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ABSTRACT
         This handbook is designed to accompany three films:
"Hey! What About Us?", "I is for Important", and "Anything They Want
to Be." Their combined purpose is to help teachers become aware of
what sex role stereotyping is. The films illustrate common examples
of sex bias. The handbook suggests classroom activities and
discussion questions which explore the concept of sex role
stereotyping in schools. It also provides factual information about
sex differences. The handbook might be used as a text in teacher
education courses, or as a resource by anyone wanting information on
sex role stereotyping. The section on teaching information includes
an introduction of the topic; transcripts of the films;
recommendations for their use; and a resource list. The section on
research information includes definitions of terms; problems;
importance of familiarity with the research; an overview of the
research; and a bibliography. (Author/BP)

Price: $5.00

CONTENTS

"We argue for . . . more flexible and more tolerant definitions of sex roles, because the livelihood and health of the American nation depends upon the talents of all its members, because the absence of restrictive stereotypes enhances the liberty and human potential of all persons, and because simple fairness and equity demand it."

(Saario, Tittle, and Jacklin, 1974)

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ACKNOWLEDGMENTS

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The students and actors who appeared in the films are mentioned at the end of the Film section of this handbook.

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PREFACE

This handbook and the three films on sex role stereotyping in schools which accompany it (HEY! WHAT ABOUT US?, I IS FOR IMPOR-TANT, and ANTHING THEY WANT TO BE) are meant to help teachers become aware of what sex role stereotyping is. They do not indicate how change takes place or what the most effective methods of changing stereo-typed perceptions in teachers and students are. That is the work of other current and future projects by our staff and others around the country. The films facilitate observation. The handbook suggests classroom activities and discussion questions which explore the concept of sex role stereotyping in schools; it also provides factual information about sex differences.

This handbook can be used as a text by professors of teacher education courses, as assigned reading for students, or as a resource for anyone wanting information about sex role stereotyping and sex differences. In addition to the handbook, a short guide containing discussion questions and course or workshop activities accompanies the films. Much of the material in this guide has been excerpted from various sections of the handbook.

The films and teacher handbook were produced under a one-year Protocol Materials grant from the U.S. Office of Education, and were a joint under-taking of the Far West Laboratory for Educational Research and Develop-ment and the Stanford Center for Research and Development in Teaching. The project adhered to a research-and-development process which followed these basic steps:

1. Literature review and concept definition: reviewing and abstracting of the literature on sex differences and sex role stereotyping in schools; de-fining of the concept to be illustrated.

2. Classroom observation: observation of teachers and students in 12 schools in the Bay Area (mostly elementary, some secondary); interview-ing of teachers and students, for the purpose of collecting examples of sex role stereotyping in schools (every example written on a 5 x 8 card).

3. Refining of concept definition: sorting of 5 x 8 cards into categories of physical, intellectual, social and emotional sex role stereotyping (non-examples and ambiguous examples discarded).

4. Script writing: creating, through collaboration of project staff and a professional writer, of three film scripts on physical, intellectual/career, and social emotional sex role stereotyping, incorporating examples from the observations and interviews; each script critiqued by consultants with teaching experience in changing stereotypes in schools.

5. Filming: coordination of project staff and technical crew to film the 22 scenes of the films in seven schools in the Bay Area; teaching parts played by actors with teaching experience; student parts generally played by children who had a familiarity with the subject or situation they enacted (they used their own words, within the framework of each scene).

6. Editing: collaboration of project and technical staff to edit footage into three films totalling 34 minutes; critiquing by teacher education staff at three stages during the editing process.

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7. Field testing: evaluation of potency and acceptability of the films by the Program on Teaching Effectiveness at the Stanford Center for Research and Development in Teaching.

This handbook is divided into two main sections: teaching information and research information. The teaching information includes:

Sex Role Stereotyping: What Is It?: an introduction to the topic.

The Films: transcripts of each scene, as well as interpretations of their content and suggested activities for course participants.

Recommendations for Using the Materials: suggested procedures for use with adult and student groups, and possible discussion questions.

Resources: organizations and publications helpful to teachers wanting more information and materials defining the problem of sex role stereotyping in schools and strategies to eliminate it.

The research information includes:

Definitions of terms related to sex role stereotyping.

Problems associated with interpreting research on sex differences.

Importance of being familiar with research which attempts to sort out the facts from the myths about sex differences.

Overview of the research on sex role socialization and on physical, intellectual, and social and emotional sex differences.

Bibliography of references mentioned throughout the handbook.

When people discuss the films, there is usually controversy about the importance of the issue, about what stereotypes are illustrated, and about whether and how the stereotypes should be changed. The expression of these conflicting views is the means by which awareness of the issue is created.

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SEX ROLE STEREOTYPING:
WHY IS IT AN ISSUE?

Just as for centuries human beings have been pigeonholed according to color, similarly they have been characterized according to sex: man, the producer; woman, the dependent. We are living in a time when this pigeonhole system is being openly questioned. As consciousness has grown, it has become apparent that one area where elimination of sex stereotyping must be initiated is in the classroom.

The films and this handbook on sex role stereotyping are directed to the teacher and to the prospective teacher concerned with helping children fulfill their potential roles in life. The agent for exposing that potential can be the teacher. But the teacher, no matter how "liberated," has two rows to hoe if she or he is to succeed in that exposure: the child's background and the teacher's own background.

A child, by the time school life begins, has spent five years at home where often dolls are designated for girls, trucks and guns for boys. Roles have been set by adults who want boys to be "all boy" and girls to be "feminine."

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Parents and others may telegraph alarm if children don't meet these expectations and the result may be children coming to the classroom silently confused. A teacher, conscientious about overcoming sexism in the classroom, soon realizes that a child's experiences may be in direct conflict with what she or he is trying to foster: a child for whom all kinds of possibilities exist.

Often, too, that potential is not realized because all of us have our own sets and pass them on. As one educational researcher points out, " . . . ironically, teachers, former victims of sex typing in the socialization process, become its new transmitters." (Frazier and Sadker, 1973)

Just how does this transmission take place? Look at a survey of junior high school teachers who were asked to list the characteristics of good male and good female students. (Kemer, 1965) Here are the adjectives they used:

Adjectives Describing Good Female Students	Adjectives Describing Good Male Students
appreciative	active
calm	adventurous
conscientious	aggressive
considerate	assertive
cooperative	curious
mannerly	energetic
poised	enterprising
sensitive	frank
dependable	independent
efficient	inventive
mature	
obliging	
thorough	

In all likelihood, these teachers—presumably both women and men—believed themselves "conscientious," "sensitive" and "mature," as well as "curious," "frank" and "inventive" when they approached this study. But, apparently, they were not seeing their students in the same light in their classrooms and counseling chambers. Their own behavior toward their students placed these students in categories or pigeonholes which could inhibit psychological, social, economic and political growth for a lifetime.

Fortunately, in this nation awareness is growing that sexism is detrimental to both sexes, psychologically as well as economically. More and more, one sees articles decrying the fact that women have been shunted into menial jobs, have had their economic rights ignored and even legislated away, and that men are under pressures detrimental to their health and sanity.

Politically, until recent times women have been invisible and have had little hand in influencing their individual and collective rights, an irony in a nation that commends itself as a democracy. But times are changing and many women are no longer willing to accept second class citizenship. Nor need they. Introduction of the Equal Rights Amendment, which has been ratified by 33 of the 38 requisite state legislatures, inspired the formation of political action groups, including the National Women's Political Caucus in 1971. Its purpose: to heighten the political awareness of women, who con-

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stitute 53 per cent of the voting population. State and regional caucuses have also formed and for the first time, in the 1972 political conventions, women were represented in state delegations in "reasonable" ratio to their presence in the population.

Coming closer to home—to schools—Title IX of the Higher Education Act of 1972 prohibits discrimination because of sex in educational programs ranging from preschools to universities that receive federal funding. This legislation is expected to have important effects on discrimination in hiring of teachers, granting of leave for pregnant teachers, physical education, sex education, shop and home economics classes, extracurricular activities, and university admissions and hiring. Guidelines for Title IX have been proposed by the Office of Civil Rights, Department of Health, Education and Welfare.

As of July 1972, the Equal Pay Act of 1963 was changed to provide coverage for professional and administrative employees in private and public preschools. elementary and secondary schools and on up. The Equal Opportunity Act of 1972 extends the enforcement of the Equal Employment Opportunity Commission and coverage of Title VII of the Civil Rights Act of 1964 to employees of public and private educational facilities. This means it is no longer legal to discriminate in employment because of race, color, religion, national origin—or sex.

Obviously, if it has taken this long to legislate against discrimination in employment, it's going to take even longer to redirect our thinking in many other spheres. If, legally, sex discrimination cannot exist on the employment scene, *what is being done to prepare young children and adolescents for the employment opportunities now open to all?*

Statistics show that while more boys than girls drop out of high schools, more men than women finish college. In high school, many girls lose their momentum academically. Marriage is still held up as the goal for young women to seek; future employment is considered less important. Boys are encouraged to study a wide range of careers; girls are limited to, as few as four. Yet, statistics show that offering girls limited opportunities does not correspond with the facts of life in the U.S.: that most women, sooner or later, must work—not merely to supplement income but to earn income as the heads of households.

Consider these simple facts: nine out of ten females will work at some time in their lives. Seventy-five per cent of the nation's "menial" jobs—housekeeping, dressmaking, bookkeeping, typing, waitressing, etc. are held by women—by women who have to work. Between 1960 and 1970, the number of families increased only 14 per cent. The number of families headed by men with incomes below the poverty line ($3,700 for a family of four) was reduced by one-half, while the number of poor families headed by women remained virtually unchanged. More than five million families in the U.S. are headed by women and nearly two million of these families are on welfare. (Berkeley Unified School District Women's Task Force, 1972)

Not only do women find themselves more often in the menial jobs, they also find themselves getting lower wages for them. Women who aspire to the professions also receive far lower salaries than men. For example, ac-

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cording to 1970 Census figures comparing median wages of men and women, women professional and technical workers received about $4,000 a year less than men; "non-farm managers," officials and proprietors, over $5,000 less; clerical workers, about $3,000 less; sales workers, nearly $6,000 less; "operatives," $3,000 less. Hopefully, with the recently enacted legislation, some of these figures will change.

In the meantime, these statistics do not always find their way into the offices of school counselors. In their study of sex discrimination in schools, the Citizen's Advisory Council on the Status of Women (1972) noted: "Many counselors and teachers lack information and sensitivity to changing life patterns of women to widening vocational and higher educational opportunities resulting from changing attitudes and equal legislation."

Generally, too, girls develop a poor opinion of themselves and of other girls' abilities and have a far higher opinion of men and their abilities. Girls' low self-esteem increases rather than declines with schooling—it appears to be nurtured by it, in fact. Girls are given short shrift when it comes to sports, physical education and extracurricular activities. The Citizen's Advisory Council on the Status of Women, which observed shortcomings in counseling, expressed the belief that "short-changing of girls in physical education and sports deprives them of the opportunity to establish life-time habits of exercise which lead to a high level of continuing good health in adult life."

A male physical education teacher expresses this view: "Sports and male chauvinism go hand-in-hand in our culture. The myths of universal male aggressiveness, male dominance, male superiority are daily confirmed in the practice of sports in the schools. In most schools, boys' physical education is given preference over girls' physical education in space, time, and scheduling. Most important of all, male physical education teachers laugh their way through sex education, teaching a double standard so blatant it would anger the editor of a provincial newspaper's most conservative women's page." (Vonesor, 1972)

If women are pressured out of sports, boys are pressured into sports; the same physical education teacher asks: "How many male sexual identities are threatened and destroyed because young people do not have the athletic ability to live up to the model of the strong-man-athlete-hero-victor held up by the schools and by society as a sexual ideal?" (Vonesor, 1972)

In extracurricular activities, girls are not as evident on debating and chess teams, school newspapers, safety patrols, etc. They are limited in their choice of instruments for the school band. They can answer the phone in the school office. Boys may be excluded from activities in the fine arts—dance, poetry, etc. And so sexism flourishes, obviously as noted above, and more often, in subtle ways in the classroom and on the playing fields.

Sex role bias can appear in the classroom in a teacher's seating arrangements, choice of "helpers," casual remarks to students, less casual remarks in lectures. It exists in the non-discussed "dress codes." Long, careful observation is required before solutions can be achieved. Teachers who look

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around their schools at children, other teachers, administrators and curriculum materials for signs of sex stereotyping really must begin with examining themselves. As one woman teacher has written:

> "Before we attempt to change children's behavior or our behavior with them, we have to examine how we feel about ourselves as women or men. Can we teach girls to respect themselves and take themselves seriously if we, as women, do not have the same attitudes toward ourselves?" (MacEwan, 1972)

Nor can men help boys to become flexible, sensitive people if they cannot share decision making or express their emotions.

There are signs that teachers in the United States are already embarked on this kind of self-examination. Take "A Chauvinistic Index for Education" that one publication for educators printed. (Van Vuuren, 1972) The Index brings out some of the day-to-day remarks that teachers casually—and traditionally—make and some of the assignments they give. The questions:

1. Do you generally ask boys to do heavy work and perform executive duties in the classroom, and girls to do light work and secretarial chores?
2a. Do you pity girls who are unable or unwilling to be fashionable or call special attention to those who are fashionable?
2b. Do you pity boys who are unable or unwilling to be athletic or call special attention to those who are athletic?
3. Do you react negatively to boys who have long hair or to girls who wear slacks?
4. Do you plan different activities, or different adaptations of the same activity, for boys and for girls?
5. Do your lessons include more exciting role models for boys than for girls? (Do you stereotype women as housewives, mothers, or workers in menial or supportive positions?)
6. Do you use slang terms such as sissy, fag, tomboy, chick, etc.?
7. Do you say, "Boys shouldn't hit girls," "Ladies before gentlemen," "Ladies don't talk that way?"
8. Do you expect girls to be more verbal and artistic than boys, or boys to be more mathematical and scientific than girls?
9. Do you feel it is more important to help boys sort out career options than it is to help girls?
10. Do you tend to discipline girls verbally and leniently, but boys physically and strictly?

These questions fall generally into three categories: physical sex role stereotyping ("boys are strong, girls are weak"), social-emotional sex role stereotyping ("boys should be boys, girls should be feminine" and "boys don't cry, girls do cry") and intellectual-career sex role stereotyping ("boys

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can fix things, girls assist" and "boys are doctors, girls are nurses"). In the last category there is room for another observation that may bring twinges at the adult level: "Women are teachers, men are principals." In California, for example, almost 67 per cent of the public elementary and secondary school teachers are women, yet men hold 82 per cent of the elementary principalships, 96 per cent of the junior high pricipalships and 98.5 per cent of the senior high principalships. (Berkeley Unified School District Women's Task Force, 1972)

Thus, the fact that the majority of U.S. teachers are women and the majority of U.S. school administrators are men drives home a point: Teachers themselves have been victims of a sexist system. Women have been passed over often for administrative roles; men interested in entering the classroom have been told that it is "female territory." Sexism has affected teachers' lives economically and psychologically. This fact alone may provide good reason for teachers to look at the way they regard the potential of their students. Must children be stymied in the same way? If the answer is no, take a look at the doll corner. Any boys playing there? Take a look at the workbench. Any girls hammering there? Better yet, take a look at the books the students are reading. Must clever Dick always triumph over weak Jane?

We realize a teacher can't combat sexism alone. Children are in school up to six hours a day; the rest of the time they are in the outside world, playing with friends, watching television, reading on their own, interacting with their families. These experiences enter the school door with them. If boys don't allow girls to play baseball on the sandlot, they're not going to change their minds (without gentle coercion) on the school playground. If boys are chased out of the family kitchen, they're not going to feel encouraged to try cooking in school. Fathers and mothers express anxiety about masculinity and femininity in their children, relatives and friends chime in; television commercials promote false images of "manhood" (the Marlboro Man) and of "womanhood" ("my bleach is better than yours"). The variety of ethnic and religious admonitions regarding sex stereotyping figure in children's behavior as well.

As the Resources chapter in this handbook indicates, some assistance is available to teachers concerned with eliminating sex role stereotyping from their classrooms. Books, films and reports are being written on the subject. Some organizations have become national headquarters for curricula (elementary, secondary, higher education) that challenge sex role stereotyping. Local organizations, such as chapters of the National Organization of Women (NOW), school district women's task forces, and parents' groups, are holding or sponsoring workshops. Concern is growing. The number of tools is increasing.

Obviously, changing one's own attitude, the attitudes of parents, other teachers and administrators and, to top it all, revising curricula are enormous tasks. Monday morning can be the start but the distance to run is long and largely uncharted. Much that needs to be known is not known; researchers in sex role stereotyping admit that. But there is sufficient information

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available to get going and there is, certainly, sufficient reason. Ideally, educators have maintained, the purpose of school is to help children discover the best within themselves and to begin using it. Sexism cripples that worthy intention. Gradual effort to destroy stereotyping, which has been destructive to boys and girls, men and women, will help accomplish it.

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THE FILMS:

TRANSCRIPTS,

INTERPRETATIONS,

INSTRUCTIONAL ACTIVITIES

The Protocol films address three different areas in which sex role stereotypes are common. HEY! WHAT ABOUT US? covers stereotypes in physical activities; I IS FOR IMPORTANT deals with social and emotional stereotypes (interpersonal interactions, personality characteristics), and ANYTHING THEY WANT TO BE includes stereotypes in intellectual functioning and career preparation. The stereotypes are presented in a variety of school contexts—in the classroom, on the playground, during and after school hours. between teachers and students, and among students.

The annotations following the transcript of each scene contain an interpretation of the scene's main points and an activity which a preservice or inservice instructor might assign to students. These activities include: research questions, classroom observation, investigation of sex role stereotyping in local institutions, examination of curricula for sex role bias, thinking about curricula to eradicate sex role stereotypes, selected readings, and discussion questions.

The transcripts contain only the verbal portion of each scene. We did not want to risk biasing the viewer by describing or interpreting the nonverbal and physical actions and interactions.

HEY! WHAT ABOUT US?

Sex Role Stereotyping

in Physical Activities

This film describes sex role stereotyping in various types of physical activities in schools—in physical education, on the playground, in rambunctious activity in classrooms, in references to physical prowess in curriculum materials.

Special Note on Scenes 1–4

The first four scenes of this film represent interactions in which sex role stereotypes are absent or relatively absent. Girls and boys are engaged in activities typical of the opposite sex—a girl displays competence in football in Scene 1; or a boy is skilled in dancing in Scene 4. The activities in these scenes challenge the usual conceptions of "masculinity" and "femininity." Thus, while physical aggression is stereotypically masculine, the boys in Scene 2 do not submit to pressures to continue fighting. Similarly, Scene 3 portrays a girl who is not "fragile," and can successfully compete with a male opponent. These four somewhat idealized scenes may seem unusual to the viewer because all of us, to some extent, believe social stereotypes; that is, they may seem "unnatural" in addition to being atypical.

SCENE 1

G: Vanessa, you're going to go out long and cut short. Troy, you're going to go out short and cut long. Okay, Seton, you're going to center it to me and you two guys are going to watch for me. Okay, break!

Hike one, hike two, hike three!

Ss: Yay! Boo!

Main Points

– The performance of the girls highlights the fact that girls are quite capable of excelling at traditionally "masculine" sports.
– In this scene, girls and boys are involved in team work. This is happening today in very few places in this country.
– The fact that the two sexes are playing the same sport indicates they have had equal opportunities to gain the skills of the game. Again, this is not yet true in most schools.

Instructional Activity

Can you find specific information in this handbook's chapter on physical differences to support or refute the picture of girls' athletic ability portrayed in this scene?

SCENE 2

T: Move forward! You aren't supposed to walk backward all your life! Atta way, Sergio, go after him—keep your guard up, come on, Terrance, go forward—that's more like it, yeah. Come on, Sergio, he's wide open there for you—go on, move. Now come on back now, move back a little bit—now move in on him. That's it. Keep your guard up, Terrance, lead with the left now. Lead with the left and then come on around him. That's a boy. What's the matter with you, are you chicken? Come on, Terrance, move in on him. No, no, no, no, that's no good, you've got to keep moving forward, Terrance. Keep your guard up, you're letting it down, Sergio, you're going to pop him one. Why don't you go ahead? Are you afraid? Come on, hit him now, don't be afraid. Come on, Sergio, you're backing up, don't be afraid. Come on, move in, that's a boy, that's a boy. Come on, Sergio, now don't

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you start backing up. Go in. drive, drive. That's it. lead with the left.
Are you going to let it hang there? Come on, okay, let's go, that's a
boy, come on—hey, what are you doing? Hey, is this some new way
of boxing, you guys? What's going on? Where are you two guys going?
Come on, you guys, you two guys over there, come on, let's go.
Let's show these guys how to box. Let's have something going on.

Main Points

- The popular definition of manhood as expressed in the coach's eagerness
  to have the boys fight to the finish implies: It is better to cause physical
  harm than to be thought of as chicken.
- The scene presents the possibility of a different set of values. When
  the boys confront the coach by stopping the fight before one of them
  gets hurt, they are saying: We are not equal fighters. One of us is going
  to get hurt. It is more honorable to end the fight than cause physical
  harm.

Instructional Activity

Read the book *Unbecoming Men.* (Bradley, M., L. Danchick, M. Fager,
and T. Wodetski. Washington, J. J.: Times Change Press, 1971) What are
some of the ways these men define manhood that differ from current stereo-
typic definitions?

JUDO CLASS   SCENE 3

Main Points

- Girls can perform competently in physical disciplines that require high
  skill.
- Girls can survive apparently rough activity as well as boys.
- Girls can learn to defend themselves skillfully.

Instructional Activity

Visit a judo or karate studio and observe a class that has both women
and men or girls and boys. Choose one or two persons—an instructor, a
female participant, or a parent of a participant—and ask: Since learning
this art (or: teaching it, watching your child learn), have any of your assump-
tions, expectations or ideas about what girls can do in sports changed? If
not, what did you previously think that you still think about girls' capabilities
in sports?

DANCE CLASS   SCENE 4

Main Points

- Dance as an art form is an appropriate activity for men.
- The high school age dance leader in this scene has already obtained
  considerable skill as a dancer. If he is attempting to develop a career
  as a dancer, it is unfortunate he will not have an opportunity to study
  dance within the high school curriculum.

Instructional Activity

Investigate the situation in a local school district. Are there any dance or
other art classes which are offered only to women?

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SCENE 5

T: Okay, yesterday we all read a story about a baseball game and promise. Now, let's review the important part of that story. Bob had promised his sister one turn at bat. It was the last inning and the score was tied. Lisa, can you tell me what happened?

G: Um, can I read it?

T: Yes, go ahead.

G: Okay. "The pitch was high, very high, in fact. It looked like it was coming straight at Susie's head. She ducked, and as she did the ball hit the bat. It rolled so slowly down the third base line, the catcher threw off his mask and raced down to pick it up. But Stan was already halfway up the baseline. The catcher never even saw him run by. And Stan had scored the winning run on Susie's hit. And it had all been an accident."

T: Let's talk about the point of the story: *promises*. Why did Bob let his sister have a turn at bat? Seton?

B: Well, I guess he did have to keep his promise.

T: Do you think it was a true story?

B: Yeah, I guess it could be.

T: Why?

B: Because no girl could ever hit a ball and win a game except by accident.

Main Points

– Some literature and textbooks communicate and reinforce stereotypes.
– A teacher can perpetrate or reinforce the stereotypes expressed in print by not pointing out and correcting this form of bias.
– The scene highlights the following stereotype: Girls are not capable of excelling in sports.

Instructional Activity

View slides on sex role stereotyping in textbooks. There are currently several such slide shows available. One often-used slide package on sex role stereotyping in children's readers can be obtained from Women on Words and Images, Box 2163, Princeton, New Jersey 08540.

SCENE 6

B_1: I'll take Barry.

B_2: Willy.

B_1: We're going to beat you guys.

B_1: Sean.

B_2: Troy.

B_1: I guess we've got enough.

B_2: Let's go.

G_1: Hey, what about us?

B_1: Well, what about you?

G_1: We want to play.

B_1: You can't play.

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B₃: Come on, give back the ball. You ain't playing ball no matter what, anyway.
G₂: Not until we get to play.
B₃: You can't play and you know it. I bet you can't even bat, you can't even pitch.
G₁: I bet I can bat better than you.
B₃: Give the ball back.
B: Come on, we got the ball, let's go!
B: Let's go play some baseball.

Main Point

— One of the results of stereotypes communicated by society and reinforced by biased textbooks is the exclusion of one sex from activities practiced by the other.

Instructional Activity

Examine your own beliefs. Can you think of one or two sports activities which you think should or could not be performed by women? By men? What feelings and evidence form the basis for your opinion? What feelings and evidence could be used to argue the opposite point of view?

SCENE 7

T: Okay, Terrance, now come on, tell me—what seems to be the trouble?
B: These boys, they were outside, they came over and then one of them took my glasses.
T: What happened? That's all right, go ahead, that's all right, don't be afraid.
B: He ran away and he dropped them and broke them.
T: Aw, gee, that's a shame. Well, I'll tell you, we'll get to the bottom of the problem. We'll solve it for you. But, you know, son, there is one thing I think you'd better work on, and that's sort of being able to stand up on your own two feet. You know, do you have something on your mind? What do you do at home?
B: I want to be a scientist.
T: A what?
B: A scientist.
T: A scientist. Hm, well, that's all right, but you know when you get out in the big, wide world there's one thing that you are going to have to learn, and that is that somebody who has a body that can do 25 good push-ups, he is going to be admired as much or maybe even more than some scientist up in a crummy old laboratory. You've gotta be a man.

Main Points

— The popular or folk definition of "being a man" often implies the possession of considerable physical prowess and the willingness to express physical aggression when psychological or physical strength is challenged.
— Those boys who are not physically strong and aggressive may at times be taunted by other students.

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— Success in sports is often a more highly valued standard for boys than success in school subjects; this type of success may be regarded as feminine. (However, science, the subject referred to in this scene, is frequently considered a masculine subject area.)

Instructional Activity

Observe the boys in your class or arrange to observe several physical education periods in another teacher's classroom. Can you identify boys who are not interested in sports or hesitant to participate because they are not skilled? Does this create any special problems for these boys? Estimate what percentage of the boys in this class would express or exhibit hesitation or negative emotions about some sports experiences if they felt free to do so.

<center>SCENE 8</center>

Gs: Maja, don't—hey don't—come on.
     1, 2, 3, 4, 5, 6, 7, 8—
T: Girls, girls, relax. That's enough.

B: Hey, I want that!
T: Hey, hey, troops, what's going on here? Oh, slides, huh? Whose is it?
B: Mine. I had it and he took it from the microscope.
T: Oh, come on, let's save it for later, huh? Come on.
B: But I was looking through it, and he snatched it.
T: Later, huh, okay?

Main Points

— It is expected that girls will be demure and quiet, that boys will be rough and playful.
— Girls are more likely to be reprimanded by teachers than boys for essentially similar roughhousing.
— This differential treatment on the part of the teacher may have a strong impact on the children, causing them to behave in conformance with the stereotypes, and thus fulfill the prophecy the stereotype prescribes.

Instructional Activity

Use the handbook (particularly the section on socialization) to find research that supports the following statement: Some personality and behavior attributes that are considered inherent differences between males and females may actually be learned differences.

<center>SCENE 9</center>

T: Are you all right?
B: Yeah.
T: Oh, you're okay.

T: Are you hurt? That was really quite a fall. Are you going to be okay?

Main Points

— The scene highlights the stereotypes: 1) Boys are tough, they can take a lot of physical abuse without getting hurt; 2) Girls are fragile, they can be easily hurt in physical play.

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– The communication and reinforcement of stereotypes involve a complicated chain of events:
  · As a *consequence* of these stereotypes, teachers sometimes treat girls and boys differently in situations involving physical danger.
  · Such differential treatment of girls and boys is one way a teacher might communicate unequal sex role expectations.
  · As a *consequence* of this differential teacher treatment, a boy who is hurt may not get the physical or psychological attention he needs; a girl may be treated in an overprotected manner.
  · And possibly as a *consequence* of the differing expectations, girls at times react more emotionally to physical risk, and boys react with more self-confidence.

Instructional Activity

Discuss whether this and other examples of differential treatment in physical activities relate to future career choices? If so, how and to what categories of career choices? If not, explain.

SCENE 10

T: Hi, Richard, come on in.

B: Would you show me some of those steps?

T: Okay. It's very basic, start with the right foot out, to the side, then go down, two, three, four, and do eight of those. Right? Okay. We'll start from there. One, two, three, four, five, six, seven, eight, and up again. Six, seven, eight and come down all in one thrust. One, hold for four, three, four, then come up on your right foot. Bring it up, one, two, three, four.

B: You know, I don't really understand why the administration won't let me in your dance class. I mean, I really like dance.

T: Want to take it with some music now?

B: Okay.

music

T: You know, I really tried to get you into this class.

music

Main Points

– Dance as an art form is not considered an activity appropriate for men.
– This stereotype has led to the exclusion of boys from dance instruction in some public schools.

Instructional Activity

Plan a two part teaching strategy for the purpose of beginning to change this stereotype in fourth through sixth grades. Part one should be aimed at helping the students recognize or discover the stereotype in their own thinking or in the society's; e.g., reading an autobiography in which a professional male dancer talks about his confrontation with the stereotype, a writing exercise in which students fantasize having an artistic career generally thought to be appropriate to the opposite sex. Part two should provide an experience which points out that the stereotype is based on something untrue (or some-

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thing which need not be true), e.g., attending a dance concert of a company in which a significant number of the dancers are male, having the children do movements to music on several occasions with both boys and girls eventually initiating movements which the others can imitate.

I IS FOR IMPORTANT

Sex Role Stereotyping in
Social and Emotional Events

This film covers examples of sex role stereotyping in social interaction and emotional expression in schools. The scenes include sex role bias in teachers' disciplinary actions and student task assignments, children's resistance to role reversal in kindergarten play, boys' anxiety about seeming to be a sissy in front of peers, the frustration of boys who attempt to assume a nurturing role, the endoctrination of girls with a commercial definition of beauty.

SCENE 1

B: Carolyn, transfer me a red pencil.
G: 5, 4, 3, 2, 1, blastoff.
B: 5, 0, blastoff.
G: Ready to blastoff—5, 4, 3, 2, 1.
T: Monica, what is this?
G: Oh, it's all right, Miss Lee. See, I finished all my math. I was just having some fun passing the pens around.
T: Yeah, but this is not the time for fun. I'm surprised at you—see how nicely the other girls are working?

Main Points

- Stereotype: Girls are not usually interested in play that calls for inventiveness and experimentation; they prefer more passive pastimes.
- In some schools, children of both sexes, but particularly girls, are expected to behave in a subdued manner in the classroom. It is often assumed that boys will more frequently transgress this code.

Instructional Activity

There have been some anthropological and psychological studies on children's play. Read several articles from this literature. Do any of the studies tend to support the idea that girls' play is basically more passive?

SCENE 2

Ss: What are we having for lunch? . . . Oh, I'm so hungry . . . Same crap again as yesterday . . .
T: Girls, girls, could you come back here for a second?
Gs: Yes?

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T: I need some secretarial help, very similar to what we've done in the past, but this time it's going to take a little more work. Do I have any volunteers?

Gs: Yeah, sure.

T: Okay, well, what I need now is some of that good feminine handwriting.

G: Me.

G: No, me.

T: Sarah, well, I think you *and* Kim can do it. I'll give you the envelopes to address. Sarah, you take this and you can fold them and put them inside the envelopes, okay? This will take some time; I'll be back in about an hour just about the end of the lunch period. I'd like to have it done if it's possible.

Gs: Yeah, yeah.

T: Okay, have a good time but get the job done.

G: Which envelopes am I supposed to put them in? I thought I was supposed to put 'em in this.

G: Hey, you guys, you know what happened? We called up Eric and we go hello, is Eric there? And she goes yeah, just a minute, and we go oh, never mind, bye! And we hung up, and we didn't have the telephone number . . .

G: And we thought, you're a traffic boy, aren't you? This is Mr. Yamahashi, we'd like to make you head traffic boy—and then we found out he wasn't a traffic boy any more.

G: He had quit the traffic.

G: Uh huh, and . . .

(passage of time)

T: Oh, are we just about done?

S: Yeah, it's done.

T: Good. Can I see a sample of what we've done?

G: Is this okay? Isn't my handwriting cute?

T: Sarah, this is it, your handwriting gets prettier and prettier every day. You girls did a fine job. Really, I don't know what I'd do without you.

Main Points

– Stereotype: It is appropriate for women to undertake tasks and occupations which serve and assist men.

– The scene reflects a condition in which girls are dependent on males for approval, regardless of whether the approval is of their beauty or of their competence.

Instructional Activity

Select two television programs and/or commercials in which a woman is portrayed in a subservient role. Describe the role by citing the words, actions, interactions, and emotions which characterize it.

SCENE 3

G: Want some muffins?

G: You want a paper towel?

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G: I want to play house and I want to be the big sister.
G: That's okay.
G: I want to be the mamma.
B: Hey. can I play? I want to be the baby.
G: No, you're not!
B: Why not?
G: No, because babies cry and big boys don't.
B: I still want to be the baby.
G: Maybe you can be a big baby cause they don't cry so much.
B: I won't cry much.

Main Points

- Stereotype: Boys and men should not openly express their emotions.
- The two sexes should not intermix in traditionally feminine and masculine activities, i.e., girls belong in the doll corner; boys in the carpentry corner.
- The rejection by opposite-sex peers can be painful and leave a lasting impression, particularly on young children

Instructional Activity

(a) Observe in a primary school classroom. Is there anything in the arrangement of furniture, selection of decorations, assignment of activity sections that either reinforces sex role stereotyping or does not sufficiently encourage exploration of role-less possibilities for self-expression? (b) Locate a children's story on the primary school level that shows a boy expressing painful feelings openly and without reproval.

SCENE 4

B: Hey. Willie, come on! What are you doing?

Main Points

- Stereotype: Expressions of tenderness and poetry are not appropriate for boys . . . except perhaps in private.
- Peers have power where stereotypes are concerned. The possibility of being discovered with a flower is too threatening for this fourth grader. He might be called or thought a sissy and that is intolerable to a young boy in this society.

Instructional Activity

Read or reread passages of *Cyrano de Bergerac* where Cyrano is speaking tenderly. Is there anything jarring in the image of this burly man speaking with so much sentiment? If not, do special circumstances of the drama (and perhaps the historical period) make this a special case? Name at least five other roles in movies or plays in which a male expresses tender emotions openly. In these cases, does it seem unlikely that the event could occur off-stage?

SCENE 5

B: What happened? Hey, come on, let's take the bike off, come on man, what happened? Come on, Daryl, it's okay.

B: You think you're okay? Good. That bike shouldn't hurt you any more,
you should just climb up there and ride away. I had a bike like that and
I used to always be falling off it, getting hurt worse than you did. Man,
you're pretty good, man, getting a lot better.
G: What happened?
B: Oh, he was just hurt on his bicycle. I think you're pretty brave to take
that, don't you think? You're okay now, aren't you. I think you want
something to eat, don't you?
G: Oh, he looks pretty beat up to me, Rob. I think I'd better bring him
back to the house and get him fixed.
B: No, it's okay.
G: Daryl, come on, I'm going to bring you back and get you cleaned up.
B: No, I've got him.
B: (looking after them) I was doing a fine job.

Main Points

– Stereotype: Nurturing is part of the feminine role.
– Stereotype: Men lack a certain natural aptitude for ministering to per-
sons needing tender care in times of stress.
– There is, of course, nothing really inconsistent about a person being
independent and having an ability to give tender, loving care or perform
simple caretaking chores. It is especially difficult for a boy or man who
enjoys taking care of others, particularly children, to be told that such
behavior is unsuitable to his sex.

Instructional Activity

Some persons believe the job of male nurse might attract more candidates
if the label were changed to something with a more masculine connotation.
Do you agree with this approach? Discuss both the implications of proposing
to make this change and the social effects of doing so.

SCENE 6

T (f): And you, oh, my dear, very nice, but I think you should learn to
sit up straight. You should watch your posture because posture is
very important to a lady. And then we might, oh, let's see, I
think perhaps thin out your eyebrows a little, reshape them and
you'll look perfectly beautiful. You have good possibilities.

And you, dear—oh, well, now, your hair is rather thin, but don't
worry about that because we can do things to it, put things on it
that will make it seem fuller, and give it more life. And I think
perhaps we'll change your part—you've been wearing that part
quite a long time, I imagine, so we'll just change it over to the other
side. Now you sit up nice and straight, now, there, you look much
better.

And how are you coming along, dear? Very nicely—oh, you have
just the right idea with those rollers, but you must learn to put
them in a little more skillfully and then—just a minute, dear, up
with your chin, put your chin up, there now. Well, I think that your
lips, your bottom lip particularly is a little bit too full. We'll show

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you how to camouflage that so we can bring out the real you.

You know, in order to feel beautiful, you must look beautiful, so that when you walk into a room filled with poise and calm, and knowing that you look beautiful, all eyes will be on you.

Main Points

- Stereotype: A primary obligation and task of girls and women is to look physically attractive to men.
- Sadly enough, many girls and women have been led to believe the chief way to feel good when with people is to look good.
- They have also been taught that in order to be appealing to men they must conform faithfully to the latest standards of commercially dictated beauty.
- They have not been taught to regard their own unique features as unduplicatable and special.
- The damaging effects of this indoctrination on girls' self-esteem are difficult to erase in adulthood.

Instructional Activity

View the film *Growing Up Female* (see Resources Section for reference) and pay particular attention to the comments on American advertising. As a teacher, what types of activities would you plan to make both girls and boys aware of the extent to which their attitudes and behavior might be shaped by messages of major industries and media? Outline in detail one such activity. What period of time and how many attempts at such activities do you think would be needed to bring about such awareness?

ANYTHING THEY WANT TO BE

Sex Role Stereotyping
in Intellectual and
Career Activities

This film deals with sex role stereotyping in intellectual and career-oriented experiences. The content covers the perpetuation of the myth about equal opportunity in career choices, sex bias among students in a crafts class, a girl's thwarted attempt to solve a mechanical problem, expression of the assumption that girls aren't good in science, and the voicing of biased career expectations by kindergarteners.

SCENE 1

B: It's a fireman.

T: That's right, very good.

Now, here's an easy one, children. "I dress in white, I'm in charge of

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making sure that you always feel well, and if you eat good food and get plenty of rest, you'll never have to come and see me. Who am I?"

No, sweetheart, no, Laura. The nurse is certainly dressed in white, but—okay, Andy, you come up and show us.

That's right, very good, Andy.
G: Mrs. Wrights, can nurses be men, and doctors be ladies?
T: Well, of course, Laura, anybody can be anything they want to be.

Main Points

– Stereotype: Girls and women are supposed to seek occupations in the traditional career categories such as nurse, secretary, domestic duties and teaching.
– Stereotype: Occupations such as doctor, lawyer, engineer are the province of men.
– Although children are taught that this is a land of equal opportunity, there are signs all around them (curriculum materials, adult models) that many careers are segregated according to sex.

Instructional Activity

Select examples of career education curriculum materials for elementary school children that have been produced in the last three years. Do they reflect traditional sex role biases? Provide examples supporting your view.

SCENE 2

T: I've checked you out, and I know you can do it, so why don't you go and try it? If you run into trouble I'll be right here.
G: Jeff, I can do it, I was just testing it.
B: It's kind of tricky the first time. You've gotta put this on all the way, and this is your valve here—to tell you how much pressure you have inside the tank.
G: I think I know how to do it.
B: You have to watch—see this right here? It's called lux, and you put it right here on the piece you're working on, because that helps.
G: Can I do it now?
B: Yeah, hold on a sec.

Main Points

– Stereotype: Girls have a basically low aptitude for mechanical tasks; that is, even if they were taught these skills, their ability would be minimal.
– The student had the support of her teacher when she was ready to try a new tool on her own—but her male classmate tried to do it for her. He was probably acting on an assumption men and boys are often taught: women expect extra help in difficult situations. The boy might even have felt incorrect if he had stood by and let the girl try it alone or waited until she asked for help.
– The girl's stance was notably passive. This passivity may be the product

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of years of regarding herself as not capable of becoming competent in such tasks.

Instructional Activity

Inventory the specific types of toys and manipulative experiences that most boys would have had that would make them feel at ease in a carpentry shop, an auto shop, or a metal shop by the time they have reached junior high school. Be as specific and detailed as possible. How many involve: (1) direct teaching by an adult; (2) availability of specialized equipment and/or to '

As a parent or potential parent, would you find it difficult to make the experiences in the above inventory available to daughters? Enumerate some of the difficulties.

SCENE 3

B: I'll be back in half an hour when the movie's over.
T: Okay, thank you.

Gs: Miss Gunn, Miss Gunn, the film is broken, what are we going to do?
T: Oh, that film is borrowed and now it's going to be ruined. Don't anybody touch anything. Oh, what a mess! Belinda, would you go and run and get the boys—quick, hurry up. Kim, please, please, Kim, I asked you not to touch that. You're just going to make that worse. The boys will be here in a minute.

Main Points

- The stereotype is similar to that in the previous scene.

- In many classrooms boys are assigned the tasks requiring simple electronic or mechanical skills. This reinforces the above stereotype and robs both sexes of an opportunity to see girls performing competently.

- In this scene, although the girl did not immediately know how to fix the projector, she exercised initiative; she was not afraid of trying to tackle the problem. Instead of encouraging this behavior both for its own value and as a model to other girls, the teacher reinforced the view that this is a task for boys.

- Many women teachers are in a difficult position; they would like to perform mechanical skills confidently but they have not had the practice this society has afforded men.

Instructional Activity

Select one skill generally performed by the opposite sex with ease (it could be domestic, mechanical, physical) and ask someone to teach it to you. In advance, decide: (1) by which sex you want to be taught; (2) at what pace it would be comfortable for you to learn (how many lessons, how many repetitions, how much practice); (3) what you will give the person in exchange (you could teach a skill, provide written and oral feedback on the person's teaching techniques at prearranged checkpoints). While learning the skill, keep a brief diary of your reactions to being taught something the other sex can do well.

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SCENE 4

G: Okay, Chris, now it's time to change the tube.

B: How did you know how to do that?

G: When the liquid with the lower boiling point is being boiled away, the gases at the top of the tube stay at the same temperature, and then when the second liquid starts to boil—

B: Wait, wait, wait.

G: Okay, the first liquid has a lower boiling point than the other, and when it's boiling the gases at the top stay the same. Then when the second liquid starts to boil, the temperature'll rise.

B: Boy, you really lost me a long time ago.

G: Well, it's here in the book, see? If you read this part here it'll explain it better.

T: . . . it's difficult to assess what they'd be doing, but right now they're learning fractional distillation. Let's see if Chris and Francine have found any liquids.

Principal: Hmm, what's going on here? Ah, distillation, hm? I understand you're on the track of a couple of unknown liquids, Chris.

B: Yeah, see, the temperature is going up right now.

P: Oh, so it is. And what does that tell you?

B: Well, uh, you see, there's two gases in here, and when the heat is hot, they go, um, to the tube, and uh, see the liquid, the liquid boils and . . . uh—

T: Perhaps Francine here could explain what the experiment—

P: Got to go, Ms. Kroeber, and I want to thank you very much, and thank you, Chris.

Main Points

– Stereotype: Most men have ability in math and science, whereas most women do not.

– The expectation that because they are male they can handle math and science well places unwarranted pressure on young men.

– This scene in which a young woman is ignored as though she cannot perform competently has evoked a strong response in many female viewers we've encountered. It seems to reflect a very common and re-current strain of experience. This experience could produce self-hatred or an outward-directed anger, or it could be the seeds of future construc-tive effort to eliminate stereotypic thinking.

Instructional Activity

Observe one class and teacher during three separate science or math lessons in elementary or secondary school. Tally how many times girls and boys receive positive teacher reinforcement for an answer or other aspect of participation. Use a tally sheet similar to the one below. Do your tallies indicate any pattern of differences or similarities in teacher responses to girls and boys?

Before undertaking the observation, consider what and how much infor-mation you will give the teacher you are observing regarding your purpose.

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Also discuss the possibility of providing the teacher with some exchange (e.g., feedback, help with students) for the opportunity to observe. It is important that the teacher not feel that he/she is being judged. This is not beneficial to the teacher and would bias your results.

Type of Activity Reinforced by Teacher	Number of Times Teacher Reinforces Positively	
	Boys	Girls

SCENE 5

G: You know, did you know that girls *and* boys could be firemen?
B: No, they can't.
G: Yes, they can.
B: No, they can't. You will look silly if you wear this fireman hat— you'd look silly with that, and you wouldn't look like a girl.
B: With stockings and stuff like that, and long hair . . .
G: So, lots of boys have long hair, don't they?
B: Not as long as girls'.
B: You can't climb, you can't climb, um, a ladder.
G: Yes, I can, if I can climb a slide ladder . . .
B: My dad said, um, girls can't use axes, only daddies.
B: And you can, you can get hurt with an axe, you can get hurt, you can get your finger cut.
G: Oh, really!

Main Points

– Stereotype: Occupations which involve strenuous physical activity, quick thinking and high risk are not appropriate for women, as they are too fragile.
– A substantial portion of stereotypic thinking is communicated and re-inforced in peer interaction, and examples of parental behavior are used by children as support for their views.

Instructional Activity

Can you recall any childhood incidents in which you were told by peers that you could not do something because of your gender? Describe the incident. (If you wish to keep this private, record the description for your eyes only, as in a personal journal.) Do you think this or other similar incidents affected choices you made in later years regarding career preparation? If so, explain what assumptions you acted on and what specific choices were involved.

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CASTING

Film 1: HEY! WHAT ABOUT US?

Scene 1: Students from the class of Joan Brannigan and Darryl Lura, Franklin School, Berkeley, California.

Scene 2: Coach played by Bruce Reeves. Students from the classes of Beverly Jimenez and Cora Meek, Buena Vista Annex School, San Francisco, California.

Scene 3: Students from Cahill's Judo Academy, San Bruno, California.

Scene 4: Leader, Richard Olivo; students from Lorna's School of Classical Ballet and Jazz, Palo Alto, California.

Scene 5: Teacher played by Karyl Daniels. Students from the class of Joan Brannigan and Darryl Lura, Franklin School, Berkeley, California.

Scene 6: Students from the class of Joan Brannigan and Darryl Lura, Franklin School, Berkeley, California.

Scene 7: Coach played by Bruce Reeves. Terrance a student from Cora Meek's class, Buena Vista Annex School, San Francisco, California.

Scene 8: Teacher played by Dalton Leong. Students from the class of Bob Valdez, Oxford School, Berkeley, California.

Scene 9: Teacher played by Catherine Whitmer. Students from Cahill's Judo Academy, San Bruno, California.

Scene 10: Teacher played by Stephanie Hawkins. Student played by Richard Olivo.

Film 2: I IS FOR IMPORTANT

Scene 1: Teacher played by Constance Hwang. Students from the class of Marj Fay, Howard School, Oakland, California.

Scene 2: Teacher played by Gary Goldberg. Students from classes of Joan Brannigan, Darryl Lura, and Mr. Klute, Franklin School, Berkeley, California.

Scene 3: Students from the class of Laura Basey, Whittier School, Berkeley, California.

Scene 4: Students from the class of Joan Brannigan and Darryl Lura, Franklin School, Berkeley, California.

Scene 5: Students from the drama class of Barry Mineah, Marin Country Day School, Corte Madera, California.

Scene 6: Teacher played by Pauline Hague. Students from the drama class of Barry Mineah, Marin Country Day School, Corte Madera, California.

Film 3: ANYTHING THEY WANT TO BE

Scene 1: Teacher played by Michelle Marrus. Students from the class of Susan Rizzo and Carol Axelrod, Oxford School, Berkeley, California.

Scene 2: Teacher played by Chuck Richardson. Students from the drama class of Barry Mineah, Marin Country Day School, Corte Madera, California.

Scene 3: Teacher played by Karen Hurley. Students from the class of Mrs. Gilvere, Daniel Webster School, San Francisco, California.

Scene 4: Teacher played by Deborah Wadell. Principal played by Bob Lea. Students from the class of Jim Duvall, Herbert Hoover Junior High, San Francisco, California.

Scene 5: Students from the class of Laura Basey, Whittier School, Berkeley, California.

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RECOMMENDATIONS FOR USING THE MATERIALS

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General Procedure

Protocols were originally designed to help teacher educators prepare new teachers for service. Typically, they might be presented by an instructor of teacher education to preservice trainees. Experience with previous Protocol materials suggests the following format for effective use in a teacher education course.

1. *Delivery of background material for prospective teachers*, either in the form of a lecture, or assigned reading of sections of the Protocol handbook. Background material would include: an explanation of the origin and function of Protocols; a description of the concept; a summary of research done in the area from which the concepts derive; and presentation of other teacher education materials on sex role stereotyping (see Resources section).

2. *Showing of the films.*

3. *Discussion of the films.* Some general areas that could be covered in a discussion are: clarification of the concept and how it is illustrated in the films; how knowledge of this concept might be useful to a teacher; how the situations in the film are similar to and different from those trainees have encountered in their teaching; relevance of the concept (and/or how the concept is illustrated) in the specific classrooms in which the trainees are working; points with which trainees agree or disagree, and how they might change them. Of course, the discussion doesn't have to cover the concept in order to be profitable. It could deal with any aspect of the reality portrayed in the films.

4. *Re-viewing of the films.* The scenes in the Protocol films go by very quickly; some of the stereotypes are subtle, and often there is more than one stereotype in each scene. On a second and third viewing people usually see things they missed the first time.

5. *Second discussion*, perhaps focusing on subtler issues than dealt with in the first discussion. For example, if the first discussion revolved around listing examples of sex role stereotyping that trainees encountered in their classrooms, the discussion leader might now probe into origins and implications of a single stereotype, asking how the situation evolved and if anything should be done to change it.

There are suggested questions at the end of this chapter that the discussion leader can ask after the first or second (or third) viewing of the Protocol films.

6. *Related activities*, such as classroom observation, investigation of sex role stereotyping in local schools, exploration of personal experiences which derived from sex role stereotyping, conceptualization of strategies for overcoming sex role stereotyping, field trips to relatively non-sexist classrooms, interviews with teachers attempting non-sexist curriculums, compiling relevant sources of information and curriculums. (See the annotated transcripts for specific examples of activities which correspond to individual scenes.)

The above format is appropriate for presenting almost all Protocol materials to a preservice group.

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Use with Various Groups

The issue of sex role stereotyping in schools is timely and has gained increasing attention from children, parents, teachers, administrators, and legislators. More and more people are demanding that sex bias be broken, and they believe that a logical place to begin is in the schools. The films on sex role stereotyping can be a valuable aid in the school for creating an awareness of the concept and for providing examples of the concept in familiar situations. Here are various settings in which the films can be used.

Inservice teacher education. The films could be used in an inservice teacher education program offered either district-wide or by an individual school. Because of the pervasiveness of sex role stereotyping, the films are appropriate for teachers from preschool through high school. The purpose of the films would be twofold: to introduce the concept of sex role stereotyping to teachers so that they might be more aware of it when it occurs in their classes; and to act as a preview of ways teachers might use the films as part of their curriculums. The films can be used in conjunction with other materials and events, for example, books describing sex role stereotyping in schools; talks by curriculum specialists concerned with eliminating stereotyping.

In the classroom. Each of the three films is appropriate for use with students in elementary and secondary schools. Since each film is a series of instances of different sex role stereotypes in specific areas of school life (physical activities, social and emotional interactions, and intellectual events), they can be profitably integrated into social studies units dealing with values, women, and other minorities. They also can be used as a stimulus for role playing.

With other groups. The sex role stereotyping films can be used with any group trying to break down male and female stereotypes or looking for an introduction to the issue. Groups such as the PTA might show them to promote awareness among parents; this might lead to discussions between parents and teachers and a feeling of shared responsibility for breaking down stereotypes in the schools.

A school administrator interested in promoting the idea of coed physical education classes showed the film on sex role stereotyping in physical activities to a group of physical education teachers. He used the film as a device to introduce the issue and start discussion on sex role stereotyping in sports. There are numerous similar ways the films can be used by people interested in the problem from the point of view of producing awareness or promoting change. The films have been and can be used by day care center staffs, career education workshops, school administrators' workshops at teachers' unions, at state hearings on bias in textbooks, by the Girl Scouts, by Planned Parenthood, and in numerous other school and community settings.

Discussion Questions

Some specific questions and instructions the leader of the discussion in either preservice or inservice teacher education might want to pose are:

Follow each film with a scene by scene analysis. Here are some suggested questions and directions:

Describe the scene in detail.

Does it reflect one or more stereotypes about sex roles? If yes, what are the stereotypes? If no, explain your reasons for thinking stereotypes are absent.

Does the scene reflect any stereotypes other than those pertaining to sex roles which are prevalent in the society?

Who is (are) the "victim(s)" of the stereotype(s) in the scene?

Who is (are) the perpetrator(s) of the stereotype(s) in the scene?

Would you want to try to change the stereotype(s)? Explain your answer.

What are some ways in which you could break this stereotype if you saw it occurring in your behavior? In others' behavior? In answering, distinguish between actions you would take immediately and long range plans to promote change.

Discuss events in the lives of the course participants which parallel the events in the films. For example, after viewing ANYTHING THEY WANT TO BE, this question would be appropriate:

Can you recall any childhood incidents in which you were told by peers that you could not do something because of your gender? Describe the incident. (If you wish to keep this private, record the description for your eyes only, as in a personal journal.) Do you think this or other incidents of this type affected choices you made in later years regarding career preparation? If so, explain what assumptions you acted on and what specific choices were involved.

There are further instructional activities suggested after each scene in the handbook section, The Films (pp. 13–29).

If the films are shown to students in the classroom, some of the questions the teacher can ask are:

What happened in each example?

Were you ever in a situation like that? What happened?

Do you agree or disagree that (girls shouldn't play baseball, boys shouldn't cry, etc.)? Give your reasons and listen to the reasons of those who disagree with you.

Have you ever seen or do you know (girls who play baseball, boys who are comfortable about crying, etc.)? Describe what you know about what these people did.

Does hearing about these people support your opinion about whether (girls can play baseball, boys should cry, etc.)? If yes, why? If no, why?

During classroom discussions about stereotypes, it is important that at least initially the teacher take a neutral position and encourage the expression of conflicting views. When the students are describing what they think occurred in each scene, the teacher should encourage a variety of interpretations. The teacher may want to explain the concepts of *stereotype* and *role*

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and spend considerable time exploring and discussing what they mean. Only when the students have had days and weeks to think and rethink their own views is it appropriate for the teacher to state his. Even then, the teacher should stress that it is his view and not one that his students need hold.

The films lend themselves to role playing activities. Role playing some of the scenes in the films can help the students bring out feelings which discussion might not elicit.

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RESOURCES

This section contains a list of resources which we feel will be helpful to persons interested in learning more about sex role stereotyping in the schools and strategies to combat it. We have not been able to personally review all of the listings or, of course, to include all that exists that might be useful. But this is a start if you need to know the following:

Organizations which catalogue information on sex role stereotyping in schools and/or produce materials to reduce it.
Some basic books, articles, and films about sexism in the schools, which cover:
1. The problems and issues of sex role stereotyping.
2. Information for institutional and curricular change.

ORGANIZATIONS WITH INFORMATION AND MATERIALS ABOUT SEXISM IN SCHOOLS

CHANGE FOR CHILDREN: A Multi-Ethnic Center for Nonsexist Education
A resource center which works with child care centers, preschools and elementary schools in the San Francisco Bay Area. They have a library of non-sexist children's books and have written an annotated bibliography of non-sexist children's books. 2588 Mission St., San Francisco, CA 94110.

CHINA BOOKS AND PERIODICALS
Offers books from China which show boys and girls in roles they usually don't occupy in the United States. 2929 24th St., San Francisco, CA 94110 or 95 Fifth Ave., New York, NY 10003.

FEMINISTS ON CHILDREN'S MEDIA
Publishes *Sexism in Children's Books: A Bibliography*, as well as other publications. Box 4315, Grand Central Station, New York, NY 10017.

THE FEMINIST PRESS
Publishes non-sexist children's books, and a bibliography sex bias in children's books and texts. The Clearinghouse on Women's Studies is an educational project of the press. It contains an extensive collection of women's studies materials. Box 334, Old Westbury, NY 11568.

KNOW, INC.
A feminist press which has articles and women's studies curriculums for school and college use. For price lists, send self-addressed, stamped envelope to Box 86031, Pittsburgh, PA 15221.

LOLLIPOP PRESS
Publishes non-sexist children's books. Box 1171, Chapel Hill, NC 27514.

NEW ENGLAND FREE PRESS

Prints and distributes materials useful in classrooms. One example is *Gold-flower's Story*, which is about a woman who changes her life in China. 60 Union Square, Somerville, MA 02143.

N.O.W. EDUCATION TASK FORCE

Has publications useful to persons working to eliminate sexism in schools. Anne Grant, 617 49th St., Brooklyn, NY 11220.

RESOURCE CENTER ON SEX ROLES IN EDUCATION

Collects and prepares materials to assist schools and community groups in the reduction of stereotypes. National Foundation for Improvement of Education, Suite 918, 1156-15th St., N.W., Washington, DC 20036.

WOMEN'S ACTION ALLIANCE

A group whose purpose is to put women and resources in contact with one another. 370 Lexington Ave., New York, NY 10017.

WOMEN'S HISTORY RESEARCH CENTER, INC.

Clearinghouse and archive of materials by and about women; publishes indexes, bibliographies, and a film catalogue on various subjects relevant to women. For price list, send self-addressed, stamped envelope and donation to 2325 Oak St., Berkeley, CA 94708.

SOME BASIC BOOKS, ARTICLES, AND FILMS RELATING TO SEXISM IN SCHOOLS

1. Description of the problem

"Are Little Girls Being Harmed by 'Sesame Street'?," by Jane Berg in *The New York Times*, January 2, 1972. Section II, p. 13.

Brief Highlights of Major Federal Laws and Orders on Sex Discrimination. Excerpts from the Equal Pay Act of 1963, Title VII of the Civil Rights Act of 1964, and Executive Order 11246, as amended. The Women's Bureau, U.S. Dept. of Labor, Washington, DC 20210.

Colloquy, November, 1973. Special issue concerned with sex role stereotyping in schools. Includes guidelines for evaluating your school. 60¢. 1505 Race St., Philadelphia, PA 19102.

Dick and Jane as Victims: Sex Stereotyping in Children's Readers, by Women on Words and Images, 1972. An analysis of sex role stereotypes in 14 widely used series of elementary school readers. $1.50 for the report. A slide show is also available. Box 2163, Princeton, NJ 08540.

Discrimination Against Women: Congressional Hearings on Equal Rights in Education and Employment. Published in March 1973. $12.50. R. R. Bowker Co., P. O. Box 1807, Ann Arbor, MI 48106

Education for Survival: Schools and Sex Role Stereotypes, edited by Shirley McCune. Collection of working papers and reprints from the November 1971 National Education Association Conference on sexism in schools. Includes curriculum suggestions. $15, from the Center for Human Relations, NEA, 1201 16th St., N.W., Washington, DC 20036.

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Growing Up Female: As Six Become One. A film about the lives of six women from ages 4–35 which focuses in part on examples and effects of sex role bias in education. 16mm, black and white, 60 min. $40 rental. $375 sale. Write for list of other films on women. New Day Films, 267 W. 25th St., New York, NY 10001.

"The Image of Women in Textbooks." by Marjorie U'Ren. In *Women in Sexist Society: Studies in Power and Powerlessness,* edited by Vivian Gornick and Barbara K. Moran. Report of a study of 30 elementary school textbooks adopted or recommended for use in California public schools. Basic Books, New York, 1971, pp. 218–225.

Jack and Jill. A pamphlet about sex role stereotypes for teachers, parents, students. $1 from Status of Women Committee, American Association of University Women, c/o Bonnie Zimmerman, 36 Castledown Rd., Pleasanton, CA 94566.

Need for Studies of Sex Discrimination in Public Schools. Citizens' Advisory Council on the Status of Women, 1971. This 10-page overview recommends action by state and city commissions on the status of women and other groups interested in investigating sex role discrimination in local public schools. Department of Labor Building, Room 1336, Washington, DC 20210.

The Portrayal of Women in Children's Books on Puerto Rican Themes, by Dolores Prida and Susan Ribner. Contains analysis linking sexism to racial stereotyping. Interracial Books for Children, 29 W. 15 St., New York, NY 10011.

Report on Sex Bias in the Public Schools, by New York City N.O.W. Revised edition, 1972. $2.75. Documents sexism in New York City schools: includes testimony from students and parents. N.O.W., 28 East 56 St., New York, NY 10022.

"Sex Bias: The Built-in Mentality That Maims the Public Schools," by Betty Friedan and Anne Grant. *The American School Board Journal, 156,* October, 1971.

"Sex Role Socialization in Picture Books for Pre-school Children," by Lenore Weitzman, Debora Eifler, Elizabeth Hokada, and Catherine Ross. *The American Journal of Sociology, 77* (6), May, 1972.

"Sex Role Stereotyping in the Public Schools," by T. N. Saario, C. N. Jacklin, and C. K. Tittle. *Harvard Educational Review, 43* (3), 386, 1973.

Sex Role Stereotyping in the Schools, by National Education Association. Collection of essays, including articles which appeared in *Today's Education.* $3 in paper, $4.20 in hard. NEA Publications, 1201 16 Street, N.W., Washington, DC 20036.

Sexism in School and Society, by Nancy Frazier and Myra Sadker. A description of the issue and possibilities for change. Paperback, Harper & Row, Publishers, Inc., 1973.

"Sexism, Racism and the Education of Women," by Florence Howe. This essay examines the links between racism and sexism in education in this society. *Today's Education, 62,* May 1973.

"Sexual Stereotypes Start Early," by Florence Howe, *Saturday Review, 54,* October 15, 1971.

"Sugar 'n' Spice," by Sarah Spinks. Discusses the socialization of girls. *This Magazine is About Schools,* Summer, 1961. $2.50 from Johnson Reprint Corpo-

ration, 111 5th Avenue, New York, NY 10003. Also in *This Book is About Schools*, edited by Satu Repo, Vintage 1971.

Unbecoming Men. A pamphlet written by a group of men discussing the socialization of boys as they experienced it. 1971. $1.35. Times Change Press, Penwell Rd., Washington, NJ 07882.

Unlearning the Lie: Sexism in Schools, by Barbara Harrison. Relates the experiences of parents who actively opposed sexism in their children's school. Liveright, 1973.

Women 1973. A reference annual composed of original research documents on sex role differentiation, sex role stereotypes, sexual development and other topics. Editors included Jesse Bernard, Judith Bardwick, and John Money. Available by subscription from Random House, Dept. 300, Box 804, Madison Square Station, New York, NY 10010.

Women and Education, a special issue of *School Review, 80* (February, 1972).

This issue of the University of Chicago Journal contains articles on research on sex differences. $3.50 from the University of Chicago Press, 5801 Ellis Ave., Chicago, IL 60637.

2. Information for change

An Action Proposal to Eliminate Sex Discrimination in the Ann Arbor Public Schools, Committee to Eliminate Sex Discrimination in the Public Schools and the Discrimination in Education Committee, 1972. A proposal to combat sexism in a school system. Other groups might want to use this proposal as a model. $1 from Joyce Borkin, Ann Arbor N.O.W., 2409 Pittsfield Blvd., Ann Arbor, MI 48104.

"Changing the School Environment: A Progress Report," by Dorin Schumacher. Describes the experiences of a group of parents who challenged sexism in a Pittsburgh elementary school. *Women: A Journal of Liberation, 2.*

Equal Treatment of the Sexes in Social Studies Textbooks: Guidelines for Authors and Editors, by Elizabeth Burr, Susan Dunn, and Norma Farquhar. 50¢. E. Burr, Westside Women's Committee, Box 24020, Village Station, Los Angeles, CA 90024.

Feminist Resources for Elementary and Secondary Schools. A compilation of references to readings on sex role socialization and stereotyping, and to resources, such as books, films, slides, graphics, articles for elementary and secondary schools. Task Force on Sexism in Schools, Valley Women's Center, 200 Main St., Northhampton, MA 01060.

"Films for Feminist Consciousness-Raising," by Louise Welsh Schrank. *Media and Methods, 10* (4), December, 1973.

Guidelines for Improving the Image of Women in Textbooks. Sexism in Textbooks Committee, Women at Scott, Foresman. From the Research and Information Division, Scott, Foresman, 1900 East Lake Ave., Glenview, IL 60025.

Guidelines for Publications, by the Committee on the Role and Image of Women in the Council and Profession. A flyer on how to represent women in written language. Free from The National Council of Teachers of English, 1111 Kenyon Rd., Urbana, IL 61801.

Humanizing English, by Mary Orovan. Pamphlet about sexism in the English language. Write author, c/o Art and Copy, 107 First St., Hackensack, NJ 07601.

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In-Progress Report to the Board of Education, Women's Task Force, Berkeley Unified School District, 1972. Report on sexism in Berkeley schools; recommends appointment of a coordinator for a sex role equalization program. Women's Task Force, 1401 Walnut St., Berkeley, CA 94709.

Liberating Young Children From Sex Roles, by Phyllis MacEwan. A pamphlet with samples of how preschool child care workers can cope with specific instances of sexism. 25¢. New England Free Press, 60 Union Square, Somerville, MA 02143.

"Male, damn it," by Jim Schoettler. A male first grade teacher tells of his attempt to eliminate sex bias in the classroom. *Saturday Review: Education, 1*, April, 1973.

Nonsexist Curricular Materials for Elementary Schools, edited by Laurie Olsen Johnson, 1974. The Clearinghouse on Women's Studies. c/o The Feminist Press, Box 334, Old Westbury, NY 11568.

"A Questionnaire: Sexism in American Schools," by Marijean Suelzle. *Learning, 1*, November, 1972. The responses appear in "Sexism in American Schools? Yes . . . But . . . ." *Learning, 1*, April, 1973.

Self-Study Guide to Sexism in Schools, Pennsylvanians for Women's Rights, 1973. A model for persons and groups who want to eliminate sexism from their schools. Jeanne Boydston, Deputy Secretary's Office, Pennsylvania Department of Education, Box 911, Harrisburg, PA 17126.

Sex Role Stereotyping, A Multi-Media Program. For inservice training, parent-teacher groups, students; contains filmstrips, casettes, books, pamphlets, leaflets. NEA, Room 609, 1201 16th St., N.W., Washington, DC 20036.

Sexism in Education, Emma Willard Task Force on Education. Second edition, revised 1972. A handbook of materials used by this group in its work against sexism. Includes a game about career aspirations for counselors to use with students. $3.50. Box 14229, University Station, Minneapolis, MN 55408.

Sugar and Spice, by Vicki and Eric Breitbart and Alan Jacobs. A film describing how parents and teachers are countering sex role stereotypes in day care centers and schools. 16mm, color, 32 min. $10 rental, $225 sale. Odeon Films, 1619 Broadway, New York, NY 10019.

When I Grow Up I'm Going To Be Married, A Game Which Illustrates How Time and Circumstance Affect Women. Excellent for use with high school students. California Commission on the Status of Women, 1025 P St., Room 340, Sacramento, CA 95814.

Women in Education: Changing Sexist Practices in the Classroom. American Federation of Teachers, AFL-CIO. Edited by Marjorie Stern. $1. AFT, 1012 14th St., N.W., Washington, DC 20005.

RESEARCH SUMMARY OF SEX DIFFERENCES

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The literature of sex differences indicates that the range of differences within one sex is larger than the differences between sexes (with the exception of spatial visualization, where males are consistently higher). The perspective on sex differences suggested by the literature is that differences exist more between people than they do between opposite sexes. The research tends to support the hypotheses that there are no differences between boys and girls or men and women that merit differential treatment of one sex over another.

But the user of the films and this handbook will be able to form an independent judgment on this issue on the basis of both the information provided in this section on RESEARCH ON SEX DIFFERENCES, and other sources which are referenced in the bibliography.

Research Interpretation Problems

Interest in assessing sex differences did not begin with the recent interest in the position of women in American society. An enormous body of literature exists documenting differences, or lack of differences, on almost every conceivable measure. Girls and boys, men and women have been measured, tested, observed in an attempt to discover how they differ from and are similar to one another.

This section reports some of the major findings of the research on sex differences in physical, social, emotional, and intellectual characteristics. These findings are presented with a minimum of evaluation. However, before confronting this collection of results, the reader should be aware of some of the issues associated with the interpretation of scientific research in general, as well as some of the unique problems of research on sex differences.

[For a thorough discussion of all existing research on sex differences and the problems related to its interpretation, read *The Psychology of Sex Differences* by Eleanor Maccoby and Carol Jacklin (Stanford, CA: Stanford University Press, 1974).]

Scientific studies frequently use words which are familiar to most people. However, the meaning of these words can be drastically different in scientific usage. For example, numerous studies document differences in intelligence. For most people, this word "intelligence" connotes mental ability and is associated with other words such as astute, shrewd, clever, discerning. Thus, in common usage, intelligence is a very general term with a variety of connotations. But scientific language must be more specific and precise. Concepts must be defined in such a way that they are measurable. Therefore, while initially tests may be devised for the purpose of measuring broadly defined qualities, in the process of test construction the qualities become redefined and narrowed.

The issue of replication and verification of findings is common to all research. In specific regard to studies on sex differences, replications of studies are rarely published. In addition, studies which report isolated positive findings of sex differences "sweep through the literature, while findings of no

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difference, or later findings showing opposite results, are ignored" (Maccoby and Jacklin, 1974). In cases where a sex difference emerges in a study which is measuring something totally separate from sex, the researcher may report those differences "only if he must do so in reporting significant interactions in which sex is one of the factors."

The results of most studies presented in this section are descriptive. The relationships between variables are reported often in terms of correlations. Two variables which occur together need *not* be related causally; they may be a result of a third variable. For example, the pattern may result from the measures used.

Factors which *seem* to be related in a study may not be in reality. If there is a correlation for one sex that is significantly different from zero, and the correlation for the other sex is insignificant, these facts can then be erroneously interpreted as though there were a significant difference *between the correlations*. For example, there are instances in which the correlations between the two sexes are only a few points apart, but one reaches the .05 level of statistical significance and the other does not. In other cases, a barely significant correlation is reported for one sex while the correlation for the other is not reported. From this false basis a theory about different causal factors is then manufactured.

Writers sometimes refer to studies that included only subjects of one sex as though they had demonstrated a sex difference. This occurs when a within-sex correlation suggests a hypothesis about between-sex differences. For example, Bell (1960), reporting on an all-male sample, said that activity level was high in newborn boys who had suffered some degree of birth complications, compared to those who had not. He speculated that since boys more often suffer birth complications, this might explain a higher neonatal activity level among boys. This was later reported by others as an instance in which boys had been found to have a higher activity level than girls.

Different patterns of findings within each sex have sometimes been mistaken for sex differences. For example, Sears et al. (1965) found that among a sample of preschool girls verbal aggression was more frequent than physical aggression. Among boys, the reverse was true. These findings were later interpreted by others as showing that girls were higher than boys in verbal aggression. (In fact, boys showed more of both kinds of aggression.)

The ability of a test measure to reflect a concept is called construct validity. Most scientific studies are based on an assumption that the measures, used accurately, reflect the quality under investigation. However, whether a specific test or experimental variable measures the quality under study is usually an open question and the assumption is rarely tested. For instance, does an IQ score capture what is commonly called "intelligence"? Does a score on the Embedded Figures Test (or any other test) give a true picture of analytic ability? Many researchers deal with this issue by defining qualities in terms of test scores. In this case, then, intelligence is *defined* as the score on an IQ test.

The issue of construct validity raises a related issue, that of the generalizability of research findings. If someone receives a high score on a test of analytic ability, we may have no way of knowing: 1) whether that test really

does measure analytic ability for all people, or 2) whether the person tested would perform as well in other situations requiring analysis.

The problems of construct validity and generalizability are even more crucial in some instances than others. A physical measurement is not as open to question as a measure of a personality characteristic. The main problem in the latter case is one of finding meaningful scientific measures of qualities which are usually defined in intuitive ways. This task has not been adequately handled in many scientific studies; thus the reader must be careful not to draw unwarranted conclusions in reading the research on differences in personality characteristics between the sexes.

Reported findings, then, should not be accepted without question, because there are always some limitations of testing. For example, many scales of masculinity and femininity do not use the concepts of male and female sex roles which are in general use. They define as sex-linked *any* behavior on which the two sexes show mean differences.

In the research we examined on intellectual sex differences, a number of specific problems of interpretation of findings should be kept in mind along with the issues already mentioned (language, correlations, construct validity, generalizability).

First, one question to be considered in the use of tests is whether certain abilities can be measured without reference to others. For instance, many intelligence tests are highly dependent on verbal ability; mathematics tests are often dependent on spatial abilities. Thus if there are basic sex differences in verbal and spatial abilities, this could affect other measures of performance. It would be difficult to get an accurate measure of basic intelligence if the test required an ability in which one sex was weaker (because of either lack of training due to socialization, or heredity).

Second, any examination of findings on sex differences, and particularly on sex differences in intellectual functioning, must take into account the differential school dropout rate of girls and boys. More boys drop out of high school than girls, so that over the school years girls are compared with an increasingly select sample of boys. If this is the case, sex differences would be exaggerated where boys excel and minimized where girls excel (Maccoby and Jacklin, 1972).

Perhaps we would like science to tell us with some assurance whether girls are more or less intelligent or analytic than boys, whether boys are more or less aggressive than girls, and so on. The research reviewed here can only tell us whether there are differences in performance on certain instruments.

There seems to be more variability between individual boys and girls (boys and boys, girls and girls) than there is when the average performance of boys and girls is compared. The average differences between males as a group and females as a group have no bearing on predicting the scores of individual males and females.

As a result of their literature review, Maccoby and Jacklin (1974) hold the opinion that sex differences may be overstated. The reader is urged to keep the problems mentioned here in mind in considering the research. As someone said, a little knowledge is a dangerous thing. Knowledge resulting from research that is accepted uncritically can be dangerous, too.

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Defining Terms

In reporting the research on sex differences we use several terms which need to be defined specifically. There are various definitions of the word stereotype, depending on whether it is used in psychology, sociology, or literature. When we talk about sex role, we use the terms sex role identity or identification, sex role standard, sex role preference, and sex role stereotyping. In this section we shall define the terms we are using.

Stereotype

In standard usage, a *stereotype* is:

Something conforming to a fixed or general pattern, especially a standardized mental picture held in common by members of a group and representing an oversimplified opinion, affective attitude, or uncritical judgment (as of a person, race, issue, or event) (Webster, 1969).

The definition of stereotype in the *Dictionary of Education* is:

A fixed standardized conception of the attributes of a class of persons or social values that is not readily modified by evidence of its falsity. Also, a standardized pattern of response to specific objects and situations (Good, 1959).

The *Dictionary of Sociology* offers a social psychological definition of stereotype:

Stereotype refers to a tendency for a belief to be widespread in any social group or society (e.g., "Jews are clever," "Americans are wealthy"). It also denotes an over-simplification of a belief in regard to its content together with a tendency for the belief to be resistant to factual evidence to the contrary. One of sociology's main problems is to examine the nature of stereotypes and to discern factors which enable them to persist (Mitchell, 1968).

The term stereotype originated in a technique of printing which used a solid metal plate (the stereotype) molded from the type. In this method the printing surface is exactly equivalent to the original type. The purpose of stereotyping is to produce many impressions without needing replacement.

The current usage of the word was coined by the journalist Walter Lippman in his book *Public Opinion* in 1922. The thesis of the book is that in modern society people are required to make decisions about many matters they don't understand. People believe that their concepts of a group (for example, the Ku Klux Klan) are accurate representations of real individuals in the group, whereas their conception is actually a stereotye *acquired in some way other than direct experience*. The situation is not usually improved even by direct experience, because people see mainly what they expect to see rather than what is really there (Harding, 1968).

The "group concept" usage of stereotype was established first in a study by Katz and Braly (1933), in which the researchers asked 100 white American college students to select from a list of 84 traits those they considered characteristic of each one of ten ethnic groups. They were asked to choose the five "most typical" traits for each. One conclusion from this study is that

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most individuals feel able to make at least a guess about characteristics of almost any defined social group on the basis of inadequate information.

According to Harding (1968), the attributes of a stereotyped concept are are usually the following:

a. it is simple rather than complex or differentiated;.
b. it is erroneous rather than accurate;
c. it is acquired secondhand rather than through direct experience with the reality it is supposed to represent;
d. it is resistant to modification by new experience.

Sex Role Stereotypes

In the Protocol materials, we have culled from the different definitions of stereotype a working definition of stereotype that specifically applies to sex roles:

Sex role stereotypes are standardized, oversimplified conceptions of the behaviors that are appropriate to females and males. Sex role stereotyping consists of forming expectations for individual females and males on the basis of these stereotypes.

In the stereotyping of sex roles, the qualities of the individual are ignored. It is difficult to contradict the social expectations which lead to this devaluing of the individual, often because of the belief that stereotyped traits are inborn, "natural." And, of course, most individuals do not consciously consider alternatives to a stereotype precisely because belief in it is so widely shared.

Sex Role

In the theater, role is an assigned or assumed part that a person plays. In a cultural context, role is "the behavior expected of the occupant of a given position or status" (Sarbin, 1968). Sex role is then the behavior expected of the occupant of a gender (male or female).

Sex Role Identity

Kagan (1964) defines sex role identity as the degree to which an individual regards himself as masculine or feminine. Among the major determinants of sex role identification for a young child are perceptions of similarity to others, and the adoption of behaviors traditionally encouraged for his/her sex (Kagan, 1964). According to Brown (1968), a child begins to distinguish between masculine and feminine by the age of two or three. Thus, the first steps in establishing sex role identity are taken very early.

Sex Typing

The characteristics that are associationally linked to male and female are called sex-typed characteristics. According to Kagan (1964), these characteristics fall into three classes: (a) physical attributes, (b) overt behaviors, (c) feelings, attitudes, motives, and beliefs. For example, sex-typing of physical attributes suggests that girls should be pretty and small, boys should be large and strong. Sex-typing in behavior might mean that girls must inhibit physical aggression and that boys are encouraged to express it.

For a further discussion of sex typing, see *The Psychology of Sex Differences*, by Eleanor Maccoby and Carol Jacklin.

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Sex Role Standard

A sex role standard summarizes the culturally approved characteristics (i.e., sex-typed characteristics) for males and females (Kagan, 1964). It dictates the adoption of different responses for boys and girls. It reflects the learned association between selected attributes, behaviors, attitudes and concepts of male and female.

"Historical as well as biological factors enter into the formulation of what the sex roles are in any given culture, but once these roles exist, the shaping of masculine and feminine personalities in growing children requires that each person learn in detail what these roles are and at the same time learn to prefer for himself what is considered appropriate for his sex" (Tyler, 1968).

Sex Role Socialization

The more one reads the literature on sex role socialization the more one realizes how little is known about the relative roles of heredity and environment in sex typing, the years and life stages in which sex role identity crystalizes, the interacting effects of various societal groups (family, teachers, peers) on sex role development. One is left uneasily aware that: 1) no one can imagine what a child would be like if he/she grew up without the cultural imposition of sex role expectations; 2) a substantial portion of the research is predicated upon traditional assumptions about masculine and feminine behavior and, perhaps unwittingly, selectively ignores other sex role behavior; 3) some researchers cite single studies for proof and neglect reviewing the larger body of relevant literature to determine if results are challenged.

Socialization—A Complex Process

Socialization is the process by which an individual learns the alternative modes of behavior expected in various social settings and the consequences of adopting each mode (Hoffman and Hoffman, 1966).

Socialization is an immensely complex process. Both socialization in general and sex role socialization in particular pervade almost all spheres of social and private existence. It is almost awesome when one considers the degree to which one's behavior has been meticulously shaped in conformity with others' expectations. While such learning has high utility in terms of daily functioning and interacting, it also poses a limitation on the amount of choice actually exercised at any one moment. We tend to act on the basis of decisions previously made—decisions which have become integrated into our whole mode of being. As adults, we do indeed have an opportunity to reconsider and remake many decisions, but the limitations of time and effort are crucial. As we mature, certain socialized modes become part of personality, and personality is generally difficult to change.

What is the feminine personality, or the masculine personality, in this society? While there is something unfortunate about the question, because it implies the very stereotyping the authors of this handbook oppose, some answers derived by researchers might reveal the powerful effects of the

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socialization process. Based on experimental findings as to how the sexes do differ, Terman and Miles (1936) developed a 455-item masculinity-femininity test which contains a variety of items, including: ·l association; ink-blot association; informational, emotional, and ethic.   ·es; interests; personality and opinions measures; and introvertive   · items. Here's how they describe their male and female "standardization groups":

" . . . the males . . . evinced a distinctive interest in exploit and adventure, in outdoor and physically strenuous occupations, in machinery and tools, in science, physical phenomena, and inventions; and . . . in business and commerce . . . the females in our groups have evinced a distinctive interest in domestic affairs and in aesthetic objects and occupations; they have distinctively preferred more sedentary and indoor occupations, and occupations more directly ministrative, particularly to the young, the helpless, the distressed."

At this point in the Terman and Miles text, the sex role distinctions may yet be regarded by the reader as having a relatively superficial quality. One might say that these activities, skills and preferences could be acquired in adulthood by persons of the opposite sex; that is, with the exercise of effort and will males and females could exchange at least this portion of their identities. But Terman and Miles continue:

Supporting and supplementing these are the more subjective differences—those in emotional disposition and direction. The males directly or indirectly manifest greater self-assertion and aggressiveness; they express more hardihood and fearlessness, and more roughness of manners, language, and sentiments. The females express themselves as more compassionate and sympathetic; more timid, more fastidious and aesthetically sensitive, more emotional in general . . . severer moralists, yet admit in themselves more weaknesses in emotional control and (less noticeably) in physique.

The above was written in 1936. How much have the typical male and female changed? How much change is possible?

Early Sex Role Socialization

In a very extensive review of research on sex differences and sex role socialization, Maccoby and Jacklin (1974) have posed a challenge to commonly held assumptions. The prevalent notion has been that parents exert both "direct and indirect pressures to make their children fit sex stereotypes." Maccoby and Jacklin assert that there are far more similarities than differences in how parents treat girls and boys under the age of six. They do not agree with researchers who maintain that modeling the behavior of the same-sex parent is the major source of sex differentiation.

Here is a summary of some of Maccoby and Jacklin's findings regarding parental treatment of the two sexes:

- The total amount of interaction between parents and children of both sexes is similar; the amount of expressed affection by parents is similar; the amount of attention is also similar.
- Although it is widely believed that mothers vocalize more with daughters, there is no consistent evidence for this.

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- While it has been thought that parents allow more aggression in boys, a number of more recent studies throw this into question.

- There is little or no evidence that one sex is encouraged to be more independent than another.

The conclusion to be drawn from Maccoby and Jacklin's scrutiny of the research is that a child's parents may not be the most important agents of his or her sex role socialization. The range of sex role behaviors which parents influence is a narrow one, including the way the child dresses, what he does for recreation, the places he goes. In Maccoby and Jacklin's view, it is in a more important and broader domain of parental influence that few or no differences in treatment of the sexes is found; this domain includes parental encouragement of autonomy, the amount of affection given the child, the amount of verbal interaction with the child.

In contrast to Kohlberg and Zigler (1966), Maccoby and Jacklin hold that children under age six do have knowledge of what is appropriate masculine and feminine behavior, despite the fact that they have not yet chosen a same-sex model. In Kohlberg's view, until the child is more self-reliant and of school age, he does not have a clear concept of masculine or feminine behavior. Instead, the child's developmental energy has been absorbed in some elementary lessons, such as learning what his or her sex is, that it is unchangeable, that he needs to identify the sex of others. Kohlberg believes that gender constancy ("Since I am and always will be a girl/boy, I might as well start behaving like one") must precede adoption of sex role. Maccoby and Jacklin do not. They say that knowledge about what behavior is sex-appropriate can begin as early as age three and probably partly results not from specific shaping by parents but from generalized learning through observation of persons in the environment.

> ". . . children seem to adopt sex-typed patterns of play and interests for which they have never been reinforced, and avoid sex-inappropriate activity for which they have never been punished" (Maccoby and Jacklin, 1974).

One difference in parental treatment which does recur in the research tends to further disprove the assumption that parents provide the major shaping of a child's sex role identity. This finding concerns the amount of punishment boys receive. For while it could be expected that boys' greater aggression might be due to receiving less parental punishment than girls, it appears that the opposite is true. Maccoby and Jacklin (1974) write:

> "We have not found that parents reward boys more for aggressive or competitive behavior, nor punish girls more for these behaviors. To some degree, the reverse may be true; it is boys who receive more punishment for aggression. One might argue that punishment will actually serve to stimulate the child's aggressiveness by providing aggressive models, but even though this may be true, it involves a different mechanism of learning than what is normally meant by a 'shaping' process . . ."

There is evidence, however, that parents tend to invest considerable effort in discouraging young children from dressing or otherwise appearing like the opposite sex. This may be the result of strong parental anxiety about

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homosexuality and may be particularly true of fathers in regard to sons. Some researchers speculate that the parental rewards and punishments which this fear inspires may be an important factor in the sex typing of young children. Nevertheless, the weight of the evidence, as interpreted by Maccoby and Jacklin, suggests that other socializing agents—other adults, the school, the media—play a stronger role than parents in sex typing the child. They maintain parents are more likely to relate to the child in a manner that is determined by his individuality rather than by his gender. Thus, Maccoby and Jacklin write:

> ". . . the social brainwashing about which we are so concerned these days does not begin so early, nor go so deep, as we have been supposing . . . Although the observational evidence on socialization after the age of six is thin, there is reason to believe that pressure for sex role differentiation may become quite heavy after this time."

This opinion would place a greater burden for the sex typing of the child on the school than has commonly been assumed.

Socialization Factors

While sex role socialization does involve learning what others expect as appropriate behavior, it is ultimately the individual child who decides to adopt particular patterns of sex-typed behavior. Kagan (1964) sees three factors as influential in the degree of masculinity or femininity a person ascribes to him or herself: differential identification with parents and other adults, acquisition of sex-typed skills, and perception of how others view her/his sex-typed characteristics.

Identification, a term which is not easily defined, is, according to Kagan (1958): ". . . a belief that some of the attributes of the model belong to the self." It has been hypothesized, but not yet clearly established, that the child identifies "with the parental model he perceives to possess power and competence." As mentioned above, there is disagreement among researchers in specific regard to the extent and importance of identification with parental models in the development of sex-typed behavior. Some interesting questions have been asked by researchers who suspect that such identification is a highly important factor in sex typing.

What happens, for example, to a boy whose father is absent? A Norwegian study (Lynn and Sawrey, 1959) indicated that boys whose fathers were absent had difficulty in fulfilling the standards for masculinity adhered to by boys from father-present families. Bach (1946) and Sears, Pintler and Sears (1946) found that boys whose fathers were absent revealed less aggressive fantasy. If one believes that identification with a same-sex parent is a major factor in setting sex-typed behavior, then these findings might be attributed to a weak identification with the father which led to a failure to develop masculine attributes.

What happens when the child chooses to identify with the opposite-sex parent? Kagan (1958) writes, ". . . it is possible that a weak identification with the same-sexed parent may prevent the child from developing the confidence to master many sex-appropriate skills." In identifying with the mother, a boy might develop what are usually considered more feminine

traits. He would be passive, hesitant to defend himself against attack, have difficulty suppressing anxiety. Bieber et al. (1972) and other studies in the clinical literature tend to support this description of personality characteristics for boys whose mothers are dominant and perceived by them as more competent.

Continuing with the three factors which Kagan believes affect gender identity, it can be said that parental influences do not necessarily set sex role in a final sense. Desired sex-typed attributes and skills which have not been acquired from parental models can be learned in interaction with peers and exposure to new experiences. A boy may learn to be aggressive on the athletic field and increase his masculine image in his own eyes. A girl may learn nurturing skills and heighten the degree to which she views herself as feminine. In addition, these self images may be affected by reactions from others. If a girl is continually praised for attractiveness to men, if a boy is frequently reacted to as dominant and strong, he or she may use the feedback to rebuild or strengthen gender identities. It is interesting that many of the overt sex-typed responses the girl must usually acquire (social poise, passivity) require reactions from other people, while the boy practices many important sex-typed behaviors (mechanical skills, independence) while alone (Kagan, 1958).

Rate of maturity affects the socializing process. Jones and Mussen (1957, 1958) find that late maturing boys doubt their ability to interact successfully with females, are more likely to withdraw from social interactions, are more dependent, and are less likely to become leaders among their peers. Among girls, the late maturing have lower feminine interest scores.

Social class is another pertinent factor in sex role socialization. It is generally thought that lower class parents are more concerned with traditional sex typing than middle class parents. Rabban (1950) reports that sex typing occurs earlier in development in lower class children. Minton, Kagan and Levine (1971) report that well educated mothers are three times more likely than poorly educated mothers to scold daughters for not performing up to a standard held by the mother. An effeminate boy may be rejected by boys of both classes, but a studious boy would be rejected only by lower class boys. The female who displays strong interest in boys would be rejected by middle class girls but not by lower class girls (Pope, 1953).

Most mothers in the United States, regardless of social class, tend to believe that their sons should develop independence, a sense of responsibility and some vocational role. The female in our culture is supposed to "inhibit aggression . . . be passive with men, be nurturant to others, cultivate attractiveness" (Kagan, 1964).

Cultural Considerations

To what extent are these beliefs specific to our culture or common to most cultures? And if they are common to most cultures, does this mean they are genetically endowed or are they adaptations to environment which can be changed? There are no clear answers to these questions. Anthropologists differ in their views. Until recently, they have stressed the relativistic influences of culture as the chief determinants of sex role differences.

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In "A Cross-Cultural Survey of Some Sex Differences in Socialization," Barry III, Bacon and Childs (1957) surveyed 110 cultures. They concluded that differentiation of the sexes is not important in infancy but in childhood "there is, as in our society, a wide-spread pattern of greater pressure toward nurturance, obedience and responsibility in girls, and toward self-reliance and achievement striving in boys." These authors also saw many examples of "no sex differences" and tend to support a cultural rather than a biological explanation of differences. However, Whiting and Whiting (1962) made an intensive study of six cultures and found considerable similarity in sex role behaviors. They speculated that this uniformity may indicate differences in the physiological makeup of the two sexes. According to Maccoby and Jacklin (1974), their finding that parents treat boys and girls much alike suggests that there are probably not very many initially biologically based behavioral differences, at least not many that are strong enough "to elicit clear differential reactions from caretakers."

There are various and conflicting theories as to the relative status of women and men in pre-historic societies. Though notably inconclusive, some of the speculation is quite fascinating. For example, Dr. Mary Jane Sheffrey (1970) theorizes that in pre-patriarchal society woman's eroticism was intense and demanding and that the transition from nomadic to agricultural society necessitated the suppression of these strong sexual urges. "The suppression was neither man's sadistic, selfish infliction of servitude upon helpless women nor women's weakness or inborn masochism . . . ." comments Sheffrey, but was required by the monogamy and family-life essential to an agricultural civilization.

Returning to our own culture, but retaining an anthropological frame of mind, it is important to remember a key word: variability. There is variability in sex role behavior not only among cultures but also within a given sex . . . and in addition, there is considerable variability in sex-typed behavior within the life stages of individuals.

In regard to maturational variations in individuals: Mussen (1961) discovered that some boys who were described as "more feminine" and less well adjusted in adolescence were better adjusted, in terms of their masculinity, as adult men. It is reported that girls who are assertive in preadolescence inhibit their expressions of aggression as they mature.

Sutton-Smith (1966) asserts that some of these life-stage changes in masculinity-femininity may be ontogenetic (related to biological development), but Kagan (1964) has a different explanation. He ties the changes directly to socialization. "Behavior that deviates markedly from sex role standards will be inhibited as a result of the child's desire to avoid social rejection and his desire to model himself after culturally approved role models."

Socialization of Females

The socialization of the female in our society has created a 51% majority of second-class citizens. This can be substantiated on both a subjective and an objective level. In regard to the subjective: according to McKee and Sherriffs (1957), both sexes devalue being female and both sexes rate men

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as more worthwhile than women. At all ages, boys strongly prefer masculine roles, and at some ages, girls too show a strong preference for masculine roles (Brown, 1958). In a study on the relationship of early socialization experience to self-concept, Sears (1970) found that for both sexes femininity is associated with poor self-concept. Both sexes generally prefer to have male children (Dinitz, Dynes and Clarke, 1954).

Concerning objective manifestations of second-class citizenship; Bem and Bem (1972) write that if a newborn child is a girl,

> ". . . we can predict with almost complete confidence how she is likely to be spending her time some 25 years later. 43% of her waking time will be spent in activity that would command an hourly wage on the open market well below the federally set minimum for menial industrial work . . . The point is that this use of time is virtually the same for homemakers with college degrees and for homemakers with less then a grade school education, for women married to professional men and for women married to blue-collar workers."

Baumrind (1972) asserts that girls in this society, and in other Western societies, do not acquire traits associated with independence. Baumrind intends "independent" to mean achievement-oriented, dominant, resistant of illegitimate authority, and purposive.* A strong case can be made for this lack of independence being the product of sex role conditioning and not basic biological differences. For example, data from Fels Research Institute (Sontag, et al., 1958) point up a relationship between a low acceptance of the feminine role and an increase in IQ from ages six to ten in girls; and girls who show such an increase are likely to be independent and dominant. It is interesting that Helson (1960) found a consistent association between creativity in college women and tomboy traits.

In separate studies Baumrind (1972), Crandall (1964), Kagan and Moss (1962) report that independence in girls is associated with an absence of overprotectiveness in the parents, and parental nonacceptance. Baumrind theorizes that overly close attachments and tension-reducing interactions do not foster assertiveness and independence. The implication is that many girls may suffer from an unhealthy degree of parental overprotection.

Bem and Bem (1972) believe that there is "an unconscious ideology about the nature of the female child and the nature of her aspirations from the very beginning. . . ." The substance of this ideology is that the female is inferior in most endeavors, is passive by nature, suited for only a narrow range of occupations, which are mostly domestic and service-oriented. How is this unconscious ideology conveyed? The scenes in the Protocol film provide a partial catalogue of the types of events that perpetuate this ideology—stereotypic storybook characters and language, differential encouragement in career choices, differential disciplining, differential expectations regarding assertiveness in social interactions, differential treatment in activities involv-

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* Baumrind speaks of independence in the context of "instrumental competence." Instrumental competence is behavior that is both socially responsible and independent. According to Baumrind, women fulfill only part of the performance of instrumental competence in that they generally *are* socially responsible but *are not* independent.

ing physical risks, high emphasis on physical appearance in girls, differential reinforcement of initiative in problem-solving tasks, perpetuation of the impression that boys can do things better, peer pressure to conform to stereotypic images, the exclusion of females from whole categories of activities.

According to Bem and Bem (1972), what the society, through socialization, really controls is the female's motivation.

> "It is frequently argued that a 21-year-old woman is perfectly free to choose a career if she cares to do so. No one is standing in her way. But this argument conveniently overlooks the fact that our society has spent 20 years carefully marking the woman's ballot for her, and so it has nothing to lose in that 21st year by pretending to let her cast it for the alternative of her choice. Society has controlled not her alternatives (although discrimination does do that), but more importantly, it has controlled her motivation to choose. . . . The so-called 'freedom-to-choose' is illusory, and it cannot be invoked to justify a society which controls the woman's motivation to choose."

Helson (1965) holds that the inhibition of assertiveness and initiative is a serious barrier to creativity in women. If this is so, and if the society does suppress or thwart the female's motivation to succeed, it would seem, then, that a powerful set of socialization factors act to keep women in a subordinate role.

A New Kind of Socialization

As mentioned earlier, Sears (1970) finds that for both sexes femininity is associated with poor self-concept. Much that has been reported in the summary of research in this manual lends support to this finding. In light of this, it seems crucial that adults—both as individual agents and as members of institutions—provide experiences for girls and boys that enhance their self-concept. It is not hard to imagine that children who are socialized to view themselves as inferior, as not fulfilling some stereotyped ideal, will reach adulthood with a severe handicap—a handicap that can be felt in hard statistics (their chances in the labor market) and in spiritual dimensions (the degree to which they are prejudiced against themselves).

Baumrind (1972) provides some concrete suggestions of a new kind of socialization. She advises:

> "The same vigorous campaign to eradicate sex role stereotyping must be initiated as is now being conducted to eradicate ethnic stereotyping. . . . If men are to share housework and child care, they must be trained to possess and value these skills as children. If women are to work outside the home, and be able to share the handyman chores at home, they must be trained to possess and value these skills as children. So far as I know the educational system has accommodated little, if at all, to demands that sex-stereotyping end."

In regard to females, Baumrind recommends: that girls be taught to compete in physical combat, in organized sports and in self-defense from an early age; that girls be taught to react assertively to threat; that parents not inhibit independence in girls by being overprotective; and that parents exercise authoritative rather than authoritarian control. The authoritative parent,

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by exerting firm control and not overly restricting the child, encourages her to feel free not to conform blindly and to voice objections. A tendency to overconform often characterizes girls in our society, notes Baumrind.

Boys, too, are not socialized in the most humane, potential-maximizing manner. Sutton-Smith (1966) notes that while boys in practically all human cultures are given more self-reliance and independence training than girls, boys also suffer a severe disadvantage.

> ". . . boys somewhat harshly forced out from female protection and forced compensatorily to prove that they are men, make much better cannon fodder than boys who are more humane and compassionate. . . . They thus serve their societies not with their compassion but with their lives."

For some adults, considerable energy is devoted to a resocializing of the self with regard to sex role. There is a growing number of persons who have examined and rejected sex role definitions dictated by the society. Such self-resocializing borders on a revamping of personality structure, or at least requires endurance of a long, painful period of growth. Further, it is no longer a relatively simple matter of females becoming more like males in certain attributes, or vice versa. Each person's combination of gender traits is complex and unique and cannot be readily classified. One can no longer so readily categorize persons as masculine or feminine in the ways these terms have traditionally been used. What gender label should be applied to an aggressive male who openly cries when he is sad, or to a soft-spoken female who knows how to defend herself with physical skill and strength if she is physically attacked?

Implications

Maccoby in 1973 writes that much recent work shows "small or non-significant results in areas once considered well-documented sex differences." She speculates that one explanation is that sex differences have gotten smaller over the years and that the sexes may be growing more alike in intellectual abilities. Indeed, it is possible that sex differences in intellectual ability are a function of the degree of sex-typing fostered by the culture.

There is evidence that the male has greater physical strength and is innately more aggressive than the female (see sections on physical and social/emotional differences). It is possible that historically these biological differences led to status differences which once had survival value for humans (Maccoby and Jacklin, 1974). But regardless of the precise import of biological differences, it appears that the principal researchers of human sex differences would agree that there is no evidence that such differences warrant the gross imbalance that exists in the socialization of the sexes in our society today.

Physical Sex Differences

Research on physical differences between males and females is limited, and implications of the research are often unclear. For example, studies with primates do not with certainty apply to humans, and in many cases have not

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been replicated with humans. Any factual information is always open to different interpretations, to opposing ways of looking at it.

What do research studies have to say about the similarities and differences between males and females? This section will summarize some of the research findings and discuss their implications for physical activities in schools.

"Recent investigations in a variety of disciplines suggest that complex interactions among genetic, hormonal, and environmental factors determined the development of sex differences in human behavior" (Hamburg and Lunde, 1966). Investigators are split generally into two camps: the "pre-destinarians"—biology predisposes and limits a person to certain roles and behaviors—and the "environmental determinists"—differences between people are caused by social and cultural pressures rather than by genetic and biological determinants. The environmentalists believe that the differences between the sexes are exaggerated and less meaningful than the similarities between people as human beings (Frazier and Sadker, 1973).

Sex Differentiation

Evidence from experimentation and investigation of sex hormones seems to be that the similarities of structure in the male and female fetus and infant are far greater than the differences. The male sex hormone, androgen, plays an important role in the structure of the male and influences certain personality characteristics such as aggression. If a genetic male or female embryo in the womb is castrated (i.e., deprived of androgen), then the baby is born with a female morphology. Thus, the presence of this one hormone makes the difference between male and female.

According to Dr. John Money, who has been investigating the question of sex differentiation for many years, gender identity is an ongoing process, with different stages of sex differentiation. At each stage of the physiological determination of the fetus there are two possibilities of development (male or female); selection and development in one direction at one stage does *not* preclude selection or development in the *other* direction during the next stage. However, we cannot see this bipotentiality and range of ambiguities in developmental selection as it is occurring; and once a child is born, we assign it a sex based on the external appearance of its genitals.

To study the implications of his findings on sex differentiation, Money (1966), along with Hampson and Hampson (1961), worked with pseudo-hermaphrodites to try to determine whether environment or chemistry played a greater part in gender role development. Pseudohermaphrodites are people whose gender is not readily identifiable because they possess a genital structure resembling both male and female. In this study, pseudohermaphrodites were females possessing an enlarged clitoris (which resembled a penis), resulting from defects in the metabolism of the fetal adrenal gland. The gender role of these subjects seemed to be the result of a learning process independent of their chromosomal, gonadal, or hormonal sex. In other words, environmental conditions in the first few years of life determined the sex identification of these children.

In another study with pseudohermaphrodites, Hampson and Hampson (1961) observed children reared in a sex contradicting their predominant

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external genital appearance. They saw that it was possible for a pseudo-hermaphrodite to establish a gender role agreeing with the assigned sex and rearing by the parents despite the paradoxical appearance of the external genitalia.

The conclusions Money draws from this work are important. He believes humans are psychosexually neutral at birth; gender identification is a "differentiation process [that] would appear to be a rather delicate one, rather easily subject to disruption." Further, "The program in the genetic code," he says, "spells out only a readiness to differentiate gender identity and role" and everything else is "programmed into the social code of interacting and learning" (Money, 1965).

However, Money's theory of psychosexual neutrality is, of course, refuted by other investigators who place themselves in the camp of the predeterminists. Diamond (1965) and Beach (1965) believe that humans are predisposed to gender orientation, but that this predisposition is only a potentiality. According to Diamond, "Life experiences act to . . . mold this prenatal organization until an environmentally (socially and culturally) acceptable gender role is formulated and established" (quoted in Hamburg and Lunde, 1966). Beach's conclusions are similar.

Regardless of whether one believes that gender role identification is completely a product of social influences, the facts seem to be that culture plays an important part beginning at birth in molding a child's "masculine" or "feminine" role orientation.

Body Differences

C. D. Flory (1935) found that growth rate is related to sex. Girls are more mature at birth than boys and stay ahead in maturity in the elementary school years. In high school, girls are two years ahead of boys in skeletal development as well as in psychological maturity, dentition, acquisition of locomotor ability, onset of procreative ability, and completion of physical growth.

Another study showed males more susceptible to disease (Washburn, Medearis, and Childs, 1965). The investigators hypothesized that the reason is that the differentiation of the male genital tract is more complex, and that X chromosome genes (of which the male has one and the female two) are related to resistance to infections. It is interesting that the reviewers of this project point out that in groups that strongly value male strength and self-sufficiency, early susceptibility to illness may have unpleasant implications for boys (Hamburg and Lunde, 1966).

In studies with newborns, females react more to the removal of a covering blanket than do males, and show a lower threshold to air-jet stimulation of the abdomen. Newborn males are able to raise their heads higher than newborn females. However, there is not enough research to tell what this means in terms of male/female differences as the infant grows older (Hamburg and Lunde, 1966).

Addressing the issue from an anthropological orientation, Margaret Mead (1949) reports that secondary sex characteristics (height, muscle-fat ratio, skeletal structure) are not *completely* under genetic control but can be

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affected by culture and environmental factors. "In Bali, where males do little heavy lifting work, preferring instead light, many-handed labor, both males and females have slender somatypes. However, Balinese men who do work as dock coolies under European supervision develop the heavy musculature more typical of males."

Kohlberg (1962) worked with five- to six-year-old children to check the hypothesis that children see males as physically more powerful and invulnerable. When children were asked "Why don't girls fight like boys?," the most frequent response was "Because girls get hurt more than boys." There is no evidence that girls get hurt more or more often than boys because of physical differences, but the stereotype seemed to come from the perceived sex differences in bodily structure and capacities. To children, Kohlberg says, the stronger person has greater social power; social power derives from physical power, which derives from size.

Activity Level

There appears to be no general sex difference in level of activity, but when there are differences, they usually favor boys. Activity level is not a stable characteristic of individual children—it varies from day to day, year to year. There may be a constitutional contribution to the male's tendency to put out more energy, or to respond with more movement to certain stimulating conditions, but boys and men are *not* generally more active (Maccoby and Jacklin, 1974).

Aggression

"The word 'aggression' refers to a loose cluster of actions and motives which are not necessarily related to one another. The central theme is the intent of one individual to hurt another. But attempts of hurt may reflect either the desire to hurt for its own sake, or the desire to control another individual (for other ends) through fear. Modes of expressing hostile feelings vary greatly. . . . Most important of all, an individual who is known for a readiness to fight under some circumstances will be meek and gentle under others, and this is true among animals as well as among human beings." (Maccoby and Jacklin, 1974).

Aggression will be discussed in this chapter as it relates to biological factors; further discussion appears in the section on social and emotional sex differences.

Aggression seems to be connected to sex for the following reasons:

1) males are more aggressive than females in all human societies for which evidence is available;

2) these sex differences are found early in life when there is no evidence of differential socialization pressures;

3) these sex differences are similar in man and in sub-human primates;

4) aggression is related to levels of sex hormones and can be changed by experimental administrations of them (Maccoby and Jacklin, 1974).

In a study conducted with primates (Young, Goy, and Phoenix, 1964), the hormone androgen was given to pregnant monkeys with the result that females were born resembling the description of male monkeys: they threat-

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ened. initiated play, and engaged in rough-and-tumble play. We do not know what the effect on human infants would be if their mothers were administered androgen, but speculation by the researchers is that effects would be more subtle. There might be more ease in learning aggressive patterns, or these aggressive patterns might become more rewarding (e.g., large muscle movements would be more gratifying and would therefore be more frequently repeated).

Studies with male rhesus monkeys at Yerkes Institute have shown that there is a definite relationship between the amount of testosterone present and the amount of aggression displayed, and how high the monkey is in the dominance hierarchy. The more aggressive males tend to have higher levels of androgens. Testosterone levels fluctuate, however, and can be both the cause and the result of aggressive behavior; the hormone level in a monkey will go down with a failure experience and stay down until the monkey has had a success experience (Rose, et al., 1971; Kreuz and Rose, 1972).

In other animal studies. Andrew (1972) found male chicks treated with androgens more aggressive than untreated males. Grady et al. (1965) administered testosterone to infant female rodents, which increased their fighting in adulthood. Another study reported that the neonatal administration of the female hormone estradiol reduces fighting in the adult male rat, but increases aggression in females (Bronson and Desjardins, 1968).

With humans, Erhardt and Baker (1973) studied 17 fetally androgenized girls and compared them with their 11 normal sisters. The androgenized girls had surgery on their masculinized genitalia, but behaviorally they continued to be "masculine" (e.g., they preferred to play with boys; had little interest in weddings, dolls or babies; preferred outdoor sports). The problems of this study are that the abnormality of the androgenized girls called for cortisone treatments, and there may be unaccounted-for side effects from this treatment; also the evidence of their behavior comes from interviews with their mothers, and the answers may be biased.

Joslyn (1973) reported that dosages of male hormones will increase fighting in females, but there is little research on whether the dosage of androgens will elevate male levels of aggressive behavior. Erhardt and Baker (1973) did find, however, that fetally androgenized boys were not behaviorally different from their normal brothers.

The field of hormone research is a new and growing one. For a more detailed discussion of the involvement of biology in aggression, see Chapter 7, "Power Relationships: Aggression, Competition, Dominance, Compliance" in *The Psychology of Sex Differences* by Eleanor Maccoby and Carol Jacklin (Stanford, CA: Stanford University Press, 1974).

The Role of Schools

Schools, among other institutions, sustain sex role stereotyping in physical activities through segregated physical education classes and intramural sports, and in teachers' differential treatment and expectations of boys and girls in regard to their physical activity. People are becoming concerned that this lack of participation in and lack of encouragement to join sports affects girls' self-concepts, and that the energy that girls are often discouraged from

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expressing emerges in unhealthy ways. Girls learn to view themselves as weaker than boys, more easily hurt, and therefore inferior. The other side of the coin is that boys are expected to be involved in and enthusiastic about sports, and the self-concept of the boy who has other interests suffers if he cannot live up to his "male" role.

Clarenbach (1972) writes:

"Women are denied the opportunity for healthful, exciting self-expression through physical activity in many ways. . . . Through nursery school days, girls are told and expected to stay clean and neat, . . . and follow instructions. In elementary school, snow-balling, tree climbing and just goofing around in innumerable independent, unstructured physical play activities are reserved for boys, and little girls are being carefully and irrevocably programmed to be 'young ladies'."

In junior high and high schools there is a large discrepancy in budget, facilities, space and equipment for boys' and girls' sports. In this way schools contribute to the feeling that girls have second-class status in athletics. There are also different sports offered to boys and girls. There is usually an over-emphasis both in the classroom and in athletic programs of protecting girls from injury or strain, and an underemphasis on developing skills and experiencing teamwork. The traditional place for girls in intramural sports is the cheering line or the spectator section—living vicariously through the players, the men.

There is another area of physical activity that is not part of the physical education program, and that is the classroom. Girls are expected to be less active than boys, and are much more firmly reprimanded for rambunctiousness and large movements in the classroom. Boys are expected to perform duties involving strength—lifting, carrying, etc. Boys are the strong ones; girls are expected to be graceful. Boys dress so that they are comfortable with physical movement; girls often come to school in dresses and shoes that prevent them from climbing and running.

As we have seen from looking at existing research, there is no reason on the basis of physical sex differences for differential treatment of boys and girls in sports and other physical activities. Preferable methods for deciding who participates in which activities would be on the basis of preference of each child, and skill level, with some regard for diversity.

School Sports

In a study of the effects of competitive sports on girls' growth, development and general health, Rarick (1972) reports that "the evidence to date indicates that the health of young women is not impaired by heavy training and, in fact, is likely to be enhanced by rigorous athletic programs that are properly supervised." In this report Rarick covers: growth and development (no growth impairment with swimmers; some accelerated growth); sports during menstrual period (some disorders from over-training; physical performance not affected during menstrual period); child-bearing functions (no adverse effects; athletes have fewer complications and shorter labor than non-athletes); masculinization (no evidence to support); physiological functions (more resistant than males to development of muscular strength and

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power; heart and respiratory adaptations to heavy training similar to males); psychological and emotional effects (no evidence to support women not suited for competitive sports); questionable practices (some programs employ male coach for girls' teams; possibility of funds being used for talented few at expense of others who need activities most).

For the boy who isn't the football or baseball hero, life is often miserable. He isn't given a choice, either—he is expected to participate, enjoy and excel in physical activities as often as the girl who wants to participate is discouraged from sports. In addition, boys can be prevented from joining activities in school which are viewed as "unmasculine." Few schools, for example, offer dance classes for boys, or dance for boys and girls together. A boy who wants to be a dancer is called a sissy.

There is an emphasis on competition in boys' athletics, on winning the game at any cost—even if it involves injury, cruelty, brutality, hostility, unethical practices, and lack of compassion. Learning that to be masculine he must be competitive (and therefore also cruel and brutal, etc.) demoralizes and restricts a boy who may not enjoy competing, or who seldom wins when he does compete. If a girl does enter into the realm of male-oriented sports, she is expected to compete in the same way that boys have been taught to compete. It is more difficult for her because she has been taught during those same years to be polite and quiet and to stay on the sidelines (Clarenbach, 1972).

The positive side of competitiveness is sportsmanship. A good athlete will win graciously and lose without having a tantrum.

> "Lacking this training and the value placed upon sportsmanship, women are inclined to be whiny and crestfallen when they lose and arrogant and boastful when they win. If women are to compete with men, they will have to be trained as girls to tolerate defeat without being devastated, and to win gallantly without robbing the loser of his dignity or fearing that he will be devastated by defeat (castrated)." (Baumrind, 1972).

Changes

There is a dilemma when girls want to participate in sports that have traditionally been open only to boys: they don't know the skills required for the sport, or they haven't had enough experience playing to be equal with the boys. Two solutions are: 1) to have the girls play the same games as the boys, but separately, until their level of skill has reached that of the boys; and 2) to introduce a sport that is new to both girls and boys, so that they learn the skills at the same time. When teachers have tried this second approach, they report that the difference in skill is not between boys as a group and girls as a group, but rather between individuals—some girls are better than some boys, and vice versa. Another approach that some teachers have emphasized is to introduce non-competitive activities into the curriculum.

An intermediate school in the San Francisco Bay Area recently initiated a coed physical education program. The response from teachers and students for the first semester of the program is positive. Students select which sports they want from a choice of four, changing every four weeks. Each class is therefore composed of boys and girls according to their choice, and each

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class also contains a full range of skills and capabilities. According to the coach reporting on the program, no injuries have been sustained by girls as a result of participating in a sport with boys, and neither boys nor girls object to having the opposite sex on their teams. Because the teams are mixed, there is a lot of peer skill teaching of the weaker members of the team. And these "weaker members" are boys as well as girls (Mt. Diablo Unified School District, Fall, 1973).

The research we have read on physical differences between boys and girls showed that there is no reason to prevent girls from participating in activities previously labelled *for men only*. There is no reason why teams should not be composed of boys and girls together. The most important conclusion to be reached from the literature is that if girls or boys *wish* to enter into an activity, there is no *biological* reason for them to be prevented from doing so. This is supported by reports from those who have been experimenting with coed physical education classes and teaching alternative new activities, both as individual teachers and as part of school programs. Further evidence supports the belief that muscle development and coordination go hand-in-hand with learning; children are healthier if they are more active, both inside and outside the classroom.

Intellectual Sex Differences

Several reviews have been written summarizing the research on sex differences in intellectual functioning. Among these are Terman and Tyler (1954), Maccoby (1966), and Garai and Scheinfeld (1968). In each review, intellectual functioning is broken down and discussed in a slightly different way. The areas in which boys and girls have been tested and compared are:

    general intelligence
    verbal ability
    spatial and analytic ability
    math ability

In addition to presenting comparative data on intellectual abilities, some reviews of sex differences correlate personality attributes with intellectual abilities in an effort to explain some of the differences that have been found. Some of these personality characteristics are:

    dependence and passivity vs. independence
    affiliation needs vs. achievement needs
    aggression and competitiveness
    level of aspiration and achievement motivation
    level of anxiety and fearfulness

Other factors that have been examined in looking at intellectual differences and which are covered in this chapter are parent-child relationships (including identification and role modeling), children's physical developmental timetable, the genetic vs. environmental contributions mentioned already in the handbook section on physical sex differences, and biological differences affecting intellectual development.

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In this chapter we shall present a summary of the research on sex differences in intellectual functioning, including possible origins of differences, review some of the speculation on the school's role in supporting these differences, and list some areas for further research.

Sex Differences in Intellectual Abilities

Sex differences can be more easily examined with regard to specific abilities than to overall intelligence. Girls tend to excel in solving verbal problems, boys in spatial problems. Achievement tests show girls superior in all kinds of language material, and boys higher in science and mathematics. Girls get better grades in elementary and high school. Ability differences are most apparent at older age levels. There appear to be no sex differences in most abilities which are classified by psychologists under the heading of learning (memory, ability to process information).

Verbal Ability. Between the ages of three and eleven the sexes are similar in verbal ability. Older studies document female superiority in verbal skills before the age of three. More recent studies tend not to show superiority in *spontaneous* vocabulary after the beginning of the understanding of speech.

A longitudinal study (Droege, 1967) followed high school students from the 9th through the 12th grade, and showed that the superiority of girls in verbal tasks increased during those high school years. The test measures included comprehension of complex written text; quick understanding of complex, logical relations expressed in verbal terms, and some tests of verbal creativity.

Brimer (1969) points out that tests of language ability which are used in schools may be biased in favor of girls because of their verbal superiority (just as many math tests may be biased in favor of boys because of their superiority in visual spatialization). When Brimer used *picture* tests of vocabulary with children, from five to eight, *pointing* their responses, he found sex differences in favor of boys. However, McCarthy and Kirk (1963) got significant differences in favor of girls when they used a procedure similar to Brimer's. Differences in verbal abilities, therefore, may be the result of the test being used.

Spatial Ability. Spatial ability includes the following:

1. Ability to orient oneself or real objects in space.
2. Ability to visualize or form mental images of how objects or oneself is located in space.
3. Ability to generalize in symbols these physical and mental experiences (Fennema, 1973b).

The area of spatial ability shows the strongest and most consistent sex differences of all the intellectual functions. According to Maccoby (1966), there are no differences in spatial abilities up to age 10 or 11, but at that time boys pull ahead of girls in a wide range of populations and tests.

Garai and Scheinfeld's (1968) review of researc. shows that from infancy males are superior to females in perception, judgment, and manipulation of spatial relationships. From the age of eight, boys show greater field independence of an image or object, with girls being more dependent on the peripheral visual field.

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Mathematical Ability. There do not seem to be any significant differences in mathematical ability between boys and girls until around age 9 to 13, when differences begin to favor boys (Maccoby, 1966). Fennema (1973a) examined data from two studies by Parsley (1963, 1964), whose work has been quoted often as supporting the belief that boys achieve significantly better than girls in mathematics. Fennema concluded that in older elementary school children, "girls appear to outperform boys in Arithmetic Fundamentals at all ability levels except the very highest while very bright boys outperform very bright girls in Arithmetic Reasoning. It is not reasonable from this study to conclude the boys learn mathematics better than do girls. In fact, a strong case can be made for concluding that since girls outperform boys consistently in Arithmetic Fundamentals, girls learn mathematics better than do boys."

The National Longitudinal Study of Mathematical Ability studied one group of children over five years as they progressed through grades four to eight, and a second group over four years through grades seven to ten. The data showed that there are no significant differences that consistently appear between the math learning of boys and girls in grades four to nine (Fennema, 1973a). There is this trend, however: if a difference does exist, girls tend to perform better in tests of math computation and boys better in math reasoning. These findings are supported in reviews by Terman and Tyler (1954) and Maccoby (1966).

In high school there are problems associated with interpreting tests of math ability. One is the dropout rate of boys mentioned earlier; another is the fact that girls don't elect math courses as often as boys; the testing sample in high school may therefore be composed of brighter boys (who haven't left school) and highly interested girls.

In one study (Backman, 1972), significant differences were found favoring boys in high school; in another study (Easterday and Easterday, 1968) differences were in favor of girls, and in a third study (Bhushan, et al., 1968) no significant differences were found. Results from studies of high school groups in mathematics ability are therefore inconclusive.

Is it possible that what test results are reflecting is not that boys are superior in math itself but that they are superior in a separate dimension—spatial ability? In this regard, Maccoby and Jacklin (1974) report some very interesting findings from the Harvard Project Physics (Walberg, 1969):

> "Physics achievement tests were given to a large sample of high school students. On the portions of the test calling for visual-spatial skills, the male physics students did better; on verbal test items female physics students obtained high scores. It would appear verbal and spatial factors account for some of the variance in science achievement; it is possible that the same situation applies in math."

Problem-Solving. One criterion of skill in problem-solving is the ability to break set (the ability to abandon a once-adopted set when a new approach seems required for successful problem solution). There may be a sex difference favoring boys and men in set breaking (Maccoby and Jacklin, 1974).

Another factor in problem-solving performance is analytic ability, generally a talent assigned to males. A review of the literature shows that the

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use of "analytic style" in grouping is not more common in one sex than the other (Maccoby and Jacklin, 1974).

It is generally accepted that males perform better than females on problems involving field-independence (picking out one image, sound, etc., from many): this is true in many, but not all, studies. Sex differences here appear at adolescence, and the development of these differences parallels that of the differences in analytic spatial abilities, which strongly favor boys. However, the male superiority in field-independence is true only on visual-spatial tasks. There is no sex difference on tests of selective listening and tactual tasks requiring disembedding (Maccoby and Jacklin, 1974).

There is some evidence that the type and content of the problem make a difference in performance (i.e., males were better in spatial problems whereas no differences were found in human relations problems). Males also seem to have a favorable attitude toward problem solution and therefore exhibit more task persistence than females (Garai and Scheinfeld, 1968).

Differences between the sexes in cognitive style have characterized girls as showing more attention to detail, using narrower categories in classification of material and giving more routine responses. Boys are said to use broader categories for cl. ification and suggest more novel elements for inclusion in their categories (Sutton-Smith, 1966).

Learning. Maccoby and Jacklin (1974) report that there appear to be no sex differences in learning.

"... it clearly cannot be said that either sex has a superior memory capacity, nor a superior set of skills in the storage and retrieval of information, when a variety of content is considered."

They find no sex differences in simple associative forms of learning, the ability to process incidental information, or in social memory (ability to register and recall social stimuli).

Vogel and co-workers (1971) contend that females have special difficulty in tasks calling for the inhibition of an already learned habit in favor of a new response, but Maccoby and Jacklin (1974) come to a different conclusion. Their survey of the research uncovers no basis for believing females are unable to handle forms of learning which involve the delaying of an initial response tendency.

In summary, the differences between males and females in intellectual functioning are often only trends rather than consistent, significant differences. Maccoby (1966) frequently emphasizes that the range of individual differences is greater than differences between the sexes. We have seen the results from intelligence tests, and will examine next some possible causes for the differences which do exist.

Possible Origins of Sex Differences in Intellectual Abilities

There are a variety of conditions which may account for sex differences in intellectual functioning. These include the different rates of development of girls and boys, lateralization of the brain into two hemispheres, and the influence of sex hormones.

Developmental Timetable. Girls mature physiologically faster than boys. It is the physiological timetable which determines a person's rate of devel-

opment, th. age at which optimum level of performance is attained, the duration of this optimum level, and the rate of aging processes.

Sex differences found in general intelligence during early life seem to parallel these physiological development trends. For example, girls mature faster than boys and are ahead in language up to age three. When looking at intellectual differences between sexes, therefore, one factor to take into account is the developmental timetable (Maccoby, 1966).

Heredity. There seems to be little doubt that a child's composite IQ is inherited, but there is little research about the inheritance of specific abilities. Maccoby and Jacklin (1972) could find only three studies (Stafford, 1961; Corah, 1965; Hartlage, 1970, which looked at parent-child resemblances in spatial ability. Each investigator found significant cross-sex correlations (that is, boys' scores on spatial abilities correlated with their mothers' scores but not with their fathers' scores; girls' scores correlated with their fathers' but not with their mothers' scores). All the studies rule out the possibility that spatial ability is acquired through modeling of the parent or teacher of the same sex as the child. According to these studies there is at least some degree of genetic control over spatial abilities, but there are unfortunately no comparable figures for verbal abilities.

Brain Lateralization. Some studies have looked at brain lateralization to explain the superiority of boys in spatial abilities and girls in verbal abilities (Sperry and Levy, 1970; Kimura, 1967). Lateralization into two brain hemispheres occurs in early childhood. In adults, spatial ability is localized in the right hemisphere, and verbal functioning (speech, language, and calculation) in the left hemisphere. The left hemisphere is dominant in most people, right-handedness being one indication of dominance. Lateralization is an advantage for most intellectual functions. Since girls are on a faster developmental timetable than boys, they establish hemispheric dominance earlier than boys. This can explain the early superiority of girls in speech and language as well as the reason for boys catching up in middle childhood. It is not clear, however, how the functions of the non-dominant hemisphere are affected by early lateralization. Sperry and Levy (1970) believe this hemisphere is weaker in girls because of early lateralization, which could account for girls' deficit in spatial abilities.

The problem with this theory, according to Maccoby and Jacklin (1972), is that there are very few sex differences in abilities in early and middle childhood; rather, they emerge strongly *after* lateralization is complete, around the age of 11. To find out whether early development of the non-dominant hemisphere shuts off the development of spatial ability, a *within-sex* examination is needed of the relationship of the early development of language with later levels of spatial ability. This might give evidence of early left-hemisphere dominance on right-hemisphere functioning.

Another problem with the Sperry-Levy theory of lateralization is that each hemisphere controls a *cluster* of skills; the right controls not only spatial abilities (in which males excel) but also fine perceptual-motor co-ordination (in which females excel). Besides controlling language fluency, the left hemisphere controls elements where girls have no advantage over boys (Maccoby and Jacklin, 1972).

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Hormonal Research. There have been several recent studies exploring the relationship of sex hormones with intellectual functioning. A relationship has been confirmed in studies by Erhardt and Money (1967) and Dalton (1968): both male and female hormones are able to promote whatever aspects of prenatal growth relate to intellectual strength (Maccoby and Jacklin, 1972).

Erhardt and Money (1967) administered synthetic progestin to pregnant women; their daughters, between the ages of 3 and 14, were found to have an average IQ of 125, which is above the national norm of 100. Dalton (1968) studied women who received progesterone during pregnancy. The sons and daughters of these women had significantly higher IQ's than a matched control group. When Dalton established high-dosage and low-dosage progesterone groups, she found that there was a significant decrease in attainments in all academic subjects from the "high dosage" to the "low dosage" to the control groups.

Broverman (1964, 1968), in his work with individuals who are auto- matizers and non-automatizers, found that both estrogens and androgens increase automatizing abilities, and that estrogens are stronger increasers than androgens. (Automatizing is a label for a cognitive style involving simple, overlearned perceptual motor tasks. Non-automatizers solve prob- lems by inhibition of well-learned responses and changing usual habits.)

Although hormone work does show that there is a relationship between sex hormones and intellectual functioning, it so far does not explain the different patterns of specific intellectual abilities in the two sexes, nor is there any information on whether *specific* hormones are related especially closely to spatial or verbal abilities. Generally, data from work on sex hor- mones and brain lateralization are insufficient at this point to substantiate their effects on sex differences. The area of the relationship of physiological factors to intellectual functioning is an exciting one which has just begun to be explored.

Differences in Achievement

There is a great deal of difference in the achievement of boys and girls, women and men, starting in the elementary years and continuing through college into professional life. Up until college, girls get better grades than boys, even in subjects where boys score higher on achievement tests (math- ematics and science). School grade averages are significantly higher for girls than for boys in elementary school, but the difference narrows toward graduation from high school. Girls also appear to be more stable in their scholastic performance, while boys show more variability (Garai and Schein- feld, 1968).

In college and professional life, however, men achieve substantially more than women in almost any indicator of intellectual activity (books and articles published, scientific, literary, and artistic achievements, etc.). Even women who are in the same relative position as men (e.g., Ph.D.'s in aca- demic posts) are less productive in these respects (Maccoby, 1966). A followup of the gifted children in Terman's longitudinal study 25 years later showed that gifted men utilized their potential to a far greater degree than

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did gifted women (Terman and Oden, 1947). Why is this? There exist theories and studies which attempt to answer the *why* of differential achievement.

Achievement Motives. Matina Horner (1969) tested her supposition that, because of social influences on children regarding sex-appropriate behavior, men possess a need to achieve and women possess an equally persuasive motive to avoid success. The need to achieve is an internal standard which motivates an individual to do well in any achievement-oriented situation. According to Horner, the motive to avoid success comes from a fear that success in competitive achievement will lead to negative consequences such as loss of popularity or femininity. Horner found that 65 per cent of the women she tested showed evidence of the motive to avoid success, while fewer than 10 per cent of the men tested showed it. Her findings suggest that most women will fully explore their intellectual potential only when they don't need to compete and that the fear of loss of femininity may lead to high anxiety in competitive situations.

Stein and Bailey (1973) have challenged this finding:

"The literature at this date does not support that sex difference. Anxiety is usually correlated negatively with achievement for both sexes, although the data are not entirely in agreement. . . . [some] studies have found no correlation between anxiety and school achievement. (Crandall et al., 1962; Lekarczyk and Hill, 1969; Stanford, Dember, and Stanford, 1963)."

There is one important exception to these findings, if IQ is interpreted as achievement. In the Fels sample (Sontag and Baker, 1958), there is a positive relationship between increases in IQ and anxiety in girls from ages six to ten.

Personality Correlates of Intellectual Functioning. In a further attempt to understand intellectual differences between the sexes, we must consider the personality characteristics that seem to correlate with intellectual functioning.

Taylor (1964) reviewed the literature from 1933 to 1963 on personality attributes of achieving children, and compiled a list of the characteristics of overachievers. Overachieving children showed: well-controlled anxiety; high self-esteem; acceptance of authority; good relations with peers; independence (or little conflict regarding dependence); academically oriented (as opposed to socially oriented) interests; and realistic goals.

Another study examined the increase in IQ of nursery and elementary school children (Sontag, Baker, and Nelson, 1958). Children with the greatest increase in IQ were more independent of adults and more competitive with their peers. Girls with the greatest IQ increases were "less feminine" (showed less sex-typing of behaviors) and needed fewer immediate rewards than other girls. Independence seems to be a consistent characteristic of children who show increases in their IQ scores.

The personality characteristics associated with academic achievement change with age. Aggression and competition become more markedly linked with achievement in late elementary and junior high school years, and even more pronounced by high school (Crandall, 1967).

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A number of the personality attributes listed here as being associated with achievement have been shown to be more characteristic of boys than girls. Moreover, they are traits that are supported in boys and discouraged in girls. For example, our society expects males to be independent, aggressive and competitive, to exhibit lack of fear and anxiety. Men are expected to model teamwork and camaraderie; women to compete against each other for men. The image of male success is oriented toward intellectual and vocational achievements. The successful female shows off her family and has attractive social skills. Women are not socialized to succeed intellectually or professionally.

Boys evaluate their own abilities and performance more realistically than girls (Crandall, et al., 1962; Sears, 1963). Crandall's work with first through third grade children showed that competent boys believed their own abilities enabled them to solve problem tasks, while less competent boys and all girls did not take credit for solving the problems, but felt that "fate" had solved them. Boys who evaluate their abilities realistically are more likely to hold realistic goals for themselves than boys and girls who are less in touch with their capabilities.

Reasons for Differential Achievement

a) *Values of the school.* Smith (1972) hypothesized that the reason achievement is higher for men than for women in college and careers is the school's reinforcement of "feminine," non-achievement-oriented qualities.

> "It is clear that boys and girls get differential treatment through the grades with the boys apparently getting the worst of it. But with all this, the girls as a group seem to suffer more than boys from their school experience. Not in grades, . . . but in something more subtle."

Girls come into nursery school physiologically more mature than boys, further along verbally. Boys at the same age are immature, and not reinforcing to a teacher who tries to maintain a relatively ordered and quiet classroom. The boys, more rambunctious and disruptive than the girls, receive the teacher's disapproval and criticism. Throughout the early school years this pattern is repeated: girls are rewarded for their compliance, dependency, control of impulsiveness and aggression; teachers see boys as having less favorable attitudes toward school than girls, and girls see that boys are admonished for behaviors of aggressiveness, independence, impulsiveness and autonomy—all of those traits which we have seen are related to achievement. So the girls generalize teacher approval to the habits of "niceness" and begin to view school as a vehicle for earning social approval.

b) *Teacher approval and disapproval.* Children's achievement in school is related to the amount as well as the type of approval or disapproval they receive from the teacher. In general, intellectual traits (problem-solving, creativity) are perceived as male, with boys being reinforced for those traits; non-intellectual traits (social interactions) are reinforced in girls as being appropriate female qualities. Minuchin (1964), comparing children in a traditional school and a more modern school, found that there were strong social demands for sex-typed behavior from children and that this played

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a role in producing some of the differences that exist in intellectual functioning.

Boys receive more attention than girls, but a good deal of that attention is negative. Meyer and Thompson (1956) observed in three sixth grade classrooms for 30 hours in each, and noted that boys received significantly more blame contacts as well as more praise contacts than girls; teachers were therefore interacting more with boys. McNeil (1964), studying the relationship between teacher disapproval and reading difficulties, established that perceptions of first grade students were that boys were criticized more, and that girls read better. He determined that boys received more criticism for disruptive behavior.

Allen, Spear and Lucke (1971) showed that teacher criticism hurts school performance when they looked at reactions of children in primary and intermediate grades to approval, silence, and criticism. Primary boys were more adversely affected by criticism than any other group. Next came older girls, then young girls, with older boys least affected by criticism. Davidson and Lang (1960) found that children who felt the teacher approved of them both performed and behaved better.

c) *Self-concept.* There seems to be a connection between a child's concept of self and achievement in school. Girls', self-concept appears to diminish around the same time as differentiated achievement in mathematics becomes evident—about age 13. Bachman (1970) reports that boys have more self-confidence than girls in relation to intellectual activities, and self-concept scores correlate with mathematical achievement in seventh graders. Fennema (1973b) finds that girls apparently feel inadequate when faced with mathematics, and probably avoid that subject whenever possible; their achievement therefore suffers because they don't practice the skills.

At the same time, in self-ratings on self-esteem tests males and females are similar up until college. At that time, when asked to predict how they'll do on a task or to describe their satisfaction in their performance, men, more than women, expect to do well and judge their performance favorably. Even though women's college grades are as good as men's, women predict they'll do less well in future tasks; men predict they'll do at least as well as before (Crandall, 1969).

Maccoby and Jacklin (1974) speculate that women express less self-confidence than men because of a hesitancy to brag, or because they don't define themselves in terms of success on tasks. Or they may feel less in control of their own fate (Crandall, 1962), and that "success is due to factors other than their own' skills and hard work." Beginning in college, men have a greater sense of potency about new tasks than do women.

d) *Sex-role perception.* A child's concept of self in regard to performance of sex role traits may also be an important influence on achievement. The findings of a study by Stein and Smithells (1969) suggest that one major aspect of learning that occurs during a child's schooling may be the discerning of what is appropriate and inappropriate for one's own sex. If a child views an area of achievement (for example, reading or mathematics) as sex-appropriate for himself or herself, he or she may put more effort into becoming proficient in that area than into one that is considered inappropriate.

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Mathematics and problem-solving are seen by society as masculine skills and therefore separate from the female role. Cleveland and Bosworth (1967) relate math achievement to sex role perception; their study established that girls who achieved well in arithmetic had lower scores on tests measuring a sense of personal worth than did girls who achieved poorly in arithmetic. According to Kagan (1964), girls scoring low on a scale of femininity performed better in math than those who exhibited "typical" feminine behavior. However, Lambert's (1960) study did not find this to be true.

In the area of reading, where girls consistently outperform boys, Dwyer (1973) found that reading is considered by both boys and girls to be a feminine activity. The perceptions of the male sex role may therefore actively interfere with boys' learning to read.

Intellectual Stereotyping in Schools

Sex stereotyping in the intellectual realm is pervasive in schools. It occurs in teacher role modeling, in differential teacher expectations and treatment, in textbooks and other curriculum materials, in classes that are segregated according to sex, and in counseling.

Textbooks. Women on Words and Images (1971) was the first group to analyze the image of boys and girls presented in school texts. They found a very strong bias against girls in 134 elementary school readers.

> "Citing only a few of the dominant themes, they found for 'active mastery' themes such as ingenuity, cleverness, industry, bravery, creative helpfulness, competence—boys cited 1,004 times, girls cited 342. For 'second sex' themes such as passivity, pseudo-dependence, altruism, goal constriction, incompetence, humiliation of the opposite sex—boys cited 182 times, girls cited 435 times. It must take a pretty tough girl to resist the constant pressure to measure down to the girls of the stories." (Smith, 1972)

Fennema (1973b) observes that sex stereotyping in mathematics texts is also prevalent in illustrations and verbal problems. Women are not the adventurers or problem solvers, but more often play the nurturant role in which intellectual ability plays a minor part.

Testing. In one of the few studies on sex bias in testing, Tittle and her associates (1973) examined two areas of potential sex bias in achievement tests—language usage and item content. They concluded that "any bias which exists is primarily a function of the content of educational achievement tests rather than the nature of the language," and could be altered by test developers and publishers. In addition to considerable bias in the number of male and female noun and pronoun references, it was found that achievement tests contain numerous sex role stereotypes and thus do not differ from other instructional materials. Males are referred to much more frequently than females. Boys are involved in many physical activities (climbing, camping) and assume leadership and responsibility, while girls are generally in helping roles (cooking, shopping); when involved in active pursuits, girls take "the back seat to the stronger, more qualified boys." Some of the test content conveys the message that most professions are closed to women and most of the biographical material in the tests refers to men (Saario, Tittle, and Jacklin, 1973).

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Differential Expectations. The schools foster stereotypes about girls' and boys' intellectual abilities by allowing curriculums to remain unchanged, opportunities to be unoffered. What happens to the girl who wants to learn to operate and fix the projector, a duty that frequently is handed to the boys in the class? What effect does the school have on the boy who secretly would like to learn macrame but is afraid of being put down by the teacher or his friends, the girl who wants to get into wood shop and is refused because it's only for boys, the boy who wants to learn to cook something besides the egg dishes taught in the "cooking for boys" class? If a child is expected to be interested in only certain areas, chances are high that she or he will react in accord with the expectations. (The expectation can fulfill the prophecy.) Girls aren't supposed to be good in math, so, afraid of failure, girls stay away from math and relate mainly to subjects in which they expect to succeed. It's time for schools to act to end this Pygmalion effect.

Career Implications. The implications of sex role bias in schools for future career choice are clear. A limiting experience in school will be likely to lead to students considering a narrow range of occupational options. Starting as early as kindergarten, when children are presented with the concept of career, a teacher has the choice of presenting stereotypic or non-stereotypic jobs that men and women fill. In the past, while men have been shown in a wide and rich range of occupations, the jobs illustrated for women have been limited mainly to teacher, secretary, waitress, nurse, librarian, or beautician. And while women have been expected to work chiefly in these nurturing, helping capacities, men have largely been excluded from them. Armed with an awareness of sex role stereotypes, teachers today have an opportunity to help alter these biases. They can present alternative kinds of role models to children, and seek or create curriculum materials which encourage career choices that cross traditional sex barriers.

Unfortunately, many high schools counsel students into stereotyped job training, discouraging them from entering fields that are typed for the opposite sex. Yet, as already mentioned, even if a student isn't actually counseled into or out of a field, the classes and/or vocational training offered in school strongly influence the choices the student perceives. But perhaps most important in both elementary and secondary schools, teachers, as professionals, are models (whether or not they intend to be) who influence their students' perceptions of career possibilities. Men teach the "intellectual" subjects of math and science; men are department heads; women teach elementary school, but men are principals. All around them in school, students see what is appropriate and inappropriate for men and women in American society. How can teachers and schools act to change their negative impact on children's ability to choose and prepare themselves for alternative futures?

Ideas For Change

We have already mentioned some ways in which schools and individual teachers can begin to effect change in breaking down intellectual and career stereotypes. Here is a more comprehensive list:

Change the curriculum to reflect diverse opportunities and learning models for children.

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Until textbooks have been changed to show boys and girls, men and women, in more realistic and non-stereotyped roles, point out the stereotypes in the old books and start discussions on them.

Become aware of how teachers' own lives and beliefs reveal stereotyping, and look at the possibility of eliminating stereotyping from their attitudes about sex roles.

Start male/female team teaching combinations, to provide children with different styles, points of view, skills, and role models.

Several checklists have been created for teachers and counselors which give a range of both ideas for change and things to watch out for in behavior and attitudes in the classroom. Some of these items are reprinted below:

Do my lessons include more exciting role models for boys than for girls? (Do I stereotype women as housewives or workers in menial or supportive positions?)

Do I expect girls to be more verbal and artistic than boys, or boys to be more mathematical and scientific than girls?

Do I feel it is more important to help boys sort out career options than girls?

Do I ask girls to do the housework-type tasks and the boys to do the executive duties or heavy work?

Do I ever discourage a girl from going into a career in which there are few women?

Do I react when I find that there are limited activities for boys in art, drama, and dance?

Do I really believe that today a girl's first priority is to plan for marriage and childbearing? (Women live to be 74 years of age and will need to plan for over 50 years of life which will not be filled with childbearing and childrearing.)

Do I find myself encouraging more boys to go to college than girls?

Do I react when I find that more scholarships are going to boys?

Do I counsel a pregnant high school woman to go to special classes outside of the regular school program when it is really her choice by law?

Do I ever counsel the young man who has cooperated in getting a young woman pregnant?

Do I ever encourage a high school woman or even a younger girl to find stories and accounts about her story which are not in the history books?

Do I discuss the draft issue with young high school men and open up all options to them or do I say, "Fighting wars has always been a man's job?"

Do I say, "Being the head of the family is a father's responsibility?"

Do I really believe there is such a thing as a distinct male image? (Try writing a paragraph stating what you think is a male image but do not put anything in it that could also apply to a female. Think about it.)

(Checklists adapted from "A Chauvinistic Index for Educators" and "How Sexist Am I As A Counselor?", NEA Conference Materials.)

For references to sources of ideas which can begin the process of change in breaking down sex role stereotypes in schools, refer to the Resources Section in this handbook.

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Social-Emotional Sex Differences

The term "social-emotional" refers to traits of personality, social interactions, and expressiveness, as well as interests and play preferences of children. Social and emotional characteristics are discussed in this handbook with specific reference to similarities and differences between females and males. The information drawn upon comes mainly from results of interest inventories, personality tests, and adjective checklists.

As was the case with sex differences in intellectual and physical abilities, there are two basic "explanations" for social and emotional differences: heredity and environment and/or socialization. Evidence seems quite conclusive that the hormonal differences between the sexes may precipitate differences in aggression (Maccoby and Jacklin, 1974). All other personality traits and interests seem to be changeable in accordance with what society dictates at any given time.

Sex Differences in Mental Health

It has been a general observation that among preschool and elementary school children girls report more fears and manifest more "nervous habits" (e.g., nail biting and thumb sucking) than boys. On the other hand, "behavior problems" (hyperactivity, temper tantrums) seem to be more common among boys (Anastasi, 1958). This provides some evidence for the conclusion that there is no sex difference in emotional stability, but there are clear differences in the way it is manifested. During adolescence, however, when measured on inventories of neurotic symptoms, women exhibit a greater number of neurotic symptoms than men. In fact, on one index, from ages 14 to 18 the median number of neurotic symptoms declines steadily for boys, while the number rises steadily for girls. In adult groups, sex differences in this area are upheld. One early study (reported in Anastasi, 1958) found that women subjects had a significantly higher number of neurotic symptoms; men studied were significantly more self-confident and self-sufficient. More recent personality inventories have supported these findings.

Broverman et al.'s (1970) survey of 46 male and 33 female clinicians indicates that healthy women were assumed to differ from healthy men "by being submissive, less independent, less adventurous, less competent, more excitable in minor crises, more easily hurt, more emotional, more conceited about appearance, less objective, less intelligent in mathematics and science." There seems from this survey to be a double standard for mental health.

"In our society, men and women are systematically trained, practically from birth on, to fulfill different social roles. An adjustment notion of health, plus the existence of differential norms of male and female behavior in our society automatically lead to a double standard of health. Thus, for a woman to be healthy, from an adjustment viewpoint, she must adjust to and accept the behavioral norms for her sex, *even though these behaviors are generally less socially desirable and considered to be less healthy for the generalized competent, mature adult.* [italics ours]

"By way of analogy, one could argue that a black person who conformed to the 'pre-civil rights' southern Negro stereotype, that is, a docile, unambitious,

childlike, etc., person, was well adjusted to his environment and, therefore, a healthy and mature adult. Our recent-history testifies to the bankruptcy of this concept." (Broverman et al., 1970)

Both Bem (1972) and Chesler (1972) observed that psychologists use stereotypes of "appropriate" masculine and feminine behavior to make professional judgments; women are classified as healthy, neurotic, or psychotic according to a male ethic of mental health (for example, in at least one study the "normal" woman is the unemployed housewife).

> "Women who fully act out the conditioned female role" (non-aggression, timidity, passivity, submissiveness) "are clinically viewed as 'neurotic' or 'psychotic'. . . . Women who reject or are ambivalent about the feminine role frighten both themselves and society so much that their ostracism and self-destructiveness probably begin very early." (Chesler, 1972)

Several recent studies investigating how men and women value themselves and each other show a devaluation of women. Both men and women rated qualities associated with the ideal male higher than those associated with the ideal female (Rosenkrantz, et al., 1968); they devalued work done by women over the same work when it was labelled as normally done by men (Mischel, 1973); and they depicted painful and embarrassing things happening to successful women, good things happening to successful men (Monahan, et al., 1973).

Women's devaluation of themselves seems to be accompanied by anger and depression over the pressures to accept inferior status. Men are also under pressure to maintain their masculine qualities. Harford, et al. (1967) correlated high masculinity with anxiety, guilt-proneness, tough poise, neuroticism and suspectingness. Low masculinity correlated with warmth, brightness, emotional stability, sensitivity, bohemianism, and sophistication, leading one to believe that being highly masculine might not be such a boon after all.

Two experiments by Bem (1975) began by rating college men and women on a scale of androgeny to determine if androgynous individuals would be more likely than masculine or feminine individuals to behave without regard to whether a behavior was sex-appropriate. An androgynous sex role represents "the equal endorsement of both masculine and feminine attributes." Bem found that androgynous subjects of both sexes displayed "masculine" independence when pressured to conform, and "feminine" playfulness when given the opportunity to interact with a kitten. All of the non-androgynous subjects displayed behavioral deficits. The feminine females showed perhaps the greatest deficit of all. They failed to display independence under pressure to conform, and playfulness in interaction with a kitten. Bem notes that this is not inconsistent with findings that "femininity in females is generally associated with high anxiety and poor social adjustment."

The anxiety of both men and women over role identification points to a need to examine personality characteristics and interests to see what differences exist between the two sexes. The following sections examine personality differences as reported in personality inventories and basic research.

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Sex Differences in Personality as Reported in
Inventories of Existing Differences

In a study by Sherriffs and McKee (1957), 50 college men and 50 college women indicated on a checklist the adjectives they would use to describe "men in general" and "women in general." The results of this checklist indicated that men were considered: frank and straightforward in social relationships; intellectually rational and competent; bold and effective in dealing with their environment. Women, on the other hand, were considered to possess: social amenities; emotional warmth; concern for affairs besides the material. It was further shown by this study that men emphasized men's desirable characteristics on the checklist, and women emphasized women's neuroticism.

Bennett and Cohen (1959) summarized the differences between masculine and feminine approaches under five general principles, which fit in with most of the reported research on personality differences.

1. Masculine thinking is of less intensity than feminine thinking.
2. Masculine thinking is oriented more in terms of the self, whereas feminine thinking is oriented more in terms of the environment.
3. Masculine thinking anticipates rewards and punishments determined more as a result of the adequacy or inadequacy of the self, whereas feminine thinking anticipates rewards/punishments as a result of the friendship or hostility of the environment.
4. Masculine thinking is associated more with desire for personal achievement, feminine thinking more with desire for social love or friendship.
5. Masculine thinking finds value more in malevolent and hostile actions against a competitive society, whereas feminine thinking finds value more in freedom from restraint in a friendly and pleasant environment.

Sex Differences in Personality as Reported in
Research on Basic Differences

Reviewers create various categories for discussing personality differences. Most agree that the basic difference is between masculine aggression and feminine dependency and nurturance. The descriptions of male and female personalities compiled from checklists and inventories can be compared with data from research studies to determine the accuracy of these perceptions. In the next few pages several personality traits will be examined in this way.

Aggression. Most evidence indicates that males are the more aggressive sex.

"In almost every group that has been observed, there are some women who are fully as aggressive as the men. Furthermore, an individual's aggressive behavior is strengthened, weakened, re-directed or altered in form by his or her unique pattern of experiences. All we mean to argue is that there is a sex-linked differential readiness to respond in aggressive ways to the relevant experience." (Maccoby and Jacklin, 1974)

There are a few exceptions to the findings that males are more aggressive: in a compilation of research on aggression from 1934 to 1966, 9 out of 53 studies showed no differences between males and females in aggression;

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7 out of 53 studies were positive for females. These seven studies showed that females were higher than males on outward aggression toward adults, pro-social aggression, covert hostility, verbal aggression, and anxiety and guilt about aggression (Maccoby, 1966). Garai (1970) observed that women give vent to their aggressive tendencies through verbal behavior, and men more often resort to physically antisocial and destructive actions.

As mentioned earlier in our section on physical differences, Maccoby and Jacklin (1974) infer a biochemical contribution to the greater aggression of males because (1) sex differences in aggression are found to be cross-culturally universal; (2) sex differences are found as early in life as behavior can be observed, and changes with age appear to be caused more by hormone levels than by socialization; (3) similar differences in man and sub-human primates are found in aggression; (4) women can be made more aggressive through parinatal administration of male hormones.

A cross-cultural summary of sex differences (across color, culture, and economic groups) found a behavioral difference between the sexes in aggression. Boys engaged in more "mock fighting," exchanged more verbal insults, and were more likely than girls to counterattack. Boys were more aggressive with other boys, even at 18 months of age (Whiting and Pope, 1974). Omark, Omark, and Edelman (1973) made time-sampled observations in the U.S., Switzerland, and Ethiopia of children on the playground. They defined aggression as pushing or hitting without smiling, and found a greater incidence of aggression in boys in all three societies.

As already stated, according to Maccoby and Jacklin (1974), the two sexes have a differential readiness to display aggression, particularly in the presence of certain stimulating conditions. The male has a greater tendency to attack or retaliate in certain interpersonal situations. It is interesting, however, that in a study of nursery school children, Patterson (1974) found that girls were no more or less likely than boys to cry or yield to aggression.

Some of the findings on aggression are conflicting. For example: there seems to be no sex difference in verbal aggression in children (Bandura and Huston, 1961); boys in nursery school display more physical and verbal aggression than girls (Sears, et al., 1965); boys are higher than girls on verbal aggression in interactions with their mothers (Hatfield, et al., 1967); boys are more aggressive only in their physical behavior, not their verbal behavior (McIntyre, 1972). The conflicting data point up a need for further research.

Although there is great evidence for a hormonal base of aggression, the social learning side cannot be ignored. Boys are usually encouraged, or at least not discouraged, from displaying physical aggression. This behavior is definitely discouraged as being inappropriate for girls, who instead receive reinforcement for more dependent behavior.

Evidence for the influence of social factors on aggression is reported by Bandura (1965). He found that boys do more spontaneous copying of modeled aggression than girls, but that sex differences were reduced if children were rewarded for performing as many of the model's aggressive responses as they could remember. Girls noticed and remembered more of the modeled aggression than was evident from their spontaneous behavior. These results

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suggest that although boys and girls possess similar knowledge of aggressive responses, they differ in the performance of these responses because of differential consequences which they both receive and observe.

Other studies of modeled aggression (Maccoby and Wilson, 1957; Moore, 1966; Kagan and Moss, 1962) show that girls don't notice or retain the details of modeled aggression to the same extent that boys do.

> "It is clear that girls do have a great deal of information about aggression which they never put into practice. The question is whether their failure to perform aggressive actions is to be attributed to anxiety-based inhibition that has been developed as a result of negative socialization pressure in the past. This is an extraordinarily difficult hypothesis either to falsify or confirm." (Maccoby and Jacklin, 1974)

Passivity. Just as males are assumed to be the aggressive sex, females are described as passive. A passive-dependent person is more oriented toward social stimuli; more in need of affection, attention, or approval from others; prefers to remain near others and resists being alone; and responds to danger or difficulty by seeking protection or help (as opposed to counter-attacking, investigating the danger, or coping directly with the problem). These characteristics are consistently assigned to girls and women by the society.

The generalization that girls are initially more passive and dependent than boys cannot be accepted in early childhood, since studies of attachment conclude that dependency and attachment behavior are characteristic of all human children with little or no differentiation by sex from infancy through preschool (Maccoby and Jacklin, 1972). In early childhood, the sexes are similar in their willingness to explore a new environment; both sexes are highly responsive to social situations of all kinds. Girls are more willing to carry out demands of adults, but this compliance can be active as well as passive (e.g., running errands, performing services). There is no difference between boys and girls in yielding or withdrawing from aggression (Maccoby and Jacklin, 1974).

Nurturant or Parental Behavior. Nurturance is the giving of aid and comfort to others, often to those in a weaker or dependent position. We commonly associate the care of infants and children with nurturance and, again, this is a quality more often attributed to females than to males.

A study of rats (Rosenblatt, 1969) found that both virgin females and males will show maternal behavior (licking, crouching over young, retrieving young) after about five days if a fresh litter of newborns is given to them each day. Rosenberg and co-workers (1971) report that male rats are likely to kill the first few litters given to them, but that their aggression diminishes after they have been put with several fresh litters.

Among sub-human primates there is a great variability between species in the degree to which males participate in caring for young (Maccoby and Jacklin, 1974). In human beings, no parallel studies of fathers exist at this time. (A project in the psychology department at Stanford University has studied responses of mothers and fathers to five-month-old infants, but this data has not been analyzed at this writing.)

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"Among human beings, the comparative nurturance potential of the two sexes toward infants and children is simply not known. Extrapolating from what is known about animals much lower than man, it would appear possible that the hormones associated with pregnancy, childbirth, and lactation may contribute to a 'readiness' to care for a young infant on the part of a woman who has just given birth." (Maccoby and Jacklin, 1974)

In a study conducted across six cultures, Whiting and Pope (1974) found that in children between ages three and six, there was only a tendency for girls to show more nurturant behavior than boys. This finding, however, was not consistent across the six cultures, and the differences in behavior were not large. In the same study, girls between ages seven and eleven were much more nurturant than boys, especially in giving emotional support.

Anxiety and Fear. There seems to be a sex difference in the kind and amount of anxiety experienced by males and females; the difference may be biologically based.

Female infants display fear and anxiety with slightly more frequency and intensity than male infants. There are two possible reasons for this, according to Kagan (1972). One is that physical development is more rapid in infant females and therefore they have more advanced development of the myelin sheath around the axons of the central nervous system, and of bone and muscle. *If* it follows that a female infant is also ahead of a male infant in psychological functioning, reasons Kagan, then she might have a better articulated idea of her life space. Thus, if the child is able to be alerted to new situations but cannot yet understand them, she will cry in fear because she can neither assimilate the experience nor withdraw from it. In other words, the earlier and more frequent occurrences of fear in the girl may reflect the fact that she has developed faster.

"If the infant habitually withdraws as a response to fear during the first year of life, a strong tendency to display that behavior can be established. If this argument has any merit, it might help explain why girls and older women are more likely to withdraw and show more cautiousness in fearful contexts than males." (Kagan, 1972)

Kagan's other supposition about the difference in frequency of the display of fear is that male babies are more likely to issue a response in an uncertain situation, and this action diverts them from the source of frustration and aborts fear. By contrast, at four months, girls begin to inhibit active motoric responses in strange situations.

A source of anxiety which may be manifested in different ways for both men and women is conflict over role identification. It was pointed out earlier that men who rate high on scales of masculinity are also high in anxiety and prone to guilt. This suggests that highly masculine men show anxiety about maintaining their masculinity. In one case men with high voices worried about their masculinity and felt they were losing self-esteem. Their anxiety was relieved by learning to deepen their voices by pressing on their voice boxes (Frazier and Sadker, 1973). Anxiety caused from worry over sex-typed behaviors might better be alleviated by loosening the socially dictated boundaries of appropriate and inappropriate masculine and feminine behaviors.

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Maccoby and Jacklin (1974) point out a potential problem in studies testing anxiety. While "observational studies of fearful behavior usually don't find sex differences, teacher ratings and self-reports usually find girls more ... anxious. In the case of self-reports, the problem is to know whether the results reflect 'real' differences, or only differences in willingness to report anxious feelings." Because of these reasons, measures other than self-reporting are needed to clarify the meaning of girls' greater self-attribution of fears and anxiety.

Other Personality Differences. Some other differences that have been hypothesized or assumed to exist between the sexes are propensity to take risks and initiative.

Generally speaking, women seem to be less given to taking risks than men. Kogan and Wallach (1964) found that this difference interacts in a complex way with variation in the nature of the task or situation and with the personality traits of anxiety and defensiveness.

There is an assertion that boys are more likely to be the initiators and girls the reactors in interactions between the sexes. There is little observational data to draw on in this area. The hypothesis is complicated too by the fact that, in a social interaction, the girl can take the initiative by setting up a situation for the man to take the initiative—initiating but still following the prescription for "feminine" behavior. There apparently is also a dearth of studies that show which sex initiates interaction among children (Maccoby and Jacklin, 1972).

The research does not give us evidence of a large sex difference in personality characteristics. The strongest difference is in aggression, with males shown to be more physically aggressive than females. In other areas, such as nurturance and affiliation and passivity, there is either not enough conclusive evidence or studies have not been done to support significant sex differences. Again the conclusion must be that there is a greater variety in personality between individuals than between the groups of male and female.

Sex Differences in Play Preferences

Garai and Scheinfeld (1968) reported sex differences found in preschool play. Boys, they said, surpass girls in restlessness and general activity. They use a larger play area, play more often with blocks and all types of vehicles, and are more proficient in motor skills. Boys build tall structures and often destroy the structures they have created. Girls are said to prefer more sedentary games. They use a smaller play space than boys, and choose easier and nearer goals in their play. The structures they build are more horizontal, and have static interiors. These findings tempt one to ask again: "How many of these differences are learned differences?"

Play becomes increasingly sex-typed in the child's first three years. From the age of three, boys show consistent preference for a sex-appropriate role in games. Girls develop this preference for a sex-appropriate role later than boys. Ross and Ross (1972) conducted a study to determine if preschool boys in a school setting would resist playing with sex-inappropriate toys when urged to do so, a teacher they respected and wanted to please. The investigators found that both boys and girls resisted choosing a sex-inappro-

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priate toy offered them by the ...cher. They resisted by arguing with the teacher, derogating the teacher in her absence, getting social support from their peers, and getting non-social support by choosing a sex-appropriate book. Although both boys and girls resisted the sex-inappropriate toy, the investigators found that the boys were under greater pressure than girls to exhibit sex-appropriate behavior, and were embarrassed by the sex-inappropriate toy, whereas girls were not. Boys showed anxiety at the sex-inappropriate choices made for them by the teacher; girls showed only a dissatisfaction with the sex-inappropriate toy, but no anxiety.

Many games classified as "exclusively masculine" in 1926 appear on girls' lists of favorite games today, therefore leaving very few which appear only on the boys' lists. In 1960 only 18 games were classified as specifically masculine, but there were 40 that were typically feminine (Garai and Schein-feld, 1968).

At about age 10, when they narrow down their play preferences to typically "masculine" games, boys begin to adapt their play to vocational preferences. Tyler (1968) maintains that play preferences are precursors of educational and vocational preferences in later life. For boys, school achievement, intelligence, and play preferences are all positively related to future occupational goals. There seems to be no such relationship for girls that has been reported so far.

The Role of the School

The school plays a role in the stereotyping of social and emotional attributes of boys and girls as it does with other attributes. It rewards and reinforces girls for silence, neatness, and conformity, and for docile compliance to school rules and norms. "For good grades and teacher praise, the grade school bargains away her willingness to deal with challenging material and difficult problems" (Sadker and Sadker, 1972). Girls' social skills are reinforced to the detriment of their intellectual and physical beings.

Women on Words and Images identified many ways in which girls are portrayed in elementary school readers as being inferior to boys in social and emotional traits:

"Ingenuity, Creativity, Bravery, Perseverance, Achievement, Adventurousness, Curiosity, Sportsmanship, Generativity, Autonomy, Self-Respect. The development and display of these traits is the major theme of the great majority of reader stories. These are the traits universally regarded in our society as positive and desirable. They spring from a solid sense of self and are considered not merely socially useful but necessary for survival as well. Those who possess such traits can be said to have power over themselves, their surroundings, and their circumstances. They 'have it made.' Who are the chosen ones who virtually monopolize the leading roles in these tales? Males—young and old. The odds against females making it are *four to one*." (Women on Words and Images, 1972)

The other side of the coin is that boys in readers are discouraged from showing their emotions, from exhibiting nurturing behavior, from displaying any tender feelings. As we have seen, there is a much greater burden on boys than on girls to hide sex-inappropriate behavior. It cannot be healthy for children of either sex to have to inhibit many of their feelings because they're

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not *supposed* to feel or do something if they're male or female. "Future readers . . . should respect the claim of each of us to *all* traits we regard as human, not assign them arbitrarily according to preconceived notions of sex roles" (Women on Words and Images, 1972). This applies to every phase of school life, not only to the books children are given to read.

After summarizing the literature, we agree with Maccoby and Jacklin's statement (1973) that women and girls are just as likely as boys and men to be energetic, independent, and exploratory, and that boys and girls are equally capable of close attachment to other human beings. The inherent differences between the sexes seem therefore to place few constraints upon the development of their personalities, which are simply human rather than female or male.

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BIBLIOGRAPHY

Aberle, D. F. and K. D. . eagele. Middle-class fathers' occupational role and attitudes toward children. *American Journal of Orthopsychiatry, 22*, 366–78, 1952.

Aiken, L. R., Jr. Attitudes toward mathematics. *Review of Educational Research, 40*, (4), 551–596, 1970.

Aiken, L. R., Jr. Biodata correlates of attitudes toward mathematics in three age and two sex groups. *School Science and Mathematics, 72* (5), 386, 1972.

Allen, S. A., P. S. Spear, and J. R. Lucke. Effects of social reinforcement on learning and retention in children. *Developmental Psychology, 5*, 73–80, 1971.

Anastasi, A. *Differential Psychology: Individual and Group Differences in Behavior* (3rd edition). New York: Macmillan, 1958.

Andrew, R. J. *Animal Behavior, 20*, 741–50, 1972.

Asher, S. R., and R. A. Markell. Influence of interest on sex differences in reading comprehension. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, 1973.

Bach, G. R. Father-fantasies and father-typing in father-separated children. *Child Development, 17*, 63–80, 1946.

Bachman, M. E. Patterns of mental abilities: ethnic, socioeconomic, and sex differences. *American Educational Research Journal, 9* (' 1–12, 1972.

Bandura, A. Influence of model's reinforcement contingencies . the acquisition of imitative responses. *Journal of Personality and Social Psychology, 1*, 589–595, 1965.

Bandura, A. and A. C. Huston. Identification as a process of incidental learning. *Journal of Abnormal and Social Psychology, 63*, 311–18, 1961.

Bandura, A. *Aggression: A social learning analysis.* Englewood Cliffs, N.J.: Prentice-Hall, 1973.

Bandura, A. Social learning through imitation. In M. R. Jones (ed.), *Nebraska symposium on motivation, 1962.* Lincoln: University of Nebraska Press, 1962.

Barry, H., III, M. K. Bacon, and E. L. Childs. A cross-cultural survey of some sex differences in socialization. *Journal of Abnormal Social Psychology, 327*, 1957.

Baumrind, D. From each according to her ability. *School Review, 80* (2), 1972.

Beach, F. Retrospect and prospect. In F. Beach (ed.), *Sex and Behavior.* New York: Wiley, 1965.

Bell, R. Q. Relations between behavioral man. .estations in the human neonate. *Child Development, 31*, 463–77, 1960.

Bem, S. Sex-role adaptability: One consequence of psychological androgyny. *Journal of Personality and Social Psychology*, 1975, in press.

Bem, S. Psychology looks at sex roles: Where have all the androgynous people gone? Paper presented at UCLA Symposium on Women, May 1972.

Bem, S. and D. J. Bem. Homogenizing the American woman: the power of an unconscious ideology. Department of Psychology, Stanford University, 1972.

Bennett, E. M. and L. R. Cohen. Men and women: personality patterns and contrasts. *Genetic Psychology Monographs, 59*, 101–55, 1959.

Berkeley Unified School District Women's Task Force. In-Progress Report to the Board of Education. Berkeley, California, June, 1972.

87

Bettelheim, B. Growing up female. *Harper's*, October, 1962.

Bhushan, V. J. J. and I. Nakamura. Large-group instruction in mathematics under flexible scheduling. *Mathematics Teacher*, 61, 773–775, 1968.

Bieber, I., H. J. Dain, P. R. Dince, M. G. Drellich, H. G. Grand, R. H Gundlach, M. W. Kremier, A. H. Rifkin, C. B. Wilbur, and T. B. Bieber. *Homosexuality*. New York: Basic Books, 1972.

Brimer, M. A. Sex differences in listening comprehension. *Journal of Research and Development in Education*, 3 (1), 72–79, 1969.

Bronson, F. H. and C. Desjardins. Aggression in adult mice, modified by neonatal injections of gonadal hormones. *Science*, 161, 705–6, 1968.

Broverman, D. M. Generality and behavioral correlates of cognitive styles. *Journal of Consulting Psychology*, 28, 487–500, 1964.

Broverman, D. M., E. L. Klaiber, Y. Kobayashi, and W. Vogel. Roles of activation and inhibition in sex differences in cognitive abilities. *Psychological Review*, 75, 23–50, 1968.

Broverman, I. K., D. M. Broverman, F. E. Clarkson, P. S. Rosenkrantz, and R. Vogel. Sex role stereotypes and clinical judgments of mental health. *Journal of Consulting and Clinical Psychology*, 34, (1), 1–7, 1970.

Brown, D. G. Sex role development in a changing culture. *Psychological Bulletin*, 55, 232–41, 1958.

Buss, A. H. Instrumentality of aggression, feedback, and frustration as determinants of physical aggression. *Journal of Personality and Social Psychology*, 3, 153–62, 1966.

Chesler, P. *Women and Madness*. New York: Doubleday and Company, 1972.

Citizen's Advisory Council on the Status of Women. Need for Studies of Sex Discrimination in Public Schools. Washington, D.C.: Department of Labor, June 1972.

Clarenbach, K. F. Human status for women. In National Education Association, *Education for survival: Schools and sex role stereotypes*. (Pre-conference working papers), October, 1972.

Cleveland, G.A. and D. L. Bosworth. Study of certain psychological and sociological characteristics as related to arithmetic achievement. *Arithmetic Teacher*, 14, 383–387, 1967.

Coleman, J. S. *The Adolescent Society*. Glencoe, Il.: The Free Press, 1961.

Corah, N. L. Differentiation in children and their parents. *Journal of Personality*, 33 (2), 301–308, 1965.

Crandall, V. C. Sex differences in expectancy of intellectual and academic reinforcement. In C. P. Smith (ed.), *Achievement-related Motives in Children*. New York: Russell Sage, 1969.

Crandall, V. C. Achievement behavior in young children. In W. W. Hartup and N. L. Smothergill (eds.), *The Young Child: Reviews of Research*, Washington, DC: National Association for the Education of Young Children, 1967.

Crandall, V. J., R. Dewey, W. Katkovsky, and A. Preston. Parents' attitudes and behaviors and grade school children's academic achievements. *Journal of Genetic Psychology*, 104, 53–66, 1964.

Crandall, V. J., W. Katkovsky, and A. Preston. Motivational and ability determinants of young children's intellectual achievement behaviors. *Child Development*, 33, 643–61, 1962.

88

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Dalton, K. Ante-natal progesterone and intelligence. *British Journal of Psychiatry*, *114*, 1377–1382, 1968.

Davidson, H. H. and G. Lang. Children's perception of their teachers' feelings toward them related to self-perception, school achievement and behavior. *Journal of Experimental Education*, *29*, 107–18, 1960.

Diamond, M. A critical evaluation of the ontogeny of human sexual behavior. *Quarterly Review of Biology*, *40*, 147–175, 1965.

Dinitz, S., R. R. Dynes, and A. C. Clarke. Preference for male or female children: traditional or affectional. *Marriage and Family Living*, *16*, 1954.

Dornbusch, S. M. Afterward. In E. E. Maccoby (ed.), *The Development of Sex Differences*. Stanford, CA: Stanford University Press, 1966.

Droege, R. C. Sex differences in aptitude maturation during high school. *Journal of Counseling Psychology*, *14*, 407–11, 1967.

Dwyer, C. A. Sex differences in reading: An evaluation and a critique of current theories. *Review of Educational Research*, *43*, (4), 1973.

Easterday, K. and H. Easterday. Ninth-grade algebra, programmed instruction, and sex differences: An experiment. *Mathematics Teacher*, *61*, 302–307, 1968.

Erhardt, A. A. and S. W. Baker. Hormonal aberrations and their implications for the understanding of normal sex differentiation. Paper presented at the Society for Research in Child Development meeting, Philadelphia, 1973.

Erhardt, A. A. and J. Money. Progestin-induced hermaphroditism: IQ and psychosexual identity in a study of ten girls. *The Journal of Sex Research*, *3* (1), 83–100, 1967.

Farley, H., J. G. Nelson, W. C. Knight, and E. Garcia-Colberg. Sex, politics and personality: A multi-dimensional study of college students. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, February, 1973.

Fennema, E. Mathematics learning and the sexes: A review. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, 1973a.

Fennema, E. Mathematics learning and the sexes: Some related factors. Duplicated paper. University of Wisconsin, Madison, 1973b.

Flory, C. D. Sex differences in skeletal development. *Child Development*, *6*, 205–212, 1935.

Frazier, N. and M. Sadker. *Sexism in School and Society*. New York: Harper and Row, 1973.

Garai, J. E. Sex differences in mental health. *Genetic Psychology Monographs*, *81*, 125–142, 1970.

Garai, J. E. and A. Scheinfeld. Sex differences in mental and behavioral traits. *Genetic Psychology Monographs*, *77*, 169–299, 1968.

Gardner, J. Sexist counseling must STOP. *The Personnel and Guidance Journal*, *49*, 705–714, 1971.

Glick, O. Some social-emotional consequences of early inadequate acquisition of reading skills. *Journal of Educational Psychology*, *63* (3), 253–257, 1972.

Good, C. V. (ed.). *Dictionary of Education*, 2nd edition. New York: McGraw-Hill Book Co., Inc., 1959.

Goodenough, E. W. Interest in persons as an aspect of sex differences in the early years. *Genetic Psychology Monographs*, *55*, 287–323, 1957.

Grady, K. L., C. H. Phoenix, and W. C. Young. Role of the developing rat testis in differentiation of the neural tissues mediating mating behavior. *Journal of Comparative and Physiological Psychology*, 59 (2), 176–182, 1965.

Gurin, G., J. Veroff, and S. Feld. *Americans View Their Mental Health*. New York: Basic Books, 1960.

Hamburg, D. A. and D. T. Lunde. Sex hormones in the development of sex differences in human behavior. In E. E. Maccoby (ed.), *The Development of Sex Differences*. Stanford, California: Stanford University Press, 1966.

Hampson, J. L. and J. G. Hampson. The ontogenesis of sexual behavior in man. In W. C. Young (ed.), *Sex and Internal Secretions*, Vol. II. Baltimore: Williams and Wilkins, 1961.

Hardding, J. Stereotypes. In D. L. Sills (ed.), *International Encyclopedia of the Social Sciences*, Vol. 15. New York: Crowell, Collier and Macmillan, Inc., 1968.

Harford, T. C., C. H. Willis, and H. L. Deabler. Personality correlates of masculinity-femininity. *Psychological Reports*, 21, 881–84, 1967.

Harmatz, M. G. The effects of anxiety, motivating instructions, success and failure reports, and sex of subject upon level of aspiration and performance. Unpublished master's thesis. University of Washington, 1962.

Hartlage, L. C. Sex-linked inheritance of spatial ability. *Perceptual and Motor Skills*, 31, 610, 1970.

Hartup, W. W. and E. D. Keller. Nurturance in pre-school children and its relationship to dependency. *Child Development*, 31, 601–9, 1960.

Hatfield, J. S., L. R. Ferguson, and R. Alpert. Mother-child interaction and the socialization process. *Child Development*, 38, 365–414, 1967.

Helson, R. Childhood interests related to creativity in women. *Journal of Consulting Psychology*, 29, 1965.

Hess, et al. The cognitive environments of urban preschool children. Report to the Graduate School of Education, University of Chicago, 1968 and 1969.

Hilton, T. L., and G. W. Berglund. Sex differences in mathematics achievement: A longitudinal study. *Journal of Educational Research*, 67 (5), January, 1974.

Hoffman, M. L. and L. W. Hoffman (eds.), *Review of Child Development Research*, Vol. 1. New York: Russell Sage Foundation, 1964.

Hoffman, M. L. and L. W. Hoffman (eds.), *Review of Child Development Research*, Vol. 2. New York: Russell Sage Foundation, 1966.

Horner, M. S. Fail, Bright Women. *Psychology Today*, 3 (6), 1969.

Jacklin, C. N. and E. E. Maccoby. Sex differences in intellectual abilities: A reassessment and a look at some new explanations. Paper presented at the annual meeting of the American Educational Research Association, Chicago, April, 1972.

Jones, M. C. The later careers of boys who were early or late maturing. *Child Development*, 28, 113–128, 1957.

Jones, M. C. and P. H. Mussen. Self-conceptions, motivations, and interpersonal attitudes of early and late maturing girls. *Child Development*, 29, 491–501, 1958.

Joslyn, W. D. Androgen-induced social dominance in infant female rhesus monkeys. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 14, 137–45, 1973.

Kagan, J. The concept of identification. *Psychology Review*, 65, 296–305, 1958.

Kagan, J. Acquisition of sex typing and sex role identity. In M. L. Hoffman and L. W. Hoffman (eds.), *Review of Child Development Research*, Vol. 1. New York: Russell Sage Foundation, 1964.

Kagan, J. The emergence of sex differences. *School Review*, 80, February 1972.

Kagan, J. and H. A. Moss, *Birth to Maturity*. New York: John Wiley, 1962.

Katz, D. and K. Braly. Racial stereotypes of one hundred college students. *Journal of Abnormal and Social Psychology*, 28, 288–290, 1933.

Kemer, B. J. A study of the relationship between the sex of the student and the assignment of marks by secondary school teachers. Ph.D. Dissertation, Michigan State University, 1965.

Kimura, D. Functional asymmetry of the brain in dichotic listening. *Cortex*, 3, 163–178, 1967.

Know, Inc. A chauvinistic index fo reducators. Box 10197, Pittsburgh, PA, 1971.

Kogan, N. and M. A. Wallach. *Risk taking: A study in cognition and personality*. New York: Holt, Rinehart and Winston, 1964.

Kohlberg, L. A note on the interaction of cognitive set, stimulus artifact, and sex-role attitudes in a projective measure of sex role identity. Unpublished mimeographed paper, Center for Advanced Studies in Behavioral Sciences, Palo Alto, California, 1962.

Kohlberg, L. and E. Zigler. The impact of cognitive maturity on the development of sex-role attitudes in the years 4–8. *Genetic Psychology Monographs*, 1966.

Kohn, M. L. and J. A. Clausen. Parental authority behavior and schizophrenia. *American Journal of Orthopsychiatry*, 26, 297–313, 1956.

Kreuz, L. E. and R. M. Rose. Assessment of aggressive behavior and plasma testosterone in a young criminal population. *Psychosomatic Medicine*, XXXIV (4), July–August 1972.

Lambert, P. Mathematical ability and masculinity. *Arithmetic Teacher*, 7, 19–21, 1960.

Lekarczyk, D. T. and K. T. Hill. Self-esteem, test anxiety, stress and verbal learning. *Developmental Psychology*, 1, 147–54, 1969.

Lippmann, W. *Public Opinion*. New York: Macmillan (1922), 1944. (Paperback in 1965 by the Free Press.)

Lynn, D. B. Determinants of intellectual growth in women. *School Review*, 80, February, 1972.

Lynn, D. B. and W. L. Sawrey. The effects of father-absence on Norwegian boys and girls. *Journal of Abnormal Social Psychology*, 59, 258–62, 1959.

MacEwan, P. T. *Liberating Young Children from Sex Roles*. Boston: The New England Free Press, 1972.

Maccoby, E. (ed.). *The Development of Sex Differences*. Stanford, California: Stanford University Press, 1966.

Maccoby, E. Sex differences in intellectual functioning. In E. Maccoby (ed.) *The Development of Sex Differences*, Stanford, California: Stanford University Press, 1966.

Maccoby, E. Differential socialization of boys and girls. Paper presented at the Annual Meeting of the American Psychological Association, Hawaii, 1972.

93

Maccoby, E. and C. N. Jacklin. Sex differences in intellectual functioning. Paper presented at Educational Testing Services Invitational Conference on Testing Problems, October 28, 1972.

Maccoby, E. and C. Jacklin. On the alleged passivity of women. Department of Psychology, Stanford University, 1973.

Maccoby, E. and C. N. Jacklin. *The Psychology of Sex Differences.* Stanford, California: Stanford University Press, 1974.

Maccoby, E. and W. C. Wilson. Identification and observational learning from films. *Journal of Abnormal Social Psychology,* 55, 76–87, 1957.

McCarthy, J. J. and S. A. Kirk. *The construction, standardization and statistical characteristics of the Illinois Test of Psycholinguistic Abilities.* University of Illinois, Institute for Research on Exceptional Children, 1963.

McIntyre, A. Sex differences in children's aggression. *Proceedings of the 80th Annual Convention of the American Psychological Association,* 7, 93–94, 1972.

McKee, J. P. and A. C. Sherriffs. The differential evaluation of males and females. *Journal of Personality,* 25, 356–71, 1957.

McNeil, J. D. Programmed instruction versus usual classroom procedures in teaching boys to read. *American Educational Research Journal,* 1, 113–119, 1964.

Mead, M. *Male and Female.* New York: William Morrow, 1949.

Meyer, W. J. and G. G. Thompson. Sex differences in the distribution of teacher approval and disapproval among sixth-grade children. *Journal of Educational Psychology,* 47 (7), 385–396, 1956.

Minton, C. M., J. Kagan, and J. A. Levine. Mother-child interaction in 27-month-old children. *Child Development,* 1971.

Minuchin, P. Sex role concepts and sex typing in childhood as a function of school and home environments. Paper presented at the meeting of the American Orthopsychiatric Assocation, Chicago, 1964.

Minuchin, P., B. Biber, E. Shapiro, and H. Zimeles. *The Psychological Impact of School Experience,* New York: Basic Books, Inc., 1969.

Mischel, W. A social learning view of sex differences in behavior. In E. E. Maccoby (ed.), *The Development of Sex Differences.* Stanford, California: Stanford University Press, 1966.

Mischel, H. Sex bias in the evaluation of professional achievements. *Journal of Educational Psychology,* 66 (2), 157–66, 1974.

Mitchell, G. D. (ed.), *A Dictionary of Sociology.* Chicago: Aldine Publishing Company, 1968.

Money, J. Sex hormones and other variables in human eroticism. In W. C. Young (ed.), *Sex and Internal Secretions,* Vol. II. Baltimore: Williams and Wilkins, 1961.

Money, J. *Sex Research, New Developments.* New York: Holt, Rinehart and Winston, 1965.

Moore, M. Aggression themes in a binocular rivalry situation. *Journal of Personality and Social Psychology,* 3, 685–688, 1966.

Moss, H. A. and K. S. Robson. The relation between amount of time infants spend in various states and in development of visual behavior. *Child Development,* 41, 509–17, 1970.

92

94

Mussen, P. Some antecedents and consequents of masculine sex-typing in adolescent boys. *Psychology Monographs, 75* (506), 1961.

National Education Association. *Education for survival: Schools and sex role stereotypes.* (pre-conference working papers) October, 1972.

Omark, D. R., M. Omark, and M. Edelman. Dominance hierarchies in young children. Paper presented to the International Congress of Anthropological and Ethnological Sciences, Chicago, 1973.

Parsley, K. M., M. Powell, H. A. O'Connor, and M. Deutsch. Are there really sex differences in achievement? *Journal of Educational Research, 57* (4), 210–212, 1963.

Parsley, K. M., M. Powell, and H. A. O'Connor. Further investigation of sex differences in achievement of under-, average-, and overachieving students within five IQ groups in grades four through eight. *Journal of Educational Research, 57* (5), 268–270, 1964.

Patterson, G. R., R. A. Littman, and W. Bricker. Assertive behavior in children: a step toward a theory of aggression. *Monographs of the Society for Research in Child Development, 32,* Serial #113, 1967.

Pope, B. Socioeconomic contrasts in children's peer culture prestige values. *Genetic Psychology Monographs, 48,* 157–220, 1953.

Potter, B. A. *The Shaping of Woman.* Mimeographed paper, 1964.

Rabban, M. Sex-role identification in young children in two diverse social groups. *Genetic Psychology Monographs, 42,* 81–158, 1950.

Rarick, G. L. Competitive sports for girls: Effects on growth, development and general health. In National Education Association, *Education for Survival: Schools and Sex Role Stereotypes.* (pre-conference working papers) October, 1972.

Rose, R. M., J. W. Holaday, and I. S. Bernstein. Plasma testosterone, dominance rank and aggressive behavior in male rhesus monkeys. *Nature, 231,* 366, 1971.

Rosenberg, K. M., V. H. Denenberg, M. X. Zarrow, and L. F. Bonnie. Effects of neo-natal castration and testosterone on the rat pup-killing behavior and activity. *Physiology and Behavior, 7,* 363–368, 1971.

Rosenblatt, J. S. The development of maternal responsiveness in the rat. *American Journal of Orthopsychiatry, 39,* 36–56, 1969.

Rosenkrantz, P., S. Vogel, H. Bee, I. Broverman, and D. M. Broverman. Sex role stereotypes and self-concepts in college students. *Journal of Consulting and Clinical Psychology, 32* (3), 287–295, 1968.

Ross, D. M. and S. K. Ross. Resistance by preschool boys to sex-inappropriate behavior. *Journal of Educational Psychology, 63* (4), 342–346, 1972.

Saario, T. N., C. N. Jacklin, and C. K. Tittle. Sex role stereotyping in the public schools. *Harvard Educational Review, 43* (3), 386, 1973.

Sadker, M. and D. Sadker. Sexual discrimination in the elementary school. *The National Elementary Principal.* Vol. III (2), October, 1972.

Sarbin, T. H. Role: Psychological Aspects. In D. L. Sills (ed.), *International Encyclopedia of the Social Sciences,* Vol. 13, New York: Crowell Collier and Macmillan, Inc., 1968.

Schumacher, D. Changing the school environment. *Women: A Journal of Liberation, 2,* 1972.

93

95

Sears, P. S. The effect of classroom conditions on the strength of achievement motive and work output on elementary school children. Final report, Cooperative research project No. 873, Stanford University, 1963.

Sears, R. Relation of early socialization experiences to aggression in middle childhood. *Journal of Abnormal and Social Psychology, 63,* 466–492, 1961.

Sears, R. Relation of early socialization experiences to self-concepts and gender role in middle childhood. *Child Development, 41* (2), 1970.

Sears, R. R., E. E. Maccoby, and H. Levin. *Patterns of child rearing,* Evanston, Ill.: Row, Peterson, 1957.

Sears, R., M. H. Pintler, and P. S. Sears. Effects of father separation on preschool children's doll play aggression. *Child Development, 17,* 211–243, 1946.

Sears, R. R., L. Rau, and R. Alpert. *Identification and child rearing,* Stanford, California: Stanford University Press, 1965.

Sheffrey, M. J. A theory on female sexuality. In R. Morgan (ed.), *Sisterhood is Powerful.* New York: Random House (Vintage), 220–30, 1970.

Sherriffs, A. C., and J. P. McKee. Qualitative aspects of beliefs about men and women. *Journal of Personality,* 451–465, 1957.

Shortell and Biller. Aggression in children as a function of sex of subject and sex of opponent. *Developmental Psychology, 3,* 143–44, 1970.

Smith, M. P. He only does it to annoy . . . In S. Anderson (ed.), *Sex Differences and Discrimination in Education.* Worthington, Ohio: Charles A. Jones Publishing Co., 1972.

Sontag, L. W. and C. T. Baker. Personality, familial and physical correlates of change in mental ability. *Monographs of the Society for Research in Child Development, 23* (Serial No. 68), 1958.

Sontag, L. W., C. T. Baker, and V. L. Nelson. Mental growth and personality development: a longitudinal study. *Monographs of the Society for Research in Child Development, 23,* Serial No. 68, 1958.

Sperry, R. W. and J. Levy. Mental capacities of the disconnected minor hemisphere following commissurotomy. Paper presented at the annual meeting of the American Psychological Association, Miami, 1970.

Stafford, R. E. Sex differences in spatial visualization as evidence of sex-linked inheritance. *Perceptual and Motor Skills, 13,* 428, 1961.

Stanford, D., W. N. Dember, and L. B. Stanford. A children's form of the Alpert-Haber Achievement Anxiety Scale. *Child Development, 34,* 1027, 1963.

Stein, A. H. The influence of social reinforcement on the achievement behavior of fourth-grade boys and girls. *Child Development,* 1969.

Stein, A. H. and M. M. Bailey. The socialization of achievement orientation in females. *Psychological Bulletin, 90* (5), 345, 1973.

Stein, A. H. and J. Smithells. Age and sex differences in children's sex role standards about achievement. *Developmental Psychology, 1,* 252–259, 1969.

Stone, D. C. and R. G. Barker. The attitudes and interests of premenarchal and postmenarchal girls. *Journal of Genetic Psychology, 54,* 27–71, 1939.

Sutton-Smith, B. Sex role identity. Paper presented at the Annual Meeting of the American Orthopsychiatric Association, April 1966.

Talland, G. A. Sex differences in self assessment. *The Journal of Social Psychology, 48,* 25–35, 1958.

94

Taylor, R. G. Personality traits and discrepant achievement: A review. *Journal of Counseling Psychology, 11* (1), 1964, 76–81.

Taylor and Epstein. Aggressions as a function of the interaction of the sex of the aggressor and the sex of the victim. *Journal of Personality, 35,* 474–96, 1967.

Terman, L. M. and C. C. Miles. *Sex and Personality.* New York: McGraw-Hill, 1936.

Terman, L. M. and M. H. Oden. *The gifted child grows up.* Stanford, California: Stanford University Press, 1947.

Terman, L. M. and L. E. Tyler. Psychological sex differences. In L. Carmichael (ed.), *Manual of Child Psychology,* 2nd edition, New York: John Wiley, 1954.

Tittle, C. K., K. McCarthy, and J. F. Steckler. Women and educational testing: A selective review of the research literature and testing practices. Unpublished manuscript, Office of Teacher Education, City University of New York, 1973.

Tyler, L. E. Sex differences. In D. L. Sills (ed.), *International Encyclopedia of the Social Sciences,* Vol. 7, New York: Crowell Collier and Macmillan, Inc., 207–213, 1968.

VanVuuren, N. What about equal opportunity for women? *Pennsylvania Education,* November–December, 1971.

Vogel, W., D. M. Broverman, and E. L. Klaiber. EEG responses in regularly menstruating women and in amenorrheic women treated with ovarian hormones. *Science, 172,* 1971, 388–391.

Vonesor, O. Sound mind, sound body, sounding off. *The Teacher Paper,* October, 1972.

Walberg, H. J. Physics, femininity and creativity. *Developmental Psychology, 1,* 1969, 47–54.

Washburn, T., D. Medearis, and B. Childs. Sex differences in susceptibility to infections. *Pediatrics, 35,* 57–64, 1965.

Webster's Seventh New Collegiate Dictionary. Springfield, Mass: G & C Merriam Co., 1969.

Whiting, B. and C. Pope. *Journal of Social Psychology,* in press, 1974.

Whiting, J. and B. Whiting. Personal communication to Eleanor Maccoby on a research project, 1962.

Women on Words and Images. *Dick and Jane As Victims: Sex Stereotyping in Children's Readers,* 1971.

Women on Words and Images. Look Jane look. See sex stereotypes. *New Jersey Education Association Review,* March, 1972.

Young, W. C., R. Goy, and C. Phoenix. Hormones and sexual behavior. *Science, 143,* 212–218, 1964.

Youseff, Z. I. The role of race, sex, hostility and verbal stimulus in inflicting punishment. *Psychonomic Science, 12,* 285–86, 1968.

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