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SEXISM IN TEXTBOOKS
AN UPDATE OF RESEARCH THROUGH 1988

by
Patricia W. Tivnan

A Thesis Submitted to the Faculty of the Graduate School
of Loyola University of Chicago in Partial Fulfillment
of the Requirements for the Degree of

Master of Arts

April

1989

ACKNOWLEDGEMENTS

I would like to thank Dr. Diane Schiller for her help and enthusiasm. This project was her idea and inspiration. Thanks, too, to Dr. Kay Smith for her support and time.

VITA

The author, Patricia Wright Tivnan, was born on March 17, 1954.

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CHAPTER I

INTRODUCTION

Sexism was an important topic in the 1970's. It was of particular concern to educators. Textbooks were often found guilty of promoting the status quo. In 1977, Dr. Diane Schiller of Loyola University wrote a graduate paper examining sexism in textbooks. Using both qualitative and quantitative analyses Dr. Schiller found that sexism was prevalent in mathematics, science and reading texts. A content analysis showed very low percentages of female representation in all areas.

Using as many of the same textbooks as the Schiller study as are currently available, this thesis compares sexism in textbooks in 1977 and 1988. Schiller's content analysis was replicated and a comparison of 1977 and 1988 percentages concludes this study.

The dimensions of sexism in current textbooks is explored through the content analysis as well as through a review of current literature. The scope of sexism in the 1980's will be outlined. Suggestions will be made as how to circumvent sexism in the classroom.

The elimination of sexism as a desirable objective in our democracy is the underlying premise of the study. It is essential that sexism be viewed as an obstacle to true personal freedom. Not only does sexism deny opportunities but it also stifles creativity in the process. Individuals must be allowed and encouraged to view any opportunity in life to be within one's reach. To accomplish this, token opportunities must be expanded, reverse sexism must be abolished and an all out effort to achieve true equality must become the rule rather than the exception.

CHAPTER II

REVIEW OF LITERATURE

Elementary textbooks have exhibited marked sexism since the onset of basal readers. Prior to the 1970's sexism was accepted and rarely challenged. The turbulent 70's brought a new outlook to education, in general, and curriculum, in particular. Research was begun into the cause and effect of sexist materials in the classroom.

Conclusions were drawn. Sexism existed. The effects were damaging to both male and female readers. The textbooks industry's lack of cognizance of the problem was appalling.

In answer to an outcry from educators, publishing houses began an in-depth examination of the problem. Standards were established, and texts were re-written to accommodate recommendations.

Females were given more active roles in texts. They were luded for ther actions and deeds, not for their beauty and domestic skills. Women were portrayed outside the home in careers previously ascribed solely to males.

On the other hand, males also underwent a change. Traditional male roles, such as sport participants, heroes and machismo figures were not as prevalent in texts. Males

were humanized. They were even given stereotypical female qualities and came to be seen as nurturing and empathetic.

In the seventies males and females were stereotyped in basal readers. Traditional were maintained, with females at home, and males in the work world. When changes began to occur in textbook sexism the percentage of male representation versus female representation was the first area to be explored. William H. Rupley, and Jesus Garcia, of the Texas A & M University, College Station, and Bonnie Longnion, of Southwest Texas State University, performed a research study on basal readers and supplementary materials, published 1976-1978. Eight publishing houses were used. Each had included sex guidelines in the teacher's manual.

The reading series and supplementary materials were examined by turning to the table of contents and listing all stories on a master sheet. Sex dominance of a story was determined by identifying the main character of each story and each accompanying illustration. Each story was independently reviewed by each researcher and identified as 'Male Dominant', 'Female Dominant', or 'Other'.¹

When compared to results obtained in a similar study in 1976, the researchers concluded:

although twice as many males as females are still portrayed in story content, male representation has been cut considerably; stories about males had been replaced by 'Other'. Results for 1978 show a real effort by the publishers; there are almost equal numbers of males and female characters in this basals. When tallied from the 1974-76 readers are compared with 1976 and both of these with 1978, a trend toward equalization is apparent. That is, there has been an attempt by publishers to portray males and females equally in story content.²

Insofar as supplementary materials were concerned, the study showed that males were represented almost twice as often as females. One explanation for this discrepancy was that supplementary materials were most often used for problem readers, the majority of which were known to be male.

Once the percentages of males and females were adjusted, concern was evidenced about male and female characterization. Feminists questioned whether girls were hurt by stereotyped portrayal in stories. They also wondered if girls' interest tended to female oriented material. Ramona S. Frasher and James M. Frasher, of Georgia State University attempted to find the answers to the following questions:

- 1) Do contemporary children prefer stories in which the main characters portray traditional, sex-typed roles or do they prefer characters in nonstereotyped roles?
- 2) Do girls and boys differ with regard to the first question?
- 3) Is comprehension affected by the sex-typed nature of content of story?³

Eighty-nine girls and seventy-three boys, ages 9-12, from two Georgia schools were subjected in a study to answer the above questions. All students had a reading achievement level of 4.0 or above. After reading two different stories whose main characters differed drastically in personality, the students were asked to indicate their story preference, main character preference, and indicate which character they most identified with. In addition ten multiple-choice comprehension questions were answered. The contrasting personalities of the main characters were explained.

One of the girl main characters demonstrated courage and physical strength, characteristics generally associated with male behavior, and accepted with pleasure lower status relative to the males in the story. One of the boy main characters demonstrated nurturance, kindness, and concern for living things, behavior often associated with females in fiction. In the other story, the boy main character hid his fear, showed bravery, and won his personal battle through physical prowess, a fairly common theme in stories about boys.⁴

Results of the studies were fascinating. Girls overwhelmingly preferred the nontraditional story, the nontraditional main character, and identified with the nontraditional character.

Boys exhibited no significant difference in their choice of story, main character or identification with character. However, the male comprehension scores were higher for the nontraditional story. The same was true for the female comprehension scores.

Frasher and Frasher concluded "perceived appropriateness of the characters' behavior in a relevant setting, rather than sex typing, had the greatest influence on children's selections."⁵

The researchers also noted that girls disapproved of the traditional female character's acceptance of a lower position in relation to the males in the story.

Frasher and Frasher also surmised that the unusual behavior of the boy in the nontraditional story was the key in capturing the male readers' attention. Thus greater comprehension was achieved in this story.

Another researcher to study the question of male/female role portrayal in textbooks was Kathryn P. Scott of Florida State University. Working with Shirley Feldman-Summers of the University of Washington in 1979, Scott conducted a study assessing the reactions of children to stories in which females take over traditional male roles. Scott was motivated to research this phenomena due to a worry that reading interest and comprehension would fall, if children were exposed to characterizations they did not accept. She also questioned whether books in which females assume male roles should be used in curriculum if not approved of by males, due to their higher rate of reading disability.

Scott and Feldman-Summers study involved 67 females and 44 males, third and fourth grade students at two, suburban, white, middle-class schools outside Bellevue, Washington.

The study was structured so that:

each child read a set of eight short stories during a 4 week period. Each story had two versions - one with a female main character and one with a male main character. The two versions were identical in all respects except for appropriate changes in the name of the main character and the pronouns used.⁶

The results showed that both boys and girls who read about a nontraditional female character assumed that they could perform the role activity successfully. However, the children did not carry over these beliefs to role activities that were not present in the stories which they read. Thus, sex role perceptions can be influenced by characterizations

in textbooks that indicate success on the part of a nontraditional character.

Stories that involved females in traditional male activities were also evaluated positively by both girl and boy readers. There was no significant differences between their evaluation and stories in which males were active in the same activity.

This finding supports the earlier research of Frasher and Frasher. However, it caused Scott to question exactly what was the basis of research that indicated that boys preferred to read about male characters.

However, children's books about boys typically differ from children's books about girls not only in terms of the gender of the main character but also, in terms of the content; that is, the activities engaged in by a male main character usually differ from the activities in by a female main character. Hence, boys' preferences for books about boys may be due to the nature of the activities presented rather than the gender of the main character. The results of the present study support this latter possibility because when traditionally male role activities were performed by female main characters, the boys like the stories as well as when those same activities were performed by male main characters.⁷

Steven T. Bossert of the Far West Laboratory for Educational Research and Development further explored the impact of sex role stereotyping.

Bossert was not convinced by Scott's Frashers' research studies. He had a conflicting explanation for the acceptance of nontraditional female characters.

Observed decreases in stereotyped attitudes, even if they are to be seen among boys and girls, may simply reflect that children have learned to respond to

attitude inventories in the "appropriate" manner. Their behavior toward each other and in social roles may still indicate sex-stereotyped roles. Unfortunately, evaluations of the effects on nonsexist curricula have not employed behavioral outcome measures or observed classroom interaction directly.⁸

He believed that educators who attempted to run a nonsexist class may damage their students through their treatment. Students may become even more sex-biased due to variant treatment on the part of the teacher. Bossert referred to studies that indicated that boys receive more feedback from teachers than girls. Although the feedback given boys was often negative, the fact that it was given, at all, was positive reinforcement.

In addition, Bossert asserted that sex discrimination occurs subtly through math and reading groupings. He believes that due to girls higher achievement status in reading, they are given more opportunity to verbalize in the classroom and display their superior status.

Coupled with the fact that girls achieve higher due to increased classroom participation, the resulting gains in skills create a double advantage for the female. Bossert supported this belief by citing studies that showed that girls were the object of more cognitive statements and questions during reading.

In looking at students' perceptions of different academic and nonacademic role responses, one must realize that the opportunity to perform and develop competence in certain roles may differ for boys and girls. Students' perceptions of the sex-appropriateness of particular roles may not simply reflect the extent to which they hold sex stereotypes or the sex role

preference of peer groups. They may also mirror the actual opportunity structure available to students. Girls' and boys' perceptions may develop in response to the change offered them to actually perform particular roles.⁹

An academic area that defies the assumption that girls achieve better in reading, is that of history. Beginning in the middle grades, and continuing throughout junior high and high school, boys are documented to read more history.

The literature seems to indicate that as boys and girls mature their reading interests change. Generally, boys read more nonfiction than girls do while at the sixth grade level girls enjoy fairy tales, humor and fantasy more than sixth grade boys.¹⁰

Why the discrepancy? Could it be that the content of historical fiction and nonfiction is slanted towards males? Jesus Garcia of Texas A & M University performed a content analysis of basal and supplementary history materials published between 1977 and 1980. Ten series were reviewed, all basal readers, save one.

Because no procedure for evaluating U.S. History content in basal reading searies existed, Garcia devised his own method.

1. The raters turned to the table of contents of each text and identified any sections and stories with a U.S. history orientation.
2. The raters skimmed each text and identified other stories with a U.S. history orientation, particular attention was given to illustration.
3. Stories identified with a U.S. history theme were read independently by each rater and categorized as: (a) famous Americans, (b) famous events, (c) historical themese and periods, (d) historical perspectives of regions and states, (e) symbols, tall tales myths, songs, and patriotism, (f) other.

4. An interrater reliability of seventy percent was considered as an acceptable level of agreement.
5. When evaluations of reading series resulted in an agreement of less than seventy percent the investigators discussed the findings and re-examined the texts. A week was allowed to elapse between the time of discussion and the start of the re-examination. Three reading series were re-examined for lack of initial agreement. An acceptable level of agreement was reached on the re-examination.¹¹

Garcia found that U.S. history in basal series was a popular topic. History content appeared in 23% of the stories in basal series.¹²

However, Garcia found that U.S. history was slanted and unbalanced in the readers. Most of the content concerned famous Americans and romanticized period pieces.

Of all U.S. history content in each reading series less than ten percent describe significant events and less than twelve percent portray the historical development of specific states and regions.¹³

Garcia does not specify the percentage of stories which feature women, but does mention the preponderance of stories which feature "George Washington, Abraham Lincoln, Benjamin Franklin, Lewis and Clark, and Benjamin Banneker."¹⁴ Nary a woman among them.

A more specific study concerning women in history textbooks was undertaken by Darrell Kirby of New Mexico State University and Nancy Julian of the University of Texas at El Paso.

They sought the answers to the following questions:

- (1) who among outstanding individual women is noted in texts and who is not?
- (2) which topics are covered and which are omitted?
- (3) how are average women of

selected eras treated? (4) how are women who fought for currently controversial issues treated? and (5) how do distortions, if any, appear in coverage of women?¹⁵

Kirby found that nine of ten textbooks covered the following personages and topics.

Queen Elizabeth I; Dorethea Dix; Harriet Beecher Stowe; Harriet Tubman; Ida Tarbell; Jane Addams; Indian women; factory work, pre-1861; factory work, 1870-1910; temperance, women's right's activities, 1875-1920.¹⁶

From this listing Kirby concluded that coverage of women touched on individuals and topics which were significant, but lacked controversy in the present day. Kirby further asserted that "the texts tended to omit women who fought for issues which are still extremely controversial and to omit analyses of topics which are likewise controversial."¹⁷

Kirby exemplified this belief by noting the omission of Margaret Sanger, birth control activist, and Charlotte Perkins Gilman, intellectual feminist, from nine of the ten texts. Topics such as the sexual exploitation of slave women and the battle between feminists and black men over the Fourteenth Amendment were either totally omitted or given scant reference.

Current topics, such as the Papal Encyclical on Birth Control: Pope Paul's VI's *Humanae Vitae*, and other works on population control were also glossed over.

Balanced and objective views of women were present in many of the texts. But, Kirby noted a disturbing trend among texts to use subtly critical words or phrases which often mislead the read with reference to certain historical

personages. Often incomplete credit was given to women.

Their contribution to history was not fully documented:

One text portrayed the eighteen married women who settled in Plymouth in 1620 as a burden to their husbands and that text's subsequent discussion of the disease of the 1621 winter, never clearly credited Pilgrim women or girls for aiding their co-colonists.¹⁸

Kirby believed that this lack of complete credit was often manifested in a failure to relate female activities to major social movements occurring simultaneously. A case in point is the texts failure to relate Jane Addams' efforts on behalf of suffrage to the Progressive Era. The connection was lost. The emerging women's rights movement was presented as an aside to history rather than as an integral part of it.

Another disturbing trend in textbooks was the tendency to quote figures who were obviously prejudiced to women, without explaining or highlighting the existence of sexism on the part of the individual.

Two examples given were clearly sexist.

One text incorrectly paraphrased as "idle women and children" a statement made by Alexander Hamilton about "persons who would otherwise be idle". Another case, a text paraphrased a lengthy argument by Louis Brandeis "that long hours of work were injurious to the health and morals of women," but did not explain the implicit accusations against women.¹⁹

Semantic criticism included the use of male oriented words and phrases throughout the texts. Man, men, working men, frontiersmen and Pilgrim Fathers were prominent. A bid for neutrality in language was made by Kirby. Insofar as illustrations were concerned, the tendency to picture men in

positions of power was also noted. Although women were included in group illustrations and frequently in singular portraits their exclusion from governmental and industrial career positions was apparent.

Kirby concluded:

Thus although many textbook passages presented well significant material about women, many other passages needed editing or additional information in order to correctly portray women's lives and roles. Textbook passages which focused directly on women tended to be objective and balanced. However, passages which focused directly on other issues and only indirectly on women were frequently misleading or demeaning about women and their role in American history.²⁰

After studying the role of women in history texts, Jesus Garcia of Texas A & M then began to examine sexism in science texts. However, the issue of racism surfaced as well. Garcia stated, "Racism and sexism are similar in that they are thought biases or ideologies that include domination or exploitation based on the cultural and/or inferiority of a group of people."²¹

Garcia stressed that educators should be aware of both sexism and racism in textbooks. He suggested that stereotypic materials should not be totally omitted but should be presented to a class as a measure of comparison to texts which are bias free. Garcia also believed that supplementary materials are necessary to reinforce lessons gained from a text.

In a paper, published in January 1984, Garcia brought up the existence of the Council of Interracial Books for

Children, (CIBC) that developed a series of basal readers aimed at eliminating sexism and racism. Although the textbooks were lauded as an innovative effort, some cautions were raised insofar as their use.

The efforts by CIBC represent a first attempt to use basal readers specifically for reducing racism, sexism, and ageism among young children. Although its efforts are applauded by some educators, the project raises more questions than it answers. First, it seems to us that CIBC has essentially changed the role of reading instruction. Apparently, CIBC feels teachers should address societal problems as they attempt to teach young learners how to read. Second, CIBC seems also to have changed the criteria used for selecting the content of readers. The content of readers is typically selected so that it will reflect children's interest, will provide variety, and will result in an objective portrayal of the American experience. Selecting content that focuses on societal ills may help "isms" but it does not guarantee that young learners will be more effective readers. Moreover, if one holds to the view that teaching the "whole child" is a major goal of education, then it seem appropriate to mount a more systematic attack on racism, sexism and ageism.²²

By September, 1985, Garcia had apparently decided to undertake such an attack, and used an analysis of illustrations in science texts as his ammunition.

Not only was the percentage of male versus female illustrations determined, but the percentage of minority versus non-minority children, and the percentage of female and minority male adults versus the percentage of white male adults were tabulated.

Garcia and associate, Richard Powell, state their motivation for the study. In the elementary classroom, the science textbooks serves three major purposes. First, the textbook is used as an instructional tool. Children read

about science, discuss science related questions, and use the text as a guide for laboratory or investigative studies. Second, learners become acquainted with the relationship between science and society; by depicting children and adults in varied science activities, roles and settings texts help young learners develop positive self-concepts and identify potential careers in science. Third, the text provides students with a glimpse of an ideal society as perceived by publishers. Since this ideal society may include and exclude particular societal groups, student may also hypothesize the importance of such groups with respect to science and science-related fields.

Our major purpose in this investigation was to examine the portrayal of society by publishers as they provide young learners with a fundamental grasp of the sciences. We believe science textbooks publishers should depict society as it was, is, and should be when describing science concepts and generalizations. This approach, which we call social action science education, serves two purposes:

- (1) Provides young learners with illustrations of all walks of life involved in science
- (2) Provides minority and female learners - representatives of groups underrepresented in the sciences - with examples of the targeted groups actively involved in science activities and science professions.²³

Prior to undertaking the illustration analysis the authors did state their belief that publishers had attempted to erase sexism and racism. But they felt that illustrations

should be chosen series by series, rather than text by text, that stereotypic illustrations should be avoided and that particular attention should be used in correlating illustrations with science content. They stressed that illustrations have a powerful impact and could enhance the status of a societal group.

The results of the project showed that girls are pictured more often than boys, adult females are shown in a variety of science career roles, but are less frequently pictured than males. Minority adults and children are respected with less frequency than nonminorities and that minority adults are infrequently depicted in science-related position or career roles.

Clearly, as of 1985, social action science education had made inroads into sexism, but had a long way to go in combatting racism.

The latest study of sexism to be published was that of Mary Hitchcock of Southeastern Oklahoma State University and Gail Tompkins of the University of Oklahoma. The study was an update of Rupley's 1981 content analysis.

Hitchcock and Tompkins work, published in December, 1987, reiterated that sexism had been reduced. Male and female characters were now almost equal in representation. Males were the main characters in 18% of the stories and females were the main characters in 17%.²⁴

The surprising fact was that three times as many stories were now categorized as having main characters which fell under the "other" category. The increase was from 23% to 65%.²⁵

The occupations of female characters were also tabulated. Thirty-seven occupations were noted. This was in contrast to two earlier studies by Graebner, which showed 5 occupations for women in 1961-1963 basal readers and 23 occupations in 1969-1971 basals.²⁶

In 54% of the stories the female characters were children. Hitchcock suggested that this was a direct result of publishers realizing that children preferred to read about children.

In conclusion, sexism in textbooks has made the publishing industry change the content of its basal series. The percentage of male main characters has dropped and the percentage of female main characters has increased. They are now virtually equal. Female career models are also more prominent. The woman is no longer portrayed as a stay-at-home wife and mother but is seen as a viable force in the work world.

Somewhat disturbingly, the increase in main characters in the "other" category is on the upswing. Whether this is a subtle means of discrimination has not yet been determined. Perhaps it is just an effort on the part of the publishers to inject levity into what has become a very closely watched

industry.

The portrayal of females in history texts is often one-dimensional. Accurate representation and complete for credit for historical contributions is often lacking. Controversial aspects are ignored or slighted.

The questions of sexism in science texts has gone beyond the male/female controversy to include minority/nonminority representation and child/adult representation. The necessity for social action science education has been outlined and a plea to educators and publishers has been issued.

In at least the reading field, the plea has been answered with the development of the Council on Interracial Books for Children. Although the Council's development of a non-sexist, non-racist, series of basal readers has been lauded by many educators, criticisms and concerns have also been raised. To what degrees must textbooks concern themselves with the elimination of sexism/racism? Are readers meant to be a forum for curing the ills of society? Most importantly, will changing the content of readers help to increase comprehension on the part of children?

The publishing industry must take all of the research done on sexism into consideration when revising and developing content. The very existence of the Council on Interracial Books for Children will help to motivate the industry to adhere to strict standards. Whether the presence of sexism/racism will be totally abolished is a question that

can only be answered in the future. Let's hope that the answer is YES!

CHAPTER III

SAMPLE

The textbooks chosen for the content analysis are the most recent seventh grade editions. They are major texts used widely throughout the United States. An attempt was made to correlate the 1987 texts to texts used in the 1977 study. However, due to merging of publishers, discontinuance of texts and unavailability, this was not always possible. When necessary, other texts were substituted.

The seventh grade level was chosen so that a standard of comparison could be reached with regards to the earlier (1977) study. Three subjects were covered: mathematics, science, and reading. As noted above, a variety of publishers were covered.

Due to the nature of the texts, different methods of comparison were used. The mathematics texts were checked for male/female illustrations and male/female word problems. The science texts compared male/female illustrations. The reading texts underwent a fourfold examination of sex of authors, sex of main characters, male/female illustrations and single sex stories.

Table 1 shows the texts used in the 1977 study as

Table 1
Textbooks Used For Comparisons

MATHEMATICS

<u>1977 Study</u>			<u>1987 Study</u>		
<u>Text</u>	<u>Publisher</u>	<u>Year</u>	<u>Text</u>	<u>Publisher</u>	<u>Year</u>
Mathematics	Silver Burdett	1970	Mathematics	Silver Burdett	1987
Math Around	Scott Foresman	1975	Invitation to Math	Scott Foresman	1987
School Mathematics	Holt, Rinehart	1974	Riverside Mathematics	Riverside	1987

SCIENCE

<u>1977 Study</u>			<u>1987 Study</u>		
<u>Text</u>	<u>Publisher</u>	<u>Year</u>	<u>Text</u>	<u>Publisher</u>	<u>Year</u>
Modern Science	Holt, Rinehart	1974	Holt Science	Holt, Rinehart	1986
Learning by Invention	Rand, McNally	1973	Life Science	Silver Burdett	1987

READING

<u>1977 Study</u>			<u>1987 Study</u>		
<u>Text</u>	<u>Publisher</u>	<u>Year</u>	<u>Text</u>	<u>Publisher</u>	<u>Year</u>
Open Highways	Scott Foresman	1967	Time Was . . .	Scott Foresman	1987
Thrust	Scott Foresman	1969	Reading Literature	McDougall	1989
Young Americans	Lyons & Ca.	1972	A Road to Travel	Silver Burdett	1987
New Open Highways	Scott Foresman	1973	In Concert	Riverside	1986
Elements of Literature	Holt, Rinehart	1974	Changing Views	Heath	1986

compared to the texts used in the 1987 study.

Mathematics

The examination of the mathematics texts yielded some very interesting results. The content analysis of the word problems counted the total word problems in each book. The number of word problems with male/female subjects was then tallied, followed by a tally of male-only word problems and female-only word problems.

The textbooks used were Scott Foresman's Invitation to Mathematics, Silver Burdett's Mathematics and Riverside's Mathematics.

Scott Foresman had a majority of word problems which did not specify males or females. Instead, words such as team, class, committee, principal, students and they (to denote a married couple) predominated. Plural surnames were also frequent, the Casados, the Lius.

Scott Foresman had a unique feature in the text. Interspersed throughout the chapters was the heading Career, followed by an introduction to an individual stating what they did for a living. A story problem followed utilizing concepts found in that career. Follow up questions also related to the particular field. Not only is the Career information informative and challenging to the student, it also serves to introduce role models using mathematical concepts. Scott Foresman carries out this role model concept

brilliantly. Females are consistently shown in non-sexist environments.

Table 2 points this out.

Mathematics

Sample

The textbooks used were Invitation to Mathematics, Scott Foresman and Company, 1987; Mathematics, Silver Burdett Company, 1987; and Riverside Mathematics, Riverside Publishing Company, 1987.

Procedure

The content analysis of the mathematics texts included a tally of word problems used in the books. The number of total word problems was noted, followed by the number of male/female word problems. Individual counts of male and female problems were then given with the percentage of male problems noted and the percentage of female problems noted. The percentage of female word problems is based on the total number of male/female word problems. This procedure is the same procedure used in the earlier study.

The textbooks were also checked for illustrations. As in the earlier study the number of male illustrations was given, followed by the number of female illustrations. Two other categories were also given, the other group, comprised

Table 2

"CAREERS"

in Scott, Foresman by Gender

MALE

overseer in textile mill

science teacher

nutritionist

cabinet maker

computer programmer

FEMALE

Oceanographer

manager of mill outlet

car salesperson

instrument maker

statistician in sports
department

cartoonist

manager of sports store

ceramic floor tile
designer

of animal, cartoon, and indistinguishable illustrations; and the group category, which tallied mixed sex illustrations of more than two individuals.

Results

A majority of word problems in Scott, Foresman did not specify males or females. Instead, words such as team, class, committee, principal, students and they (to denote a married couple) predominated. Plural surnames were also frequent, such as the Casados, the Lius.

While the male careers are typical male endeavors, with the exception of the nutritionist, the female careers are not stereotyped. The oceanographer, car salesperson and sports statistician are not careers in which women come to mind.

Silver Burdett Mathematics had a large number of family problems, with both male and female members represented. Silver Burdett also had numerous problems in which bisexual names were used for the subjects which made it impossible to identify them as male or female. Representative of these are Jan, Pat, and Jo.

Riverside Mathematics had no outstanding characteristics. The tally of word problem follows in Table 3. Note that the percentages of total male/female word problems in each text is very close. Scott, Foresman had the highest percentage of female vs. male representation which emphasizes their efforts in the area of sexism. Riverside had the most

Table 3

WORD PROBLEMS

<u>Text</u>	<u>Publisher</u>	<u>Total W.P.</u>	<u>Total m/f W.P.</u>	<u>%</u>	<u>Male</u>	<u>%</u>	<u>Female</u>	<u>%</u>
Invit. Mathem.	Scott Foresman	1117	382	34.2	177	46%	205	54
Mathematics	Silver Burdett	979	364	36.1	185	51%	179	49
Mathematics	Riverside	716	237	33.0	132	56%	105	44

ILLUSTRATIONS

<u>Text</u>	<u>Publisher</u>	<u>Male</u>	<u>Female</u>	<u>Other</u>	<u>Group</u>
Invit. Mathem.	Scott Foresman	47	27	13	27
Mathematics	Silver Burdett	59	41	32	43
Mathematics	Riverside	17	13	8	10

disappointing statistics with Silver Burdett close to equal in representation.

In comparison to the earlier study, the number of word problems jumped significantly. However, the percentage of female word problems did not change as a whole. Scott, Foresman had 53% female in 1977 and 54% female in 1988. Silver Burdett had 24% female in 1977 and 49% female in 1988. Holt had 49% female in 1977. Riverside had only 13% female in 1988.

Science

Sample

The science texts used in the study were Holt Science, Holt, Rinehart and Winston, 1986; and Life Science, Silver Burdett & Ginn 1987. These texts are seventh grade level. They were the latest editions available at the time of the study. The Holt text is also the updated Holt science texts that was used in the previous study.

Procedure

The science texts were analyzed for male/female illustrations. Single male and single female illustrations were tabulated. Multiple male and multiple female illustrations were also counted. The other category was also included to account for animal illustrations. Percentages were figured for the human illustrations. The single male

and single female percentages were based on the total number of single human illustrations.

Results

Table 4 shows that Holt had an equal number of single male and single female illustrations in the text. However, multiple male illustrations outnumbered female illustrations, 63.6% to 36.6%. The other category had the largest number of illustrations.

The Silver Burdett text had 55.1% male illustrations and 44.8% single female illustrations. Multiple male and multiple female illustrations were weighted in the opposite direction, with 45.5% male and 54.5% female. Silver Burdett had a much smaller "other" category count with only 25 illustrations as compared to 70 single male and 57 single female illustrations.

Both texts had a relatively small number of multiple male and multiple female illustrations. Holt had 7 multiple male and 4 multiple female illustrations. Silver Burdett had 5 multiple male and 6 multiple female illustrations.

In reference to the earlier study the percentage of single female illustrations in the Holt text increased from 13% to 50%. The percentage of multiple female illustrations increased slightly from 33% to 36.3%. The other texts used in the earlier study showed small percentages of single female illustrations and multiple female illustrations as

Table 4
SCIENCE ILLUSTRATIONS

<u>Text</u>		<u>Publisher</u>			
Holt Science		Holt			
<u>Single M.</u>	<u>Single F.</u>	<u>Multiple M.</u>	<u>Multiple F.</u>	<u>Other</u>	
# %	# %	# %	# %		
17 50.0	17 50.0	7 63.6	4 36.3	69	

<u>Text</u>		<u>Publisher</u>			
Life Science		Silver Burdett			
<u>Single M.</u>	<u>Single F.</u>	<u>Multiple M.</u>	<u>Multiple F.</u>	<u>Other</u>	
# %	# %	# %	# %		
70 55.1	57 44.8	5 45.4	6 54.5	25	

* Percentage based on total number of single illustrations and total number of multiple illustrations.

compared to the Silver Burdett text. Specifically, the percentages were 27% and 28% single female illustrations in 1977 and 44.8% in 1988. Multiple female illustrations compared at 33% and 25% in 1977 to 54.5% in 1988.

Reading

Sample

The reading texts used in the study were Time Was ..., Scott, Foresman, 1987; Changing Views, Heath, 1986; In Concert, Riverside, 1986; A Road to Travel, Silver Burdett & Ginn, 1987; and Reading Literature, McDougall Littell, 1989. All texts were the latest seventh grade editions.

Procedure

The reading texts underwent a fourfold examination. This copied the earlier study. The texts were checked for the sex of the authors; sex of the main characters; male/female illustrations; and single sex stories, that is, stories which featured only male or only female characters. In the tally of illustrations the group category was developed. This category covered illustrations which contained both female and male characters in combinations of two or more. This category was developed because in reviewing the texts the large number of combined sex illustrations was apparent.

Results

The tally of authors showed that four of the five texts used more male than female authors. The sole exception was the Riverside text which represented male and female authors equally. This is shown in Table 5.

The sex of the main characters followed the same pattern with Riverside being the only publisher to have a higher percentage of female main characters than male. Riverside showed 54.1% female characteristics than male. Riverside showed 54.1% female characters. The other four texts tallied 40.6% or fewer female main characters as shown in Table 6.

The illustration category showed that all five texts had a higher percentage of male illustrations than female illustrations. The highest percentage of female illustrations was again in the Riverside text with 47.8 represented.

Four of the five texts had more group illustrations than female illustrations. Riverside had more group illustrations than male illustrations. The group category showed a much higher percentage than the other category, which covered animal illustrations, in three of the five texts.

As compared to the 1977 study, the percentage of female authors has risen slightly. The percentage of female main characters has increased. Scott, Foresman had 14% female main characters in 1977 as compared to 40.6% in 1988. The percentage of female illustrations has also risen, with

Table 5

Reading

Authors

<u>Text</u>	<u>Publisher</u>	<u>Male Authors</u>	<u>%</u>	<u>Female Authors</u>	<u>%</u>
<u>Time Was ...</u>	Scott, Foresman	29	58.0	21	42
<u>Changing Views</u>	Heath American Reader	34	62.9	20	37
<u>In Concert</u>	Riverside	24	50.0	24	50
<u>Road to Travel</u>	Silver Burdett & Ginn	39	69.0	17	30.9
<u>Reading Literature</u>	McDougal	33	55.0	27	45

* Percentage based on total number of authors.



Table 6

Reading

Main Characters

<u>Text</u>	<u>Publisher</u>	Male Main Characters	<u>%</u>	Female Main Characters	<u>%</u>
<u>Time Was ...</u>	Scott, Foresman	19	59.3	13	40.6
<u>Changing Views</u>	Heath American Reader	15	60	10	40
<u>In Concert</u>	Riverside	17	45.9	20	54.1
<u>Road to Travel</u>	Silver Burdett & Ginn	20	62.5	12	37.59
<u>Reading Literature</u>	McDougall	31	79.4	8	20.6

* Percentage based on total number of main characters.

Scott, Foresman showing 16% in 1977 and 33.3% in 1988. Other texts showed 17% in 1977 and 20%, 27.9% and 45% in 1988. Single sex stories showed 0% female in 1977 in two texts. In 1988 their were 0%, 12.5%, 33% and 50% female single sex stories.

Table 7

Reading

Textbook Illustrations By Gender

<u>Text</u>	<u>Publisher</u>	Male		Female		Group		Other	
<u>Time Was ...</u>	Scott, Foresman	78	66.6	39	33.3	59	27.9	35	16.5
<u>Changing Views</u>	Heath	56	73.6	20	26.3	40	29.4	20	14.7
<u>In Concert</u>	Riverside	49	52.1	45	47.8	80	40.4	24	12.1
<u>Road to Travel</u>	Silver Burdett	62	72	24	27.9	31	20.5	34	22.5
<u>Reading Literature</u>	McDougal1 Littell	60	63.8	34	25.5	13	10.3	19	15

* Percentage based on total male and female illustrations.

Table 8

Reading

Single Sex Stories

<u>Text</u>	<u>Publisher</u>	<u>Male Stories</u>	<u>%</u>	<u>Female Stories</u>	<u>%</u>
<u>Time Was ...</u>	Scott, Foresman	7	37.5	1	12.5
<u>Changing Views</u>	Heath American Reader	6	50.0	6	50
<u>In Concert</u>	Riverside	6	66.6	3	33.3
<u>Road to Travel</u>	Silver Burdett & Ginn	16	100.0	0	0
<u>Reading Literature</u>	McDougall	20	83.4	4	16.6

* Percentage based on total number of stories.

CHAPTER IV

CONCLUSIONS

The textbook content analysis as shown in Table 9 yielded disparate results. Strides in the effort to erase sexism are apparent in the mathematics texts. Scott, Foresman leads the way with the inclusion of a nonsexist career section. Females are seen in nonstereotyped roles, utilizing mathematical concepts applicable to their chosen career. Females are also equally represented in word problems. The huge increase in word problem should be noted. This increase reflects the changing direction of current mathematics texts as compared to those of the 1970's. This is an indication that appropriate problem solving has achieved major emphasis in mathematics. Although more males are shown in illustrations, females are highly visible in group illustrations.

Science texts were close to doubling the representation of females in both single male and single female illustrations and multiple male and female illustrations. No evidence of sexism in textbook pictures can be found in current science texts. Credit for the elimination of sexism in science texts can be given to the efforts of The National Science Foundation. The Foundation's push to open up science

Table 9

Comparison 1977/1983

<u>Mathematics</u>	<u>W.P. '77</u>	<u>W.P. '83</u>	<u>M/F '77</u>	<u>MF '88</u>	<u>% Female '77</u>	<u>% Female '88</u>
Silver Burdett	197	979	71	364	24	49
Scott Foresman	377	1117	60	382	53	54
Holt	220		103		49	
Riverside		716		237		44

<u>Science (% Female)</u>	<u>Single '77</u>	<u>Single '83</u>	<u>Multiple '77</u>	<u>Multiple '83</u>
Holt	13	50	23	36
Rand McNally	27		25	
Silver Burdett		45		55

<u>Reading</u>	<u>Authors</u>		<u>Main Char.</u>		<u>Illustrations</u>		<u>Single Sex Stories</u>	
	<u>%F '77</u>	<u>%F '83</u>	<u>%F '77</u>	<u>%F '83</u>	<u>%F '77</u>	<u>%F '88</u>	<u>%F '77</u>	<u>%F '83</u>
Scott Foresman	36	42	14	40.6	16	33.3	0	12.5
Holt	44		25		17		0	
Heath		37		40		20		50
Riverside		50		54		45		33
Silver Burdett & Ginn		31		37.5		27.9		0

education and careers has played an instrumental role in changing the content and appearance of science texts.

As compared to 1977, both mathematics and science texts have made enormous gains in erasing sexism in word problems.

The reading texts are moving toward eliminating sexism. Males still predominate with regards to authors, main characters, illustrations and single sex stories. But percentages comparing 1977 results and 1988 results show that the gap is narrowing.

The discrepancy between mathematics and science texts as compared to reading texts is interesting. Why does it exist? Perhaps mathematics and science texts were so male-oriented in the past that a greater effort was successfully made to reduce sexism.

It must be noted that this study was basically a quantitative rather than a qualitative one. As in any quantitative study the data can be interpreted as the "last word" on the subject. But, the qualitative aspects should not be overlooked. The earlier, 1977, study included a section on mathematical word problems that evaluated the activities the males and females were engaged in. Girls usually were discussed in boring, predictable ways. They were sewing, cooking or engaged in other domestic, safe, tasks. The boys were discussed in terms of more exciting behavior. They were active in sports, out exploring the world, winning prizes, etc. Because the number of word

problems in the 1987 study had escalated to such a huge amount, this qualitative analysis was not done. The practice of including both males and females in the word problems was also another deterrent for pursuing this qualitative analysis.

If a qualitative analysis had been done it would have balanced the numbers. The "headcounts" would have been given an extra dimension. As it stands, the study must be read in terms of being a strict quantitative analysis.

The danger of such a quantitative analysis is that it paves the way for limited sexist reform. When as educator reads the percentages he immediately can ascertain the existence or lack of sexism. When a classroom is run on a nonsexist basis it often exposes a hidden curriculum. Secondary or unintentional outcomes come into play. A teacher can be so busy avoiding sexism that he fails to give a much needed perspective. This perspective is that of historically putting sexist material into a dated frame of reference. Too often educators fail to explain sexism to their students. If a child or an adult is made aware of the existence of sexism in materials they can question its purpose. To be cognizant of the existence of sexism gives the students an evaluative aspect. This serves to heighten their awareness of the problem. It can also be the impetus for change in the student.

When evaluating illustrations it is important that the

reader understand the illustration in relation to the time period that it is portraying. An illustration of Victorian women at work in a sweatshop under the glaring eye of a male foreman must be seen as an accurate portrayal of an age, rather than as a sexist illustration.

Insofar as making recommendations for the future with regards to sexism the first would be to emphasize the historical perspective.

A second suggestion would be to expand the scope of sexism to include racism and ageism. Although the Council on Interracial Books for Children has touched upon this subject, it needs to become a widespread topic. School systems and individual educators must lobby for the removal of racist and ageist materials. Publishers must become sensitive to these issues.

Another issue that publishers must evaluate is the existence of sexism in supplementary materials. Now that textbooks are becoming non-sexist, supplementary materials must follow suit. As discussed in the literature review, many supplementary reading materials are still written strictly for males. This practice must be eliminated.

The outcry against sexism in the 1970's brought results. Perhaps the 1990's can renew the fight for non-biased materials. Let us hope that this fight will be successful.

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