women were well represented as subteam leaders but under-represented as team leaders.

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Spennemann, D. H. R. 1995. **Gender Imbalances in Computer Access Among Environmental Science Students.** Charles Sturt University: School of Environmental and Information Sciences

A study at Charles Sturt University revealed that women with low economic standing are at a disadvantage because of their lack of access to computers. Whilst younger female students are more likely to own computers than their more mature female counterparts, their computers are slower, hand-me down models. Male students by contrast had more effective, dependable machines.

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Sutton, L. **Gender, Power, and Silencing in Electronic Discourse on USENET.** IN Proceedings of the 20th Berkeley Linguistics Society. UC Berkeley.

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Truckle, S. and Papert, S. 1994. **Epistemological Pluralism: Styles and Voices within the Computer Culture.** SIGNS. Vol. 16. No. 1. Fall. p.128-157.

BIOGRAPHIES AND STUDIES OF INDIVIDUALS

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Borg, A., Whitney, T. 1995. **The Grace Hopper Celebration.** Communications of the ACM.Vol. 38. No. 1. January. p.50.

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Borg, A. 1995. **Grace Hopper Celebration of Women in Computing.** IEEE Annals of the History of Computing. Vol. 17. No. 1. Spring. p.57.

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Fryer, B. and Simpson, R. 1994. **The Top One Hundred Women in Computing.** Open Computing. Vol. 11. No. 12. December. p.47.

Provides biographies of top women in information services and computing.

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Gurer, D. W. 1995. **Pioneering Women in Computer Science.** Communications of the ACM. Vol. 38. No. 1. Jan. p.45-54.

Includes information on Augusta Ada Byron Lovelace and Grace Murray Hopper.

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Hafner, K. 1993. **Woman, Computer Nerd-- and Proud.** New York Times. August 29. p.1-4.

Presents biographical information on Stephanie Winner, Ellen Spertus and Megan Smith.

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Hausman, L. F. 1995. **Early Women in Computing.** Communications of the ACM. Vol. 38. No. 4. April. p.13.

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Lee, J.A.N. 1994. **Unforgettable Grace Hopper.** Reader's Digest. October. p.181.

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Markoff, J. 1994. **Reprogramming the Hacker Elite.** New York Times. January 2. Sec 3: p.6.

Presents biographical information on Donna Auguste who helped create Apple Computer's Newton System.

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Nebeker, F. 1993. **Thelma Estrin, Biomedical Engineer: A Pioneer of Applied Computing.** Proceedings of the IEEE. Vol. 81. No. 10. October. p.1370-1382.

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Perusek, A. M. 1994. **Hopper Inducted in National Women's Hall. of Fame.** Society of Women Engineers Magazine. Nov./Dec.

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Sutherland, H. 1995. **Pioneers in Computing.** Sistren. Vol. 17. No. 3. p.16-17.

Profiles two successful Jamaican women in the field of computing. The women are: Vilma Gregory the Executive Chairman of Vilcomm Services International and Lorna Green, the President of Digital Transtec Limited.

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Clariana, R. B. and Schultz, C. W. 1993. **Gender by Content Achievement Differences in Computer-based Instruction.** Journal of Computers in Mathematics and Science Teaching. Vol. 12. No. 3-4. p.277-288.

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Daniels, J. Z. 1994. **Expanding the Pipeline-**

Programs Target Women, Girls. Computer Researching News. Vol. 6. No. 3. May.

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Downey, L. L. 1995. **Announcing a New List: The WCAR List.** Communications of the ACM. Vol. 38. No. 1. January. p.43-44.

Lists colleges and universities which have programmes for encouraging women in computer science.

*** 221

Eastman, C. M. 1995. **Accommodating Diversity in Computer Science Education.** IN Teaching the Majority: Breaking the Gender Barrier in Science Mathematics and Engineering. Edited by S. V. Rosser. p.160-168. New York: Teachers College Press.

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Elliott, A. 1993. **Effects of Gender on Preschoolers' Play and Learning in LOGO Environments.** Journal of Computing in Childhood Education. Vol. 4. No. 2. p.103-124.

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Epstein, S. L. 1993. **Anatomy of a Course: Program Keys in Success for Women and Minorities.** Liberal Education. Vol. 79. Summer. p.44-50.

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Francis, J. 1993. **Measuring Attitude Toward Computers Among Undergraduate College Students: The Affective Domain.** Computers & Education. Vol. 20. No. 3. April. p.251-255.

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Grignon, J. R. 1993. **Computer Experience of Menominee Indian Students: Gender Differences in Coursework and Use of Software.** Journal of American Indian Education. Vol. 32. May. p.1-15.

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Hesse-Biber, S. and Gilbert, M. K. 1994. **Closing the Technological Gender Gap: Feminist Pedagogy in the Computer-assisted Classroom.** Teaching Sociology. Vol. 22. January. p.19-31.

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Howell, K. 1993. **The Experience of Women in Undergraduate Computer Science: What Does the Research Say?** SIGSE Bulletin. Vol. 25. No. 2. June 1. p.1-8.

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Lancaster, A. and Smith, B. 1994. **Potential Contributions of Cooperative Education to the Retention of Women in Computer Science.** Computer Science Education. Vol. 5 . No. 1. p.85-101.

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Makrakis, V. 1993. **Gender and Computing in Schools in Japan: The "We can, I can't Paradox".** Computers and Education. Vol. 20. March. p.191-198.

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Martin, D. C. and Heller, R. S. 1994. **Bringing Young Minority Women to Computers and Science: Developing Intervention Programmes That Work.** GATES: Greater Access to Technology, Engineering and Science Journal No. 1. p.1.

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Moses, L. E. 1993. **Our Computer Science Classrooms: Are They Friendly to Female Students.** SIGCSE Bulletin. Vol. 25. No. 3. p.3-12.

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O'Rourke, J. 1993. **Mentor Projects Target Female Undergrads.** Computing Research News. Vol. 5. No. 4. September. p.3-5.

*** 233

Pfleeger, S. L. and Mentz, N. 1995. **Executive Mentoring: What Makes it Work?** Communications of the ACM. Vol. 38. No. 1. Jan. p.63-73.

Showcases the results of an executive mentoring programme. Mentoring has been cited as important

in attracting and keeping women and minorities in computer science. It has been suggested that mentors from senior level positions, if paired with middle level women and minorities, these groups will have better chances of breaking through corporate glass ceilings.

ONLINE USAGE

*** 234
Austin-Smith, B. 1995. **Boys, Toys and the Net.** Herizons. Women's News & Feminist Views. Vol. 9. No. 3. Fall. p.18.

*** 235
Balsamo, A. 1994. **Feminism for the Incurably Informed.** IN Flame Wars: The Discourse of Cyberculture. Edited by M. Dery. p.125-156. Durham, NC: Duke University Press.

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Balsamo, A. 1996. **Technologies of the Gendered Body: Reading Cyborg Women.** New York: Duke University Press.

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Bogstad, J. M. 1995. **Women and the Internet at the NGO Forum for the Fourth World Conference on the Status of Women.** Feminist Collections. A Quarterly of Women's Studies Resources. Vol. 17. No. 1. Fall. p.13-15.

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Bromley, H. 1995. **Gender Dynamics Online: What's New about the New Communication Technologies?** Feminist Collections. Vol. 16. No. 2. Winter p.16-19.

*** 239
Enger, N. 1994. **Help is Where you Find it.** Open Computing. Vol. 11. No. 12. p.62.

Discusses cyberspace forums for women such as: Systers, ECHO and Women's Wire. Through these forums women help and support each other.

*** 240
Flynn, B. 1994. **Women/Machine Relationships: Investigating the Body within CyberCulture.** Media Information Australia Vol. 72. May. p.11-19.

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Freeman, E. and Hupfer, S. 1995. **TAP - Taping Internet Resources for Women in Computer Science.** Communications of the ACM. Vol. 38. No. 1. January. p.44.

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Kome, P. 1995. **Virtual Sisterhood: Women of the Net.** Herizons. Women's News and Feminist Views. Vol. 9. No. 3. Fall. p.15.

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Senjen, R. and Guthrey, J. 1996. **The Internet for Women.** Spinnifex Press

The authors discuss the use of the most common Internet services and provide the information needed to get Internet access. This is done in a simple format which can be used by both seasoned users and novices alike. The book also covers topics such as: pornography, sexual harassment, gender issues, anonymity, privacy and security on the Internet. Also included is information on pioneering women in computer fields, as well as a collection of Internet resources useful to women.

*** 244
Shade, L. R. and We, G. 1993. **The Gender of Cyberspace.**Internet Business Journal. Vol. 1.No. 1.

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Sherman, A. 1995. **Debunking the Myths That Keep Women Offline.** Ms. Vol. VI. No. 1. July/August. p.26.

*** 246
Spender, D. 1995. **Nattering on the Net: Women, Power and Cyberspace.** Spinifex Canada: Garamond Press.

Discusses the way men and women think about and use computers. The author suggests that the new technology can help women

through the creation of a " virtual sisterhood". She does however also note the problems faced by women on the Internet such as new forms of sexual harassment and "data rape".

*** 247

Truong, H. 1993. **Gender Issues in Online Communications.** [Paper presented at] The Third Conference on Computers, Freedom, and Privacy. March 1993, Burlingame, CA.

*** 248

van der Ploeg, I. and van Wingerden, I. 1995. **Celebrating the Cyborg? On the Fate of a Beautiful Metaphor in Later Users' Hands.** European Journal of Women's Studies. Vol. 2. No. 3. August. p.397-400.

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We, G. 1993. **Cross Gender Communication in Cyberspace.** Graduate research paper, Dept. of Communication, Simon Fraser University, April 1993.

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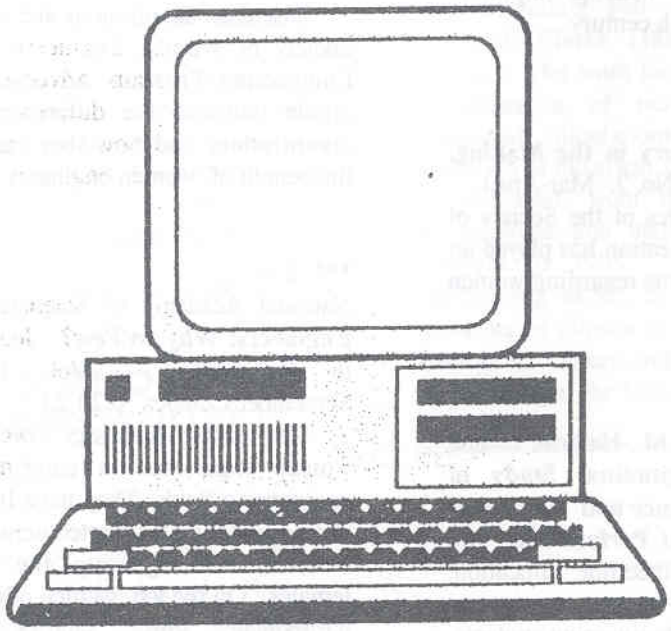
Weisbard, P. H. 1995. **Web-ster Definitions: A Quick Introduction to the World Wide Web and Women.** Feminist Collections. Vol. 16. No. 2. Winter. p.26.



ENGINEERING

*** 251

Church, J. 1995. **Job Prospects for Women Engineers.** Women's Issue: Graduating Engineer. Feb.

Graduating women engineers benefit from equitable starting salaries.

*** 252

Daniels, J. Z. 1995. **Organizations, Conferences, Publications and Funding for Women in Engineering: A Historic Review.** 4p. SWE Magazine. Vol. 41 No. 2. Mar-Apr.

Describes useful resources for women in engineering including sources of funding, conferences, publications and organizations. The author notes that whilst these resources for women engineers have only come into being in recent times, women engineers have been making important contributions since about the 19th century.

*** 253

Eng, P. L. 1995. **SWE History in the Making.** 4p. SWE Magazine. Vol. 42. No. 2. Mar-April.

Describes the recent activities of the Society of Women Engineers. This organization has played an integral part in reshaping opinions regarding women engineers.

*** 254

Felder, R., Felder, G., Mauney, M., Hamrin, C. and Dietz, J. 1995. **A Longitudinal Study of Engineering Student Performance and Retention: Gender Differences in Student Performance and Attitudes.** Journal of Engineering Education. April. p.151-163.

Examines male and female engineering students, looking at their approaches to course work and how they deal with academic difficulties. Women show more anxiety about their course work and school in general. Regarding their academic performance, female students tended to blame poor performance on a lack of ability whereas men attributed this to a lack of hard work or unfair treatment.

*** 255

Geppart, L. 1995. **Uphill Struggle No Rose Garden for Women in Engineering.** IEEE Spectrum. Vol. 32. No. 5. May. p.40-50.

Discusses reasons why women shun careers in engineering.

*** 256

Kvande, E. and Rasmussen, B. 1995. **Women's Careers in Static and Dynamic Organizations.** Acta Sociologica. Vol. 38. No. 2. p.115-130.

*** 257

Maslanik, M. K. 1995. **WEPPAN and SWE: A Model of Teamwork.** SWE Magazine. Vol. 41. No. 2. Mar-April. p.26-27.

Discusses the missions and responsibilities of the Society of Women Engineers and the Women in Engineering Program Advocates Network. The article indicates the differences between the two organizations and how they can work together for the benefit of women engineers.

*** 258

National Academy of Sciences. 1994. **Women Engineers: Why So Few?** Journal of Management in Engineering. Vol. 10. No. ME5. September/October. p.20-23.

The article discusses some of the problems women experience in entering and working in engineering fields. They have limited access to jobs as traditional male oriented networks are used to hire workers, thus ignoring the available qualified females. On the job, women often experience sexual harassment, lower salaries and paternalism. Recently however, some companies have established programmes for the effective recruitment and retention of female employees. Key elements of these progammes include chief executive support, flexible work schedules and parental leave programs.

*** 259

Perusek, A. M and Baldwin, K. 1995. **Curtiss-Wright Engineering Cadettes.** SWE Magazine. Vol. 41. No. 2. Mar-Apr. p.28-30.

In 1943-1944 less than 1000 Curtis-Wright cadettes were recruited and trained in engineering fields associated with the design of military aircraft. The author tells the story of these cadettes highlighting their contribution during World War Two.

*** 260

Pursell, C. W. 1993. **Am I a Lady or an Engineer? The Origins of the Women's Engineering Society in Britain 1918-1940.** Technology and Culture. Vol. 34. No. 1. January. p.78-97.

*** 261

Wadsworth, E. M. 1993. **Women's Activities and Women Engineers: Expansions Over Time.** Initiatives. Journal of NAWE. Vol. 55. No. 2. p.59-65.

Traces the changes in sequence, scope and support of women's activities and correlates this with the number of enrollments and degrees for women engineers. Activities such as women oriented engineering programmes increase the overall percentage of women receiving engineering degrees.

BIOGRAPHIES AND STUDIES OF INDIVIDUALS

*** 262

Baylor S. J. and Swoboda, A. 1995. **Women Who Made a Difference.** Technological Bridges Magazine of the Society of Women Engineers, (SWE). March/April. p.16-20.

The authors discusses the lives and careers of Ada Lovelace, Mary Engle Pennington, Rosalind Franklin, and Grace Hopper.

*** 263

Gabay, M. 1995. **The Softer Side of Engineering: Ana Treasure.** Sistren. Vol. 17. No. 3. p.14.

Profiles Ana Treasure, a civil engineer at the National Water Commission in Jamaica. Treasure was born in Panama and studied in England for a Masters degree in Water and Waste water management. She has deeply rooted convictions about the role of women in the development of the third world. She also believes that women are just as capable as their male counterparts in engineering and that women can be independent, and capable professionals without losing their femininity.

*** 264

Gunsen, A. 1994. **Looking Back: Edith Clarke.** IEEE Potentials. Feb.

Edith Clarke (1883-1959) was an electrical engineer. Her work focused on the development and dissemination of mathematical methods which simplified calculations used in the design and operation of electrical power systems. She was born in Maryland, went to Vassar College to study mathematics and astronomy and graduated with honours in 1908. She earned her electrical engineering M.Sc., at MIT in 1919. She was a professor of physics at the Constantinople Women's College in Turkey and also a professor of electrical engineering at the University of Texas, Austin.

ENTERTAINMENT TECHNOLOGY

*** 265

Balka, E. 1995. **Risk, Recreation, Gender, Technology and Empowerment: Reflections of Life on the Rocks.** Canadian Woman Studies. Vol. 15. No. 4. Fall. p.42.

*** 266

Chaika, M. 1995. **Ethical Considerations in Gender-Oriented Entertainment Technology.** Crossroads (ACM Student Magazine). Vol. 2. No. 2. Nov.

Girls and boys have different perceptions of computers. Girls see them as tools to be used in word-processing. Boys regard computers as playful, recreational toys. These perceptions are due in part, to entertainment software which is male oriented. Computer games are violent, graphic and are largely based on warfare. While some girls play these games and may enjoy them, there are few games designed with females in mind. The author suggests that if games become more geared towards girls, they would begin to enjoy computers. This in turn may encourage the girls to pursue computer related careers.

*** 267

Duclayan, G. 1995. **Game Girls.** Seventeen. Vol. 54. January. p.38-39.

Describes the interaction of young girls with video games.

*** 268

Gailey, C. W. 1993. **Mediated Messages: Gender, Class, and Cosmos in Home Video Games.** Journal of Popular Culture. Vol. 27. Summer. p.81-97.

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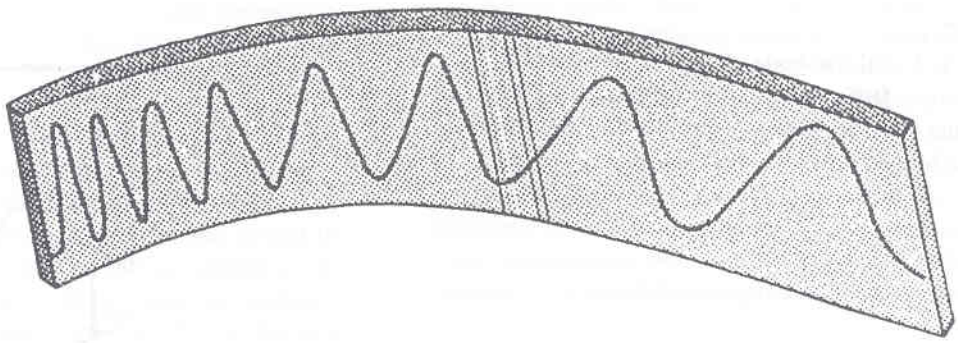
Jacobs, K. 1994. **Robo Babes (Why Girls Play Less Video Games Than Boys).** I.D. Vol. 41. No. 3. May/June.



INFORMATION TECHNOLOGY

*** 270
Adam, A. and Bruce, M. 1993. **The Expert Systems Debate: A Gender Perspective.** IN Gendered by Design? Information Technology and Office Systems. Edited by E. Green et al. p.81-92. Washington: Taylor and Francis.

*** 271
Alloo, F. 1995. **Using Information Technology as a Mobilizing Force: The Case of the Tanzania Media Women's Association (TAMWA).** IN Women Encounter Technology: Changing Patterns of Employment in the Third World. Edited by S. Mitter. and S. Rowbotham. p.303-313. New York: Routledge in association with the United Nations University Press.

*** 272
Birkenes, T. 1994. **Feminist Approach to Design of Computer Systems Supporting Co-operative Work- the Troublesome Issue of Co-operation Seen From a Woman's Perspective.** IN A-57 1994 Proceedings of the IFIP TC9/WG9.1 Fifth International Conference on Women, Work and Computerization: Breaking Old Boundaries-Building New Forms, Manchester, UK, Jul. 2-5, 1994. p.75-89. London: Chapman & Hall..

Discusses how gender may be considered crucial to the design of computer systems using selected theory from critical pedagogy and feminist research.

*** 273
Borg, A. 1994. **Women Defining Technology for the 21st Century: A Report From America.** IN Women, Work and Computerization: Breaking Old Boundaries, Building New Forms. Edited by A. Adam et al. p.231-238. New York: Elsevier.

*** 274
Chakravarty, P. 1994. **Santa Barbara As Salvation? : Women in India and the Information Revolution.** Feminist Voices. Vol. 7. No. 2. March 5- April 7. p.7.

*** 275
Cole, A. et al. 1994. **Information Technology and Gender: Problems and Proposals.** Gender and Education. Vol. 6. No. 1. p.77-85.

Describes gender bias in favour of males at secondary level information teaching in Scotland.

*** 276
Creedon, P.J. ed. 1994. **Women, Media and Sport.** 368p. Sage Publications.

Links feminism, sport and media theory.

*** 277
Crutzen, C. K. M. 1994. **Influence of Feminist Theory on Informatics Course Design.** IN A-57 1994 Proceedings of the IFIP TC9/WG9.1 Fifth International Conference on Women, Work and Computerization: Breaking Old Boundaries-Building New Forms, Manchester, UK, Jul. 2-5, 1994. p.59-73. London: Chapman & Hall.

*** 278
Damarin, S. K. 1993. **Technologies of the Individual: Women and Subjectivity in the Age of Information.** IN Technology and Feminism. Edited by J. Rothschild and F. Ferre. p.183-198. Greenwich, CT: Jai Press.

*** 279
Damarin, S. K. 1993. **Where is Women's Knowledge in the Age of Information.** IN The Knowledge Explosion: Generations of Feminist Scholarship. Edited by C. Kramarae and D. Spender. p.362-370. New York: Harvester Wheatsheaf.

*** 280

Douglas, S. 1995. **Where the Girls Are: Growing Up Female With the Mass Media.** 348p. New York: Random House.

*** 281

Ebben, M. and Kramarae, C. 1993. **Women and Information Technologies: Creating a Cyberspace of Our Own.** IN Women, Technology and Scholarship. Edited by J. Taylor., C. Kramarae and M. Ebben. p.15-27. Urbana, IL: Women Information Technology Scholarship and Colloquium. Centre for Advanced Study. University of Illinois.

Describes access to, training and educational use of new technologies.

*** 282

Fothergill, A. 1994. **Telework: Women's Experiences and the Utilization of Information Technology in the Home.** IN A-57 1994 Proceedings of the IFIP TC9/WG9.1 Fifth International Conference on Women, Work and Computerization: Breaking Old Boundaries-Building New Forms, Manchester, UK, Jul. 2-5, 1994. p.333-347. London: Chapman & Hall.

The author describes research done on teleworkers and their families. Research subjects worked mainly at home using information technology/telecommunications. All had live in partners but only some of them had children. The information obtained from interviews was examined from a gender perspective, focusing on female teleworkers experiences of working at home.

*** 283

Fryer, B. 1994. **Sex & the Superhighway.** Working Woman. Vol. 19. April. p.51-54.

*** 284

Green, E. , Owen, J. and Pain, D. eds. 1993. **Gendered by Design? Information Technology and Office Systems.** 218p. London: Taylor and Francis.

*** 285

Green, E. 1994. **Gender Perspectives, Office Systems and Organizational Change.** IN A-57 1994 Proceedings of the IFIP TC9/WG9.1 Fifth International Conference on Women, Work and Computerization: Breaking Old Boundaries-Building New Forms, Manchester, UK, Jul. 2-5, 1994. p .365-377. London: Chapman & Hall.

The paper addresses the relationship between gender, information technology and the process of organizational change. It also examines the potential impact of feminist perspectives on the gendered social relations of information technology.

*** 286

Gunter, K. 1994. **Women and the Information Revolution Washed Ashore by the Third Wave.** IN A-57 1994 Proceedings of the IFIP TC9/WG9.1 Fifth International Conference on Women, Work and Computerization: Breaking Old Boundaries-Building New Forms, Manchester, UK, Jul. 2-5, 1994. p.439-452. London: Chapman & Hall.

Describes the effects of the information and industrial revolution on the lives of women.

*** 287

Henwood, F. 1993. **Establishing Gender Perspectives on Information Technology: Problems, Issues and Opportunities.** IN Gendered By Design? Information Technology and Office Systems. Edited by E. Green et al. p.31-49. Washington, DC: Taylor & Francis.

Describes the technological skills of women working in the field of information technology.

*** 288

Holtgrewe, U. 1994. **Everyday Experts? Professionals' Women Assistants and Information Technology.** IN A-57 1994 Proceedings of the IFIP TC9/WG9.1 Fifth International Conference on Women, Work and Computerization: Breaking Old Boundaries- Building New Forms, Manchester, UK, Jul. 2-5, 1994. p.121-128. London: Chapman & Hall.

Many women assistants working as legal secretaries or in doctors consulting-rooms encounter information technology on a daily basis. In many cases there is no professional expertise available, so they have had to learn about the new technologies in an informal manner. The author suggests that in this way, the women have become informal experts on office information technology.

*** 289

Kramarae, C. and Taylor, H. J. 1993. **Women and Men on Electronic Networks: A Conversation or a Monologue?** IN Women, Information Technology and Scholarship. Edited by J. H. Taylor., C. Kramarae and M. Ebben p.52-61. Urbana, IL: Women, Information Technology and Scholarship Colloquium. Center for Advanced Study, University of Illinois.

*** 290

Light, J. S. 1995. **The Digital Landscape: New Space for Women?** Gender, Place and Culture: A Journal of Feminist Geography. Vol. 2. No. 2. p.133-146.

Describes women's relationship with information technology. The author suggests that bulletin boards, online conferences and other forms of computer communications can be used to emphasize women's issues.

*** 291

Mederith, H. ed. 1994. **Women in Technology: Technological Change-Impact of Information Technology.** Belconnen, ACT: National Information .Technology Council

Discusses the history of women in computing in Australia.

*** 292

Murray, F. **1993. A Separate Reality: Science, Technology and Masculinity.** IN Gendered By Design? Information Technology and Office Systems. Edited by E. Green et al. p.64-80. Washington, DC: Taylor & Francis.

*** 293

Odedra-Straub, M. **Women and Information Technology in Sub Saharan Africa. A Topic For Discussion.** IN Women Encounter Technology: Changing Patterns of Employment in the Third World. Edited by S. Mitter and S. Rowbotham. p.256-277. New York: Routledge.

*** 294

Perez- Victoria, S. ed. **1994. Impact of Communication Technologies on Women.** p.48. Paris: UNESCO.

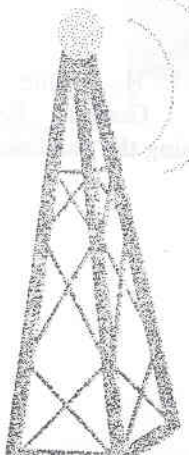
*** 295

Shapiro, G. 1994. **Informal Processes and Women's Careers in Information Technology Management.** IN A-57 1994 Proceedings of the IFIP TC9/WG9.1 Fifth International Conference on Women, Work and Computerization: Breaking Old Boundaries- Building New Forms, Manchester, UK, Jul. 2-5, 1994. p.423-437. London: Chapman & Hall.

Examines the gender technology debate, focusing on women in information technology management.

*** 296

Taylor, H. J., Kramarae, C. and Ebben, M. eds. 1993. **Women, Information Technology and Scholarship.** Urbana IL: Women, Information Technology and Scholarship Colloquium. Centre for Advanced Study, University of Illinois.



MATHEMATICS

*** 297

Burton, L. 1995. **Moving Towards a Feminist Epistemology of Mathematics.** Educational Studies in Mathematics. Vol. 28. No. 3. p.275-291.

*** 298

Chapman, O. 1993. **Women's Voice and the Learning of Mathematics.** Journal of Gender Studies. Vol. 2. No. 2. Nov. p.206-222.

*** 299

Gill, J. 1994. **Shedding Some New Light on Old Truths: Student Attitudes to School in Terms of Year, Level and Gender.** [Paper presented at the] Annual meeting of the American Educational Research Association, New Orleans, LA, April 4-9, 1994.

Middle school and high school girls have negative attitudes towards math. A study done on Australian schools indicates that this is irrespective of the type of schools the girls attended, be it a co-educational or single sex school. The study also suggests that separating boys and girls during math instruction does not improve girls' attitudes towards the subject.

*** 300

Jones, L. and Smart, T. 1995. **Confidence and Mathematics: A Gender Issue.** Gender and Education. Vol. 7. No. 2. June. p.157.

*** 301

Kalinowski, J and Buerk, D. 1995. **Enhancing Women's Mathematical Competence.** National Women's Studies Association (NWSA) Journal. Vol. 7. No. 2. Summer. p.1-17.

*** 302

Lewis, J. S. 1995. **Princess of Parallelograms and Her Daughter: Math and Gender in the 19th Century English Aristocracy.** Women Studies International Forum. Vol. 18. p.387-394.

*** 303

Morrow, C. and Morrow, J. 1993. **Whose Math is It, Anyway? Giving Girls a Chance to Take Charge of their Math Learning.** Initiatives. A Journal of NAWE. Special Issue: Gender Equity in Math and Science (Part 2). Vol. 55. No. 3. p.49-60.

Describes the structure of the Summer Math Programme at Mount Holyoke College. This programme addresses deficiencies in young women's math education, emphasizing conceptual understanding of mathematics rather than memorization of formulas. Students explore solutions through visual representations and discussion of problems. The success of the programme relies on these new approaches to existing material.

*** 304

Oaks, A. 1993. **Empowering Women in Mathematics.** Initiatives: Journal of NAWE. Vol. 55. No. 2. p.31.

Examines the reasons why bright women do not do math including the difficulties they encounter on a day to day basis. It is suggested that the main problem is women's conception of mathematics as a prepackaged set of instructions to be followed exactly. The author suggests that this does not promote conceptual understanding. Women must be discouraged from memorization of mathematical formulas and instead discover the meaning of mathematics.

*** 305

Parker, L. H., Rennie, L. J. and Fraser, B. eds. 1995. **Gender, Science & Mathematics: Shortening the Shadow.** Norwell, MA: Klewer.

*** 306

Parker, M. ed. 1995. **She Does Math! Real-life Problems From Women on the Job.** The Mathematical Association of America.

The careers of 38 professional women are discussed, emphasis being placed on their use of math on the job. Each case study describes the math courses taken by the women in high school and college.

*** 307

Swetman, D. 1995. **Rural Elementary Students' Attitudes Toward Mathematics.** 20-22. Rural Educator. Vol. 16. No. 3. Spring.

Girls initially have more positive attitude towards maths than boys, but as they grow older their attitudes become more negative.

*** 308

Tobias, S. 1993. **Overcoming Math Anxiety: Revised and Expanded.** 260p. New York: W.W. Norton

Includes a chapter on how society influences women, such that, most of them avoid math.

BIOGRAPHIES AND STUDIES OF INDIVIDUALS

*** 309

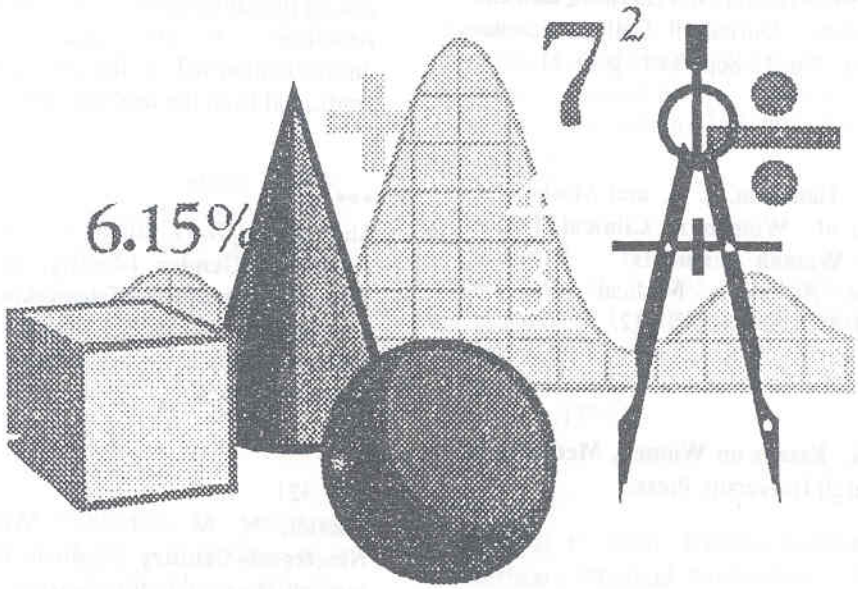
Dzielska, M. 1995. **Hypatia of Alexandria.** 157p. Cambridge: Harvard University Press

The book describes the life of Hypatia, a mathematician and neoplatonist who lived in Alexandria. She was murdered by a mob of Christians in 415.

*** 310

Whitman, B. S. 1993. **An American Woman in Gottingen.** The Mathematical Intelligencer. Vol. 15. Winter. p.60-62.

Profiles Mary Frances Wilson, a nineteenth century mathematics student.



MEDICAL AND ALLIED SCIENCES

*** 311
Aziz, F. A. 1994. **Education and the Professionals: Some Aspects of Innovation in Medical Education Adopted by Ahfad University for Women.** The Ahfad Journal. Women and Change. Vol. 11. No. 2. December. p.33-40.

*** 312
Bell, S. E. 1995. **Gendered Medical Science: Producing a Drug for Women.** Feminist Studies. Vol. 21. No. 3. Fall. p.469-500.

Describes the links between transformations in medical science and cultural ideas about women.

*** 313
Bickel, J. 1995. **Women in U.S. Academic Medicine: 1994 Status Report.** AWIS Magazine. Vol. 24. No. 2. March/April. p.6.

*** 314
Conley, F. K. 1994. **Gender Stereotyping and the Medical Profession.** Journal of College Science Teaching. Vol. 24. No. 1. Sept./Oct. p.17-21.

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Jensvold, M. F. , Hamilton, J. A. and Mackey, B. 1994. **Inclusion of Women in Clinical Trials: How about the Woman Scientists?** JAMWA. Journal of the American Medical Women's Association. Vol. 49. July. p.110-112.

*** 316
Oakley, A. 1994. **Essays on Women, Medicine & Health.** Edinburgh University Press.

*** 317
Riska, E. and Weger, K. 1993. **Gender, Work and Medicine.** Newbury Park: Sage.

*** 318
Rosser, S. V. 1994. **Gender Bias in Clinical Research: The Differences in Clinical Research.** IN Reframing Women's Health. Edited by A. J. Dan. p.253-265. Thousand Oaks, CA: Sage.

*** 319
Scott, A. K. 1995. **Gender Discrimination in the Medical Community.** Update. Vol. 11. No. 2. Loma Linda University.

This paper discusses problems encountered by females in the medical community. The author cites case studies where female medical students have been sexually harassed by their male colleagues and other cases where female physicians have been harassed by their patients. Female physicians and patients have also been discriminated against by the male dominated medical community. For example, women with coronary diseases are less likely to receive state of the art medical treatment than men are. The author does note however, that in the United States, there is now increased awareness of gender discrimination in medical circles. Under the American Health Security Act, gender discrimination will perhaps be addressed and in time eradicated from the medical community.

*** 320
Shervington, D. O., Bland, I. J. and Myers, A. 1996. **Ethnicity, Gender Identity, Stress and Coping among Female African-American Medical Students.** JAMWA. Journal of the American Medical Women's Association. Vol. 51. No. 4. August/October. p.153.

*** 321
Theriot, N. M. 1993. **Women's Voices in Nineteenth-Century Medical Discourse: A Step toward Deconstructing Science.** Signs. Vol. 19. No. 1. p.1-31.

Suggests that nineteenth century medical discourse is the site of competing definitions of gender and science. The author discusses this statement looking in particular at medical texts on women's nervousness and mental illness.

*** 322
Wilson, L. 1993. **Women and Medicine in the French Enlightenment: The Debate Over Maladies Des Femmes.** Baltimore, MD: Johns Hopkins University Press.

*** 323
Zambrana, R. E. 1996. **The Under-representation of Hispanic Women in the Health Professions.** JAMWA. Journal of the American Medical Women's Association. Vol. 51. No. 4. August/October. p.147.

Hispanic women are severely under-represented in the health professions. The paper examines the factors which contribute to this phenomenon, and presents recommendations to overcome the barriers faced by these women.

NURSING

*** 324
D'Antonio, P. 1993. **The Legacy of Domesticity: Nursing in Early Nineteenth-Century America.** Nursing History Review 1. p.229-246.

*** 325
Fisher, S. 1995. **Nursing Wounds: Nurse Practitioners, Doctors, Women Patients, and the Negotiation of Meaning.** 275p. New Brunswick, NJ: Rutgers University Press.

PHYSIOLOGY

*** 326
Appel, T. A. 1994. **Physiology in American Women's Colleges: The Rise and Decline of a Female Subculture.** Isis. Vol. 85. March. p.26-56.

Examines physiology as a female subculture focusing on its teaching and research at five American women's colleges.

*** 327
Bindman, L., Brading, A. and Tansey, T. eds. 1993. **Women Physiologists**. 166p. London: Portland Press.

Discusses the work of physiologists such as Sybil Cooper, Martha Louise Vogt and Brenda Muriel Schofield.

*** 328
Carey, H. V. 1993. **Women in Physiology Mentoring Program.** The Physiologist. Vol. 36. No. 1. February. p.1.

VETERINARY SCIENCE

*** 329
Dixon, G., Thornley, D., Coward, T., Brown, E., Esterling, A. and Cheetham, J. 1995. **Jobs For Women.** Veterinary Record. Vol. 137. No. 23. Dec. 2. p.599.

*** 330
Gehrke, B. C. 1995. **The Information Exchange-Employment of 1995 Graduates of U.S. Veterinary Medical Colleges: Analysis by Gender.** Journal of the American Veterinary Medical Association. Vol. 207. No. 12. Dec. 15. p.1559-1561.

*** 331
Gehrke, B. C. 1995. **Employment of 1994 Graduates of U.S. Veterinary Medical Colleges, Analysis by Gender.** Journal of the American Veterinary Medical Association. Vol. 206. No. 2. Jan. 15. p.177-186.

*** 332
Gehrke, B. C. 1996. **Gender Redistribution in the Veterinary Medical Profession.** Journal of the American Veterinary Medical Association. Vol. 208. No. 8. April 15. p.1254-1262.

NATURAL, BIOLOGICAL AND LIFE SCIENCES

*** 333
Angus, S. 1995. **Women in Natural Resources: Stimulating Thinking About Motivations and Needs.** Wildlife Society Bulletin. Vol. 23. No. 4. Winter. p.579-582.

*** 334
Biermann, C. A. and Grinstein, L. S. 1995. **Despite the Odds: Women Biologists Who Succeed.** The American Biology Teacher. Vol. 56. No. 8. Nov./Dec. p.468-476.

The author suggests that to attract women to science successful women scientists for instance women biologists should be studied. Attracting women to scientific fields can also be furthered if attention is paid to teaching styles

*** 335
Birke, L. and Hubbard, R. eds. 1995. **Reinventing Biology: Respect for Life and the Creation of Knowledge.** 291p. Bloomington: Indiana University Press.

*** 336
Brown, P. S. 1994. **Early Women Ichthyologists.** Environmental Biology of Fishes. Vol. 41. No. 1-4. p.9.

*** 337
Fabrizio, M. 1994. **Gender Issues in the Workplace. [Women as Fisheries Scientists].** Fisheries. Vol. 19. October. p.17-18.

*** 338
Fedigan, L. M. 1994. **Science and the Successful Female: Why There are so many Women Primatologists.** American Anthropologist. Vol. 96. No. 3. Sept. p.529-541.

*** 339
Katterman, L. 1996. **Women Still Rarely Named to fill Top Posts at Life Science Journals.** The Scientist. Vol. 10. No. 5. March 4. p.1.

*** 340
Kormondy, E. J. 1995. **More on Women Biologists Who Succeed.** American Biology Teacher. Vol. 57. No. 4. April.

*** 341
Lewontin, R. C. 1994. **Women Versus the Biologists.** New York Review of Books. Vol. 41. April 7. p.31-35.

*** 342
Lipscomb, D. 1995. **Women in Systematics. Annual Review of Ecology and Systematics.** Vol. 26. p.323-342.

*** 343
Longino, H. and Doell, R. 1996. **Body, Bias and Behaviour: A Comparative Analysis of Reasoning in Two Areas of Biological Science.** IN Feminism and Science. Edited by H. Longino and R. Doell. New York: Oxford University Press.

*** 344
Lorber, J. 1993. **Believing is Seeing: Biology as Ideology.** Gender and Society. Vol. 7. No. 4. December. p.568-581.

*** 345
Morell, V. 1993. **Seeing Nature Through the Lens of Gender.** Science. Vol. 260. 16 April. p.428-429.

In the absence of previous data, early studies in primatology focused on the "male pecking order" of primates as it was then believed that the primate social activity was governed by what the males did. It is now suggested that the early studies mirrored society's institutions which were also based on male hierarchy. Since the mid 1980's however, the focus has shifted from the male to the female primates, largely due to the work of the female primatologists. It has therefore been suggested by some that the gender of the researcher is an influencing factor. Other primatologists believe that real science does not have a gender.

*** 346

Norwood, V. 1993. **Made From This Earth: American Women and Nature.** Chapel Hill, NC: University of North Carolina Press.

Describes the contributions of American women in the fields of botany, biology and conservation biology. These include Agnes Chase, Delia Akley and Dian Fossey all of whom are part of the female tradition of nature study in America.

*** 347

Okruhlik, K. 1994. **Gender and the Biological Sciences**. Canadian Journal of Philosophy Supplementary. Edited by M. Matthen and R. X. Ware. Vol. 20.

*** 348

Primack, R. B. and O'Leary, V. 1993. **Cumulative Disadvantages in the Careers of Women Ecologists.** BioScience. Vol. 43. No. 3. March. p.158-165.

Men have traditionally dominated the field of ecology, recently however, women are increasingly entering this field of study. Research has indicated that male ecologists generally show greater scientific productivity and more rapid career advancement than women and it was always assumed that this was due to women's commitment to marriage and family. Recent research suggests differently, as the productivity of women was lower regardless of their marital status etc. In fact it has been proposed that there are cumulative disadvantages which hamper women ecologists. These include the following: less satisfactory relationships with their Ph.D. advisors, difficulty in finding mentors, sexual discrimination, nomadic employment, a lack of job security, family responsibilities and finally low salaries. Possible solutions include programs initiated by the U.S. National Science Foundation, but what is also needed is fundamental changes in the attitudes towards women ecologists.

*** 349

Sanborn, W. A. and Schmidt, R. H. 1995. **Gender Effects on Views of Wildlife Professionals About Wildlife Management.** Wildlife Society Bulletin. Vol. 23. No. 4. Winter. p.583-587.

*** 350

Schiebinger, L. 1993. **Nature's Body: Gender in the Making of Modern Science.** Boston: Beacon.

Schiebinger suggests that the research agendas and results of 18th century naturalists are partly based on assumptions surrounding the perceived differences between men and women. She cites for example the work of Linnaeus who used the word for breasts "mammae" and the resulting "mammals" to refer to warm-blooded, four-limbed creatures which suckle their young. Linneaus therefore used a feature of human females to link humans to animals. The book has 6 main chapters each highlighting a case study of 17th century history in the making.

*** 351

Schiebinger, L. 1993. **Why Mammals are Called Mammals: Gender Politics in Eighteenth Century Natural History.** American Historical Review. Vol. 98. No. 2. April. p.382-411.

*** 352

Shiva, V. and, Moser, I. eds. 1995. **Biopolitics. A Feminist and Ecological Reader in Biotechnology.** 304p. Zed Books.

Presents feminist and environmentalist thinking on biotechnology. In particular the book highlights information on genetics and genetic engineering.

*** 353

Shteir, A. B. 1996. **Cultivating Women, Cultivating Science: Flora's Daughters and Botany in England 1760-1860.** Baltimore: John Hopkins University Press.

*** 354

Slade, M. and Blatt, B. 1993. **Women in Bioscience : Opportunities in the Nineties.** AWIS Magazine. Vol. 22. No. 3. May/June. p.16.

*** 355

Sloane, E. 1993. **Biology of Women.** 3rd ed. New York: Wiley

*** 356

Spanier, B. B. 1995. **Im/partial Science: Gender Ideology in Molecular Biology.** Bloomington: Indiana University Press.

*** 357

Tripp-Knowles, P. 1994. Androcentric Bias in Science? An Exploration of the Discipline of Forest Genetics. Women's Studies International Forum. Vol. 17. No. 1. Jan./Feb. p.1-8.

The author examines the discipline of forest genetics for cases of androcentric bias. She also gives an overall view of science, highlighting the neglect of social and environmental responsibility.

*** 358

Zuk, M. 1994. **Feminism and the Study of Animal Behaviour.** Bioscience. Vol. 43. No. 11. p.774-778.

The author discusses the relevance of female choice to evolutionary biology, with respect to both humans and animals. She also discusses the scarcity of women in science, as well as, sex discrimination in animal behaviour research.

BIOGRAPHIES AND STUDIES OF INDIVIDUALS

*** 359

Balon, E. K. 1994. **The Life and Work of Eugenie Clark: Devoted to Diving and Science.** Environmental Biology of Fishes. Vol. 41. No. 1-4. p.89.

*** 360

Balon, E. K., Bruton, M. N. and Noakes, D. L. G. 1994. **Prelude to the Anthology in Honour of Women Ichthyologists.** Environmental Biology of Fishes. Vol. 41. No. 1-4. p.7.

*** 361

Bruton, M. N. 1994. **The Life and Work of Rosemary Lowe-Mconnell: Pioneer in Tropical Fish Ecology.** Environmental Biology of Fishes. Vol. 41. No. 1-4. p.67.

*** 362

Freeman, M. ed. 1995. **Always, Rachel: The Letters of Rachel Carson and Dorothy Freeman, 1952-1964.** 608p. Boston: Beacon Press.

*** 363

MacDonald, M. 1993. **A Biography of Rachel Carson.** Canadian Women's Studies. Women in Science and Technology: The Legacy of Margaret Benston. Vol. 13. No. 2. Winter. p.105.

*** 364

McCay, M. A. 1993. **Rachel Carson.** New York: Twayne.

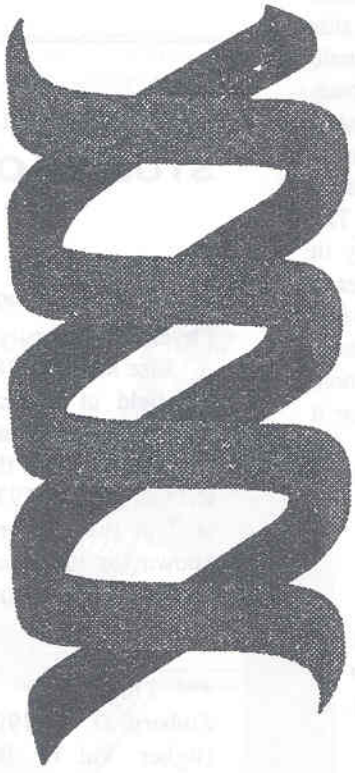
*** 365

Morell, V. 1993. **Called "Trimates", Three Bold Women Shaped their Field.** Science. Vol. 260. 16 April. p.420-425.

Describes the work of three female primatologists i.e. Dian Fossey, Jane Goodall and Birute Galdikas. The legacies of these scientists have encouraged many other women to pursue this avenue of research. Today, fifty percent of the primatologists in North America are women. It has been said that the success of the trimates and other women in primatology is largely due to the capacity of the women to empathize with their subjects. They are able to see the primates they study as individuals thus enabling them to gain insights into the behaviour and interactions of the animals. The "trimates" were chosen by Louis Leakey because of their lack of specialized training and because of their gender. He thought they would be successful because of their patience, persistence and perception.

*** 366
Noakes, D. L. G. 1994. **The Life and Work of Ethelwynn Trewavas: Beyond the Focus on Tilapine Cichlids.** Environmental Biology of Fishes. Vol. 41. No. 1-4. p.33.

*** 367
Shearer, B. F. and Shearer, B. S. eds. 1996. **Notable Women in the Life Sciences: A Biographical Dictionary.** Westport, CT: Greenwood Press.



PHYSICS

*** 368

Ajzenberg-Selove, F. 1994. **A Matter of Choices: Memoirs of a Female Physicist.** New Brunswick: Rutgers University Press.

*** 369

Dresselhaus, M. S., Franz, J. R. and Clark, B. C. 1994. **Interventions to Increase the Participation of Women in Physics.** Science. Vol. 263. 11 March. p.1391.

*** 370

Flam, F. 1994. **Italy: Warm Climate for Women on the Mediterranean.** Science. Vol. 263. 11 March. p.1480.

There is a relatively high percentage of female physicists in Italy in comparison to other countries like the United States. The author credits this phenomenon to the long tradition of female intellectual achievers in Italy which dates as far back as the Renaissance, and provides a welcoming environment for female scientists. Also important is the Italian system of schooling in which mathematics and science is a requirement for all students. The Italian academic system is also woman friendly in that it allows women to climb the academic ladder at their own pace. They are able to stay in lower level positions, start a family and move up at a later date. There is also free day care for working women. Problems still exist in Italy however, for instance it has been noted that there is a glass ceiling for women as only a few of them to reach high level elite positions.

*** 371

Franz, J. R., Dresselhaus, M. S. and Clark, B. C. 1995. **Improving the Climate for Women in Physics.** AWIS Magazine. Vol. 24. No. 6. November/December. p.8.

*** 372

Gebbie, K. B. 1996. **Why Encourage Women to Enter Physics.** APS News. July 1996 issue.

Suggests that women should be encouraged to enter physics to advance and diffuse the knowledge in this field, by drawing upon the widest spectrum of talented individuals.

*** 373

Larsen, K. M. 1995. **Women in Astronomy.** Inclusion in Introductory Textbooks. Vol. 63. No. 2. February. p.126-131.

*** 374

Wertheim, M. 1995. **Phythagoras' Trousers: God, Physics, and the Gender Wars.** New York: Times Books

The author describes the exclusion of women from physics.

BIOGRAPHIES AND STUDIES OF INDIVIDUALS

*** 375

Slime, R. L. 1996. **Lise Meitner, A Life in Physics.** University of California Press.

Lise Meitner (1878-1968) was a central figure in the field of nuclear physics. She was born in Vienna, educated at the University of Vienna and was a professor at the Kaiser-Wilhelm Institute. She left Germany in 1938 and joined the atomic research staff at the University of Stockholm. Meitner is known for her research on nuclear fission, atomic theory and radioactivity.

*** 376

Zinberg, D. S. 1996. **Thoroughly Modern Mille.** Higher. Vol. 12. Jan. p.19.

Profiles the work of MIT physicist Mildred Dresselhaus. Her attempts to gain equal opportunities for women in science are highlighted.

REPRODUCTIVE TECHNOLOGY

*** 377

Cox, S. 1993. **Strategies for the Present, Strategies for the Future: Feminist Resistance to New Reproductive Technologies**. Canadian Women's Studies. Women in Science and Technology: The Legacy of Margaret Benston. Vol. 13. No. 2. Winter. p.86.

*** 378

Davis-Floyd, R. E. 1996. **The Technocratic Body and the Organic Body: Hegemony and Heresy in Women's Birth Choices.** IN Gender and Health: An International Perspective. Edited by C. F. Sargent. and C. B. Brettell. p.123-166. Upper Saddle River, New Jersey: Prentice-Hall.

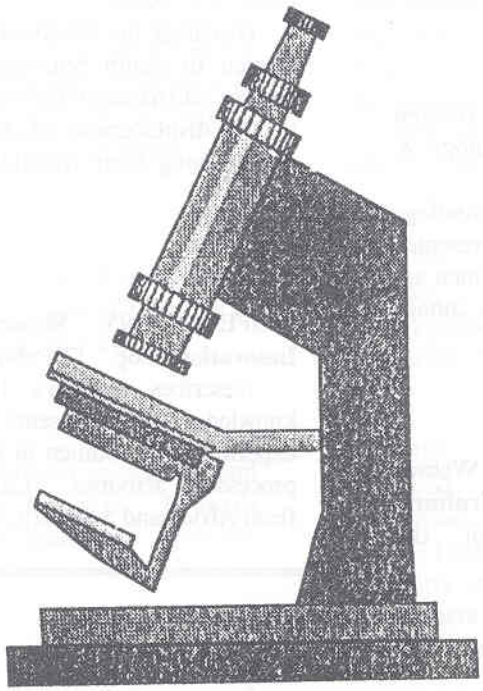
The author argues that birth is not a simple biological act, it is marked and shaped by society and culture. The birthing process in Western societies is characterized by a mechanization of the body. Women see their pregnant bodies as defective machines unable to produce a healthy baby without technological assistance. Thus, there is heavy usage of ultrasound and electronic amplification technology for proof of the baby's health. Additionally there are high cesarean, epidural and episiotomy rates in many health facilities.

*** 379

Gregg, R. 1995. **Pregnancy in a High-Tech Age: Paradoxes of Choice.** 207p. New York: New York University Press.

*** 380

Rothman, B. K. 1993. **The Tentative Pregnancy: How Amniocentesis Changes the Experience of Motherhood.** New York: Norton.



RURAL TECHNOLOGY

*** 381

Alleyne, A. T. 1995. **Biotechnology and Women in Caribbean Agriculture**. Sistren. Vol. 17. No. 3. p.11.

Examines the impact of biotechnological innovations such as tissue culture and micropropogation on Caribbean women in agriculture. It is suggested that the agricultural innovations can benefit women by reducing labour inputs. Additionally, genetically engineered crops can lead to an improvement in the diets of Caribbean females.

*** 382

Appleton, H. 1995. **Do it Herself. Women and Technological Innovation**. 310p. IT Publications.

Presents case studies from Latin America, Asia and Africa which showcase women's contributions to technological innovation at the grassroots level. Women's use, production and adaptation of technology food production and processing is highlighted.

*** 383

Budgett-Meakin, C. 1995. **Technology, Women and the Environment.** Science, Technology & Development. Vol. 13. No. 1. p.72-78.

The author presents an appropriate technology approach to development. Case studies are presented from Peru, Ghana and Sri Lanka, where women are putting intermediate technology to work in cottage industries.

*** 384

Ferguson, A. E. 1993. **Differences Among Women Farmers: Implications for African Agricultural Research Programmes.** IN Proceedings of the Workshop on Social Science Research and the CRSP's. June 9-11,1992, Carnahan Conference Center, University of Kentucky, Lexington, Kentucky. Lincoln Nebraska: INTSORMIL.

The paper argues that technology associated with agriculture and science are products of social constructs. Consequently gender and other forms of social differentiation are important in agricultural research and technology development.

*** 385

Jellison, K. 1993. **Entitled to Power: Farm Women and Technology 1913-1963.** 217p. Chapel Hill: University of North Carolina Press.

*** 386

MacPhail, F. 1993. **Displacement, Divisions, and Decisions: The Impact of Irrigation Technology on Women in South Sulawesi, Indonesia.** Canadian Journal of Development Studies. Special Issue. p.229-248.

Discusses the effects of technological change on women in South Sulawesi, Indonesia. The paper focuses on irrigation technology and its contribution to the displacement of women from agriculture, undermining their traditional roles as agricultural workers.

*** 387

UNIFEM. 1995. **Women's Roles in Technical Innovation**. 86p. IT Publications.

Describes women's indigenous technological knowledge and presents solutions to problems experienced by women in their food production and processing activities. Case studies are presented from Africa and Southern Asia.

SCIENCE EDUCATION

*** 388

Armstrong, R. 1995. **News from the UW System Women and Science Program. Science Diversity, and Community: Revitalizing Introductory Curricula.** Feiminist Collections. Vol. 16. No. 2. Winter. p.28.

*** 389

Bailey, B. and Leo-Rhynie, E. 1995. **Factors Affecting the Choice of Science Subjects by High School Students: A Pilot Study.** Sistren. Vol. 17. No. 3. p.25-27.

On the international level it has been recognized that boys do more science subjects and achieve at higher levels than girls. Jamaican researchers have also found this to be the case. Recently however, there has been an increase in the numbers of girls in science especially as science professions are the high salary and high status careers. Research has also indicated a tendency for girls to show more interest in medicine than the physical sciences, possibly because of the biology context of the medical courses. The authors note that the issue of women in science must be examined in Jamaica, as the country can ill afford to loose any potential contribution to the scientific arena. This is especially in light of expanding international trade and competition.

*** 390

Baker, D. R.and Leary, R. 1995. **Letting Girls Speak Out About Science.** Journal of Research in Science Teaching. Vol. 32. Jan. p.3-27.

*** 391

Barber, L. A. 1995. **U.S. Women in Science and Engineering, 1960-1990: Progress Towards Equity?** Journal of Higher Education. Vol. 66. No. 2. March/April. p.213-235.

*** 392

Barr, J. and Birke, L. 1994. **Women, Science, and Adult Education : Toward a Feminist Curriculum?** Women's Studies International Forum. Vol. 17. No. 5. p.473-483.

*** 393

Bernard, M. C. 1994. **Participation by Female Students in Natural Science and Technical Programmes at the Secondary and Tertiary levels in the Education System in Guyana: Implications for Classroom Practice and Curriculum Management.** [Paper presented at] Gender, Science & Technology Seminar, Mona, Jamaica, February 23-25.

Examines the patterns of participation of females in science and technical education. The author focuses on the perceptions of teachers and female students at secondary level schools in Georgetown. It was noted that at the fourth form level, when students choose subjects, girls are generally coaxed in ·non-technical areas. Secondary level patterns continue at the university level where girls are concentrated in the health science fields whilst males are found in engineering. The paper also raises concerns such as educational and institutional barriers to female participation in these programmes in spite of the articulation of policy intended to address specific issues.

*** 394

Denton, D. D. 1996. **Systematic Reform in Undergraduate Science Education.** AWIS Magazine. Vol. 25. No. 1. Jan./Feb. p.31-32.

*** 395

Diamond, J. **Sex Differences in Science Museums; A Review.** Curator. Vol. 37. No. 1. March 1994. p.17-24.

Girls need to learn math in a cooperative atmosphere. They also need to have more math and science related experiences than boys. Math and

science curricula must therefore be reflective of these needs.

*** 396

Eccles, J. et al. 1993. **Age and Gender Differences in Children's Self and Task Perceptions During Elementary School.** Child Development Vol. 64. No. 3. June. p.830-847.

A study of 1st, 2nd and 4th graders revealed that boys feel more competent in math whereas girls are more sure of subjects such as reading and music. The author suggests that teachers need to raise girls' confidence and competence in mathematics perhaps by incorporating subjects that they are already confident in, into math lessons.

*** 397

Finn, R. 1995. **Study Finds Gender Disparity Even Among High Achievers in Science.** The Scientist. Vol. 9. No. 22. Nov. 3. p.3-10.

*** 398

Fraser, B. 1993. **Research Implications for Science and Mathematics Teachers.** Volume 1. Key Centre Monograph Number 5. Curtin University of Tech., Perth, Australia. National Key Centre for Science and Mathematics. Australian Department of Education, Canberra.

Presents examples of the strategies used by teachers to create a classroom environment encouraging to female math students. These strategies include the use of writing in mathematics.

*** 399

Fraserabder, P., Mehta, J. and Rathgeber, E. 1995. **Educating our Womenfolk in Science, Technology, and Engineering.** Appropriate Technology. Vol. 22. No. 1. June. p.12.

*** 400

Goodman, S. 1995. **Women in Science and Engineering at the National Academy of Sciences.** AWIS Magazine. Vol. 24. No. 4. July/Aug. p.7.

*** 401

Johnson, J. M. 1994. **International Comparisons of Women in Higher Education in Science and Engineering.** [Paper presented at] The Annual Conference, Comparative and International Education Society, March 21-24 1994, San Diego, CA.

*** 402

Koch, J. 1993. **Elementary Science Education: Looking Through the Lens of Gender**. Initiatives. Journal of NAWE. Vol. 55. No. 3. p.67-71.

Discusses the integration of a gender agenda into elementary science methods, with a view to encouraging more girls and young women to enter the field of natural sciences. Issues include the lack of female role models in textbooks as well as teachers' attitudes. Teachers tend to demonstrate experiments for female students whilst they allow the male students to perform experiments by themselves. One useful initiative to alleviate the situation is the use of informal science learning experiences outside of the school.

*** 403

Lanzinger, I. 1993. **Toward Feminist Science Teaching.** Canadian Women's Studies. Women in Science and Technology: The Legacy of Margaret Benston. Vol. 13. No. 2. Winter. p.95.

*** 404

Leach, L. 1994. **Sexism in the Classroom: A Self-Quiz for Teachers**. Science Scope. Vol. 17. No. 6. March. p.54-59.

Girls' attitude toward math and science is greatly affected by the attitude of their teacher. The author thus provides a self-quiz for teachers so that they can determine their attitudes towards the girls in their class.

*** 405

Pettit, L. 1995. **Middle School Students' Perception of Math and Science Abilities and Related Careers**. [Paper presented at the 61st Biennial Meeting of the Society for Research in Child Development, Indianapolis, IN, March 30-April 2, 1995.

Students were surveyed about their career aspirations and their feelings about sex stereotyping in certain professions. While girls felt that society accepted many different careers for women, they still tended to choose sex-stereotyped careers when filling

out the questionnaire. Girls for instance, felt that while they would be capable of becoming doctors or veterinarians, they did not want to have science related careers as adults.

*** 406
Preece, B. 1995. **Science, Education and Women.** AWIS Magazine. Vol. 24. No. 2. March/April. p.23.

*** 407
Preece, B. 1993. **Education, Science, and Women: Building Confidence and Improving Teaching Methods.** AWIS Magazine. Vol. 22. No. 4. July/August. p.18.

*** 408
Rayman, P. and Brett, A. 1995. **Women Science Majors: What Makes a Difference in Persistence After Graduation?** Journal of Higher Education. Vol. 66. No. 4. July/August. p.388-414.

*** 409
Rosser, S. V. ed. 1995. **Teaching the Majority: Breaking the Gender Barrier in Science, Mathematics and Engineering.** New York: Teachers' College Press.

*** 410
Rosser, S. V. and Kelly, B. 1994. **From Hostile Exclusion to Friendly Inclusion: University of South Carolina System Model Project for Transformation of Science and Math Teaching to Reach Women in Varied Campus Settings.** Journal of Women and Minorities in Science and Engineering. Vol. 1. No. 1.

*** 411
Rouchoudary, A., Tippins, D. J. and Nichols, S. 1995. **Gender Inclusive Science Teaching: A Feminist-Constructivist Approach.** Journal of Research in Science Teaching. Vol. 32. No. 9. November. p.897-924.

*** 412
Roychoudary, A., Tippins, D. J. and Nichols, S. **An Exploratory Attempt Toward a Feminist Pedagogy for Science Education.** Action in Teacher Education. Vol. 15. Winter 1993/1994. p.33-46.

*** 413
Sankaran, N. 1995. **New NSF Programs For Women Set Ambitious Goals, Backed by Sharp Increase in Project Appropriations.** The Scientist. Vol. 9. No. 4. Feb. 20. p.1-2.

*** 414
Shulman, B. J. 1994. **Implications of Feminist Critiques of Science for the Teaching of Mathematics and Science.** Journal of Women and Minorities in Science and Engineering. Vol. 1.No. 1.

*** 415
Sookdeo, V. and Wharton, A. 1994. **Gender Differences in Students' Concepts of Wave Motion at the CXC Level.** [Paper presented at] Gender, Science & Technology Seminar, Mona, Jamaica, February 23-25.

Discusses the perception of physics being a "male" subject, focusing on the Caribbean Examinations Council (CXC) examinations. The results showed no significant difference in the overall performance of males and females however it was noted that females are better at theoretical questions, whereas males were more successful with the practical questions. Additionally, it was revealed that the sex of the teacher was an influencing factor as girls tended to do better in physics when the teacher was female, likewise the boys' performance was enhanced with a male teacher.

*** 416
Telese, J. 1993. **Effects of Alternative Assessment From the Student's View.** [Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, GA, April 12-16,1993.

Alternative assessment techniques, whilst they do not change girls math ability per se, they do improve girls attitudes towards classroom activities.

*** 417
Tobias, S. 1994. **Keep Culture From Keeping**

Girls out of Science. The Education Digest. Vol. 60. September. p.19-20.

*** 418

Tobias, S. 1994. **Women in Science-Women and Science.** Journal of College Science Teaching. March-April. p.276-278.

*** 419

Van Sickle, M. and Spector, B. 1995. **Caring Relationships in Science Classrooms: A Symbolic Interaction Study.** Journal of Research in Science Teaching. Vol. 33. No. 4. April. p.433-454.

*** 420

Whitely, P. 1994. **Science Textbooks in Jamaican High Schools- Gender Fair?** [Paper presented at] Gender, Science & Technology Seminar, Mona, Jamaica, February 23-25.

The paper considers gender fairness of two editions of integrated science text books used in Jamaican high schools. Gender fairness in this instance refers to the balanced and comprehensive portrayal of men and women in the books. The author reveals that most of the integrated textbooks carry a male bias. He suggests that the reason for this is a lack of societal pressure in the Caribbean to ensure strict equality for the representation of the genders.

*** 421

Wolffensperger, J. 1993. **Science is Truly a Male World. The Interconnectedness of Knowledge, Gender and Power Within University Education.** Gender and Education. Vol. 5. No. 1. p.37.

RECRUITMENT AND CAREER GUIDANCE

*** 422

Alper, J. 1993. **The Pipeline is Leaking Women All the Way Along.** Science. Vol. 260. 16 April. p.409-411.

Traditionally women have not been encouraged in science. At an early age girls lose their confidence due to the attitudes and teaching styles of their teachers. In labs for instance, the boys are encouraged to do experiments whilst girls are encouraged to record. Teachers also make more eye contact with boys and generally pay them more attention. Thus the leaks begin and continue through high school where girls' scientific ability is underestimated and their self-confidence is further eroded. They, in turn, take fewer science courses, hence significantly fewer pursue college science and engineering majors.

*** 423

Anderson, B. T. 1993. **Minority Females in the Science Pipeline: Activities to Enhance Readiness, Recruitment, and Retention.** Initiatives. Journal of NAWE. Vol. 55. No. 3. p.31-38.

The shortage of individuals in the scientific pool can be corrected by attracting more minority females to these fields. This can be facilitated by the use of new educational methods as well as intervention programmes aimed at girls at the middle school level. In this manner, graduating students, as well as the colleges receiving them, benefit greatly.

*** 424

Baylor, S. J. 1995. **Graduate Fellowship Programs.** Communications of the ACM. Vol. 38. No. 1. p.37-42.

Lists eligibility requirements and sponsoring organizations for graduate computer science students.

*** 425

Bird, S. J. et al. 1993. **Mentoring means Future Scientists: A Guide for Developing Mentoring Programmes Based on the AWIS Mentoring Project.** 148p. Washington, DC: Association for Women in Science

*** 426

Bird, S. J. and Didion, C. J. 1993. **Retaining Women Science Students: A Mentoring Project of the Association for Women in Science.** INITIATIVES. Journal of NAWE. Vol. 55. No. 3. p.3-11.

Describes the activities of the Association for Women in Science (AWIS) which is dedicated to the advancement of women in science and technology and the encouragement of girls and women in the study of mathematics. The association aims to increase the percentage of women who graduate with bachelors degrees in these fields. Most of their work is geared towards the retention of undergraduate and graduate students.

*** 427

Brainard, S. G. 1993. **Student Ownership: The Key to Successful Intervention Programs.** Initiatives. Journal of NAWE. Vol. 55. No. 3. p.23-30.

In the successful implementation of an intervention programme, student ownership is a crucial factor. The author cites the example of the Woman in Engineering Initiative at the University of Washington. Within this programme students were given the title of chair and they took the lead in designing and implementing the programme.

*** 428

Braus, P. 1993. **Moms Help Daughters Stick to Science.** American Demographics. Vol. 15. August. p.18-20.

Describes a study done by Wellesley College on the importance of mothers' encouragement to their daughters considering careers in scientific fields.

*** 429

Camp, T. 1996. **Diversity Recruiting.** Communications of the ACM. Vol. 38. No. 1. p.61.

*** 430

Daniels, J. Z. 1993. **Purdue's Commitment to Women in Engineering: Strategies That Work.** Initiatives. Journal of NAWE. Vol. 55. No. 3. p.61-66.

Describes Women in Engineering Programmes (WIEP) at Purdue which seek to encourage and retain women in the field of engineering. The programmes begin at the high school level where high school students are given the opportunity to interact with university engineering students. They also participate in summer programmes, and essay competitions. Once in college girls are provided with networks of support including buddy systems and professional development workshops. There are also strong links to corporations and alumnae, which provide financial support and help in securing summer employment for participants in the engineering programmes.

*** 431

Didion, C. J. 1993. **Attracting Graduate and Undergraduate Women as Science Majors.** Journal of College Science. Vol. 22. May. p.336.

Discusses the mentoring project of the Association for Women in Science.

*** 432

Didion, C. J. 1995. **Mentoring Women in Science.** Educational Horizons. Vol. 73. Spring. p.141-144.

Describes the mentoring programme of the Association for Women in Science.

*** 433

Farmer, H., Wardrop, J., Anderson, M. and Risinger, R. 1995. **Women's Career Choices: Focus on Science, Math, and Technology Careers.** Journal of Counseling Psychology. Vol. 42. No. 2. p.155-170.

*** 434

Fort, D. C., Bird, S. J. and Didion, C. J. eds. 1993. **A Hand Up: Women Mentoring Women in Science.** 349p. Washington, DC: Association for Women in Science.

Includes essays about mentoring as well as interviews with female scientists and students. The book also covers resources, relevant networks and guidelines for mentoring.

*** 435

Goyal, A. 1995. **Mentoring Resources and Programs for Women.** Communications of the ACM. Vol. 38. No. 1. January. p.66-67.

*** 436

Grant, L. et al. 1993. **Mentoring, Gender, and Careers of Academic Scientists.** [Paper presented at] The Annual Meeting of the American

Educational Research Association. April 12-16, 1993. Atlanta, Georga.

Describes the mentoring of women and minorities in science, outlining some of the gender and race related problems between the mentors and the mentees.

*** 437

Holloway, M. 1993. **A Lab of Her Own.** Scientific American. Vol. 269. Nov. p.68-77.

Describes the struggles of women in science and the obstacles girls face in entering scientific fields. In academic circles, women are absent from informal communities and clubs. They experience difficulty in obtaining tenure, their salaries are lower and they are rarely promoted to high positions. There is also a high attrition rate. At an early age, girls are discouraged from pursuing science careers as the educational system does not foster a love of science in females. To change this trend, there must be changes in testing and curriculum, to encourage girls in science.

*** 438

Hotaling, D. 1995. **New Ph.D.'s Can Find a Life Outside Academe.** AWIS magazine. Vol. 24. No. 4. July/August. p.12.

*** 439

Jackson, T. 1995. **Status of Women Geoscientists in the Anglophone Caribbean.** Sistren. Vol. 17. No. 3. p.18.

Female geoscientists in the anglophone Caribbean have not attained the recognition afforded to their male counterparts. They have a lower rate of employment and they encounter problems on the job including: sexism, a lack of female role models and domestic responsibilities. Sexism is especially a problem when it comes to field work as additional staff and infrastructure have to be put in place to allow women to do field work. Whilst sexual discrimination was encountered in the workplace, women felt there was no discrimination in academia, they believed they had equal opportunity in awards, fellowships and scholarships.

*** 440

Johnson, R. C. and Parrott, J. 1993. **Females and Minorities in Science: The Role of Community and Collaboration.** Initiatives. Journal of NAWE. Vol. 55. No. 2. p.53-58.

To alleviate the under-representation of women in science, early intervention programmes are needed. The article describes the importance of collaboration and a sense of community in such programmes. When students work cooperatively and parents and teachers are involved, participants can develop an enhanced appreciation and interest in math, science and computers.

*** 441

Lips, H. M. 1993. **Bifurcation of a Common Path: Gender Splitting on the Road to Engineering and Physical Science Careers.** Initiatives. Journal of NAWE. Vol. 55. No. 3. p.13-22.

*** 442

Maack, M. N. and Passet, J. E. 1994. **Aspirations and Mentoring in an Academic Environment: Women Faculty in Library and Information Science.** p.216. Westport, Conn.: Greenwood Press.

*** 443

Miller, A. and Silver, C. B. 1993. **The Limits of Intervention: Lessons From Eureka, A Program to Retain Students in Science and Math-Related Majors.** Initiatives. Journal of NAWE. Vol. 55. No. 2. p.21.

Evaluates the academic lives of fifty-three women who participated in the Eureka Programme in 1988. The Eureka programme was a federally sponsored two year math and science intervention programme for selected females. Within the programme students received peer tutors, faculty mentors and invitations to a host of extra curricular activities. The programme was not as successful as expected, possibly due to the students' part-time jobs. The programme did provide some useful lessons for future programmes, such as the need to recognize and compensate for the unique characteristics of any particular college and accompanying student body. It was also recognized that providing resources and supporting services does not automatically mean that students will take advantage of them.

*** 444

Miller, J. A. and Moehlmann, J. L. 1993. **Social**

Climate Forces Women Out of Science. Bioscience. Vol. 43. No. 10. Nov. p.672.

Attempts are being made by the National Science Foundation (NSF) to change the cultural forces that push women out of science and engineering fields. An unfriendly social climate is cited as a major deterrent for women who are faced with problems of isolation, competitiveness and the negative attitude of some male professors, who do not feel women belong in science. Programmes have been initiated by the NSF to counteract these problems, with a view to increasing the numbers and general success of women in science. These programmes include new testing and teaching strategies. NSF also funds visiting professorships and research-planning grants for women. Grants are also being given to institutions for the development of trial programmes for the promotion of women in science.

*** 445

Morris, J. 1994. **Women Scientists and the Workplace.** [Paper presented at] Gender, Science & Technology Seminar, Mona, Jamaica, February 23-25.

Presents information from interviews with three women scientists in two research institutions in Trinidad. All of the interviewees saw themselves as competent, hard working and deserving of promotion. They did however feel that their hard work was not recognized, largely because they did not publicize their achievements. All felt that they were treated unfairly, as they were overlooked for promotion and in some cases had lower salaries than their male counterparts. The author suggests that female scientists can combat some of these problems by joining professional associations which will be active on their behalf.

*** 446

Motluk, A. 1995. **Flexible Fellowships Keep Women on Course for the Top**. New Scientist Vol. 147. No. 1987. July 22. p.10.

*** 447

Muller, C. B. 1993. **The Women in Science Project at Dartmouth.** Initiatives. A Journal of NAWE. Special Issue: Gender Equity in Math and Science (Part 2). Vol. 55. No. 3. p.39-48.

The Women and Science Project at Dartmouth seeks to encourage women to pursue careers in science, math and engineering. The author believes that programmes such as these are important to counteract the low participation of college women in science during the last two decades, especially now where the numbers of women in science seem to be hitting a plateau. Aspects of the programmes include internships and first hand experience with scientific equipment.

*** 448

Rayman, P. and Brett, A. 1993. **Pathways for Women in the Sciences: The Wellesley Report Part 1.** Wellesley, MA: Wellesley College Center for Research on Women.

Discusses why women choose science careers and the reasons for their success or lack of it.

*** 449

Sanders, J. 1994. **Lifting the Barriers: 600 Tested Strategies That Really Work to Increase Girl's Participation in Science, Mathematics and Computers.** 111p. Jo Sanders Publications

Provides strategies for generating interest and involvement in girls about mathematics, science and computers. Strategies include: focusing specifically on girls, highlighting the social aspects of these subjects and watching language for sex stereotypes. These strategies should be used along with extra curricular activities, reformed educational policies and outreach efforts.

*** 450

Sebrechts, J. S. 1993. **Cultivating Scientists at Women's Colleges.** Initiatives. Journal of NAWE. Vol. 55. No. 2. p.45-52.

Women's colleges can serve as effective instruments in the cultivation of women in science. In these environments there are no barriers based on gender and as a result the women have more chance in the sciences traditionally regarded as male fields.

*** 451

Shaya, S. B., Petty, H. R. and Petty, L. I. 1993. **A Case Study of Supplemental Instruction in Biology Focused on At-risk Students.** Bioscience. Vol. 43. No. 10. November. p.709-711.

The projected shortfall of scientists within the next fifteen years can be offset by the participation of women and minorities in science. This in turn can

be facilitated by recruitment and retention programmes. The success of such programmes can be furthered by the use of supplemental instruction. The authors demonstrate the effectiveness of this technique using the example of students in a Basic Biology course at Wayne State University. In this instance supplemental instruction greatly enhanced the performance of the students.

*** 452

Shea, S. L., Wright, M. H. 1994. **The Women in Science Model Program at Southern Illinois University at Carbondale.** Initiatives. Vol. 56. No. 1. p.29-35.

*** 453

Sloat, B. F. 1993. **Undergraduate Women in the Sciences: Removing Barriers.** Initiatives. Journal of NAWE. Vol. 55. No. 2. p.5.

Women are still outsiders in the inhospitable scientific environment. To alleviate this situation the authors recommend small interventions such the provision of role models in the classrooms and textbooks. They also highlight the importance of mentoring programmes as well as the teaching of gender and science courses to empower and encourage students.

*** 454

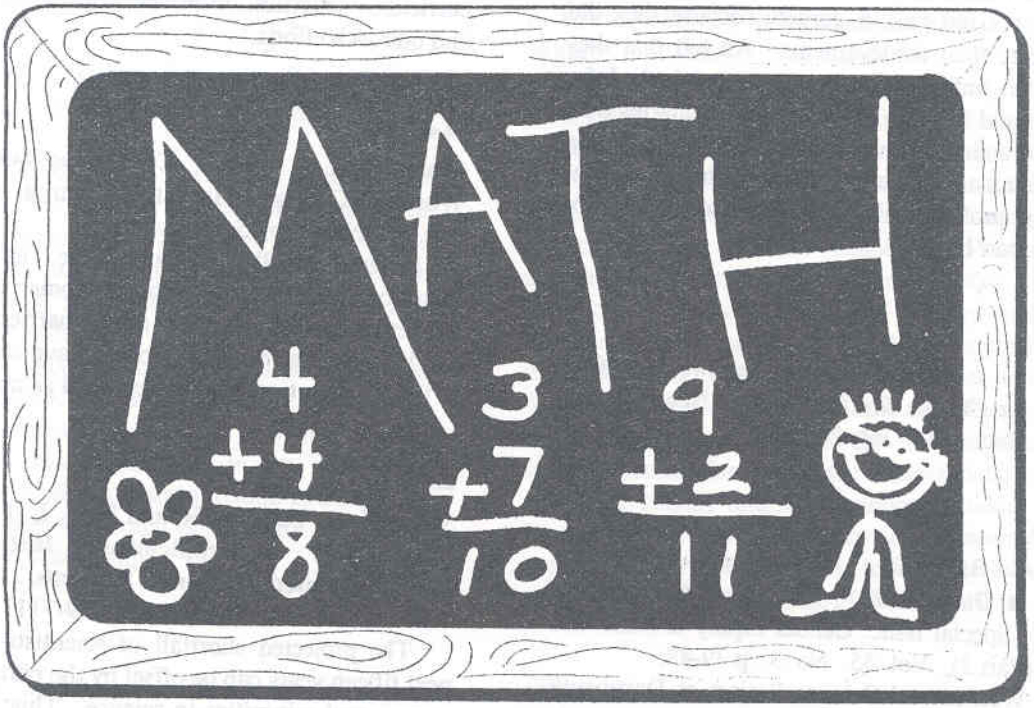
Sonnert, G. and Holton, G. 1995. **Gender Differences in Science Careers: The Project Access Study.** New Brunswick: Rutgers University Press.

*** 455

Sonnert, G. and Holton, G. 1996. **Career Patterns of Women and Men in Sciences.** American Scientist. Vol. 84. Jan/Feb. p.63-71.

*** 456

Winslett, M., Altstetter, C., Huang, H., Jones, V., Kriven, T., Lamb, S., Oakley, B., Thurston, D., Walker, W. and Wrightson, S. 1993. **Final Report of the Committee on the Status of Women Graduate Students and Faculty in the College of Engineering.** June. Urbana, IL: University of Illinois at Urbana-Champaign.



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