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ABSTRACT To explore androcentric bias in the "Educational Administration Quarterly" (EAQ), researchers performed a content analysis of 90 articles from ten volumes of the EAQ (1970-1979). An initial demographic analysis of the articles looked at the author's gender, article focus, and use of sexist language. The researchers then examined five aspects (comprising 19 variables) of each of the articles: (1) research problem selection and formulation, including such variables as the article's conceptualization of roles, the significance of the problem for women, and the exploration of gender as a variable; (2) review of previous research, including the gender of authors reviewed; (3) specification of the population and sample selection, involving the gender balance of samples and the justification of sample imbalance; (4) validity of methods and instruments, concerning sex-biased research instruments and surveys and interviewer-interviewee genders; and (5) interpretation of results, including generalization to gender groups and explanations of gender differences. The results of the analysis indicate that androcentric bias exists in all phases of research reported in the ten EAQ volumes. A copy of the data collection instrument is appended. (Author/RW)

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ANDROCENTRIC BIAS IN THE EDUCATIONAL ADMINISTRATION QUARTERLY

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Androcentric Bias in the Educational Administration Quarterly

Within a number of social science disciplines, the study of society and behavior has been opened for reconsideration and revision by feminist scholars who have noted that academic research has ignored the role of women. It has been charged that the bulk of work in the social sciences has focused on men, male institutions, and on phenomena in which men dominate: territoriality, aggression, politics, and economics.

Because of the narrow context from which most research and writing in the social sciences has emerged, feminist scholars have become concerned about the accuracy of this collective thought for women and female experience as well as to theory construction for human populations in general. In response to this impoverished scholarship, feminist research and writing has emerged which seeks to fulfill three functions: to criticize existing paradigms and ways of perceiving them; to serve as a corrective mechanism by providing an alternative viewpoint; and to begin to lay the groundwork for the transformation of social science and society.

The purpose of this paper is to present the results of a content analysis of ten volumes of the *Educational Administration Quarterly (EAQ)* which extends this tradition by examining the research and writing of an important aspect of schooling -- educational management and instructional supervision -- and the relationship of this domain to the social, cultural and political contexts from which its research and training emerge.

The content analysis encompasses three progressive stages of feminist critique: the first stage addresses demographic characteristics of research and literature and includes such questions as: *Who is doing the research?* and *What topics are being researched?* These questions are posed with a view toward determining the degree of inclusion of women as sources and topics involving women. This is currently the most well-documented level of feminist critique and is exemplified by such work as Lockheed and Stein's review of women's research

in educational publications and by Sadker and Sadker's 1980 study of teacher training texts.¹

The second level of critique treats issues and births such questions as: *Who is researched?* and *What issues are addressed?* The intent at this stage is to document the degree of inclusion of constructs and issues relevant to women within topical studies. Work in this area is less frequent and has been confined to analysis of particular disciplines or to cutting broad swaths across fields without comprehensive attention to particular works.²

The third and final level of analysis to be presented has been termed conceptual and answers questions such as: *To what degree can theoretical grounding and structure be identified as feminist?* The intent at this level is to determine the impact that conceptualization grounded in feminist assumptions and philosophy might have on resulting conclusions and behaviors. Little can be found in the field of education which attains this level of analysis. although in the social sciences such work is beginning to appear.³

Methods

The EAQ was selected as the focus of this inquiry because it has provided a forum for research and theory debate within the field and is labelled as "the only educational administration periodical in the United States that presumes to be scholarly."⁴

Sample

Specifically, each article in ten volumes of the EAQ covering the decade of the 1970s was analyzed; the total sample was 178 articles representing a population of all articles in the Educational Administration Quarterly. Ninety or slightly more than half of the articles were judged appropriate for an inquiry into androcentric bias. These 90 articles are the subject of the major portion of this paper.

Procedure

All articles in the ten volumes of the *EAQ* were read and critiqued by one of the researchers using a data collection instrument (Appendix A) developed from a model of issues identified by the Committee on the Status of Women in Sociology (1980).⁵ Figure 1 outlines conceptual, design and interpretation aspects of these issues which were examined. Because the purpose of this study was a critique of method, conceptualization and design of research and theory presented in the *EAQ*, rather than a count of such domains, inter-rater reliability was neither required nor desired; we were seeking a dual perspective in this critique. Rather than a restatement of surface androcentrism, this study intends to identify and elaborate, through example, the androcentric nature of the research and theory formulation in ten years of the *EAQ*.

Components of the studies which are addressed include problem selection and formulations, review of previous research, specification of the population and selection of the sample, validity issues, and interpretation of research results. While thirty-four of the ninety articles (See Table 1) treat the issue of gender at some point in the presentation, none maintain their coverage through all five phases of the article. In fact an all-too-frequent pattern is to suddenly report a difference on some measure between men and women without ever having developed a theoretical or research-based rationale for looking for such a difference and without ever having specified the gender-composition of the population or that the gender variable would be studied. A typical concomitant of the pattern is the failure to discuss or interpret results. Due to this piecemeal nature of gender-related coverage, several issues under each article's components are examined in light of the aggregate data for all ninety articles and through the use of examples, from specific *EAQ* articles.⁶

Figure 1

Gender-Related Issues in Educational Administration Research

Research Problem Selection and Formulation

- A. Gender Variable Explored in Discussion of Theory
- B. Topics Significant for Women Addressed
- C. Aspects of Topics of Special Salience for Women Treated
- D. Explicit Formulation of the Problem for Women, Men, or Both Sexes
- E. Research Model Properly Assumed to Apply to One Sex
- F. Topics Explored Which Transcend Sex-Stereotyped Divisions
- G. Non-Pejorative Conceptualization or Labeling of Persons Outside of Traditional Roles

Review of Previous Research

- H. Gender Composition Reported for Studies Cited in the Review of Research
- I. Gender Composition Reported for the Body of Literature Reviewed
- J. Methodological Weaknesses Addressed in Research Which Reports One Sex Inferior

Selection of the Sample

- K. Balanced Samples
- L. Adequate Justification of Sample Imbalance

Validity Issues

- M. Instruments Containing No Bias
- N. Scales Validated on Both Sexes
- O. Same-Sex Interviewing

Interpretation of Research Results

- P. Generalization to Correct Gender Groups
- Q. Proper Entitlement of Single-Sex Study Reports
- R. Correct Inferences Regarding Women
- S. Adequate Attribution of Gender Differences

Adapted from the Committee on the Status of Women in Sociology, "Sexist Biases in Sociological Research: Problems and Issues," *American Sociological Association Footnotes* (January 1980): 7-9.

Table 1.

Gender-Related Issues Addressed in *Educational Administration Quarterly* Articles in Which Gender is Theoretically Significant (1970 through 1979)

Volume	Problem Selection and Formulation							Research Review			Sample		Validity			Interpretation				
	A. Gender Variable Explored	B. Topics Significant for Women	C. Aspects Salient to Women	D. Implicit Problem Formulation	E. Research Model Applied Properly	F. Topics Transcending Sex Stereotype	G. Non-Fejorative Conceptualization	H. Gender of Studies	I. Gender of Body of Literature	J. Methodological Weaknesses	K. Balanced Samples	L. Justified Unbalanced Samples	M. Unbiased Instruments	N. Scales Validated on Both Sexes	O. Same-Sex Interviewing	P. Correct Generalization	Q. Proper Titling	R. Correct Inferences	S. Adequate Attribution	Gender Addressed Explicitly
6						9													2	9
7					1			1					1						2	9
8	1			1		8						1							2	10
9				1	1						1			1					6	11
10			1			7	1	1		1		1			1				1	10
11	1									2					2	1	2		5	7
12	3					9	1			2	2	4			1	1		2	6	12
13										1		1	1		1				3	7
14	2			1		10	1			2		1			1				5	10
15	1	2	2	2	1		1	1		1						2			2	5
Total	9	2	3	5	3	43	4	3	0	9	3	8	2	1	6	4	2	2	14	10

While the data collection instrument allowed for brief tallies of the raters' judgment, rich descriptions of specific cases where an issue was specifically addressed (or not addressed), were also recorded in the margins. These latter records provide the basis for the illustrations of the various aspects of androcentric bias in *EAQ* research.

Results

Topics Researched and By Whom

Although the purpose of this inquiry was not to count items, an initial demographic analysis of *EAQ* articles provides the context of the larger study. Thus, the conspicuous characteristics of gender of authors published, focus of *EAQ* articles, and language usage was recorded for each article. In an effort to increase inter-rater reliability, the two readers compared analysis on these three article characteristics in a sample of articles and found agreement 95% of the time.

Gender of Authors Published: A total of fifteen articles (8%) are authored or co-authored by women in the 10 volumes of the *EAQ* reviewed (See Table 2). Since no woman shared authorship with another woman -- five wrote alone and ten worked with male co-authors -- 15 women were published in the journal. Four authors had names which could not be categorized by gender; these have been listed as unknown in Table 2.

Because individuals other than authors have influence on scholarly inquiry, female acknowledgements were also recorded. Of the forty-eight individuals acknowledged in the ten volumes of the *EAQ*, five (10%) were women, 37 were men, and six (anonymous reviewers and persons identified only by initials and last names) may have been either male or female. Although one of the females was acknowledged for her clerical help, the remaining four were thanked for their editorial or substantive contributions. Thirty-three organizations were also acknowledged for their support.

Table 2
 Authorship of EAQ
 Articles (1970 - 1979)

Gender of Author	Number of Articles	
	N	%
Female	5	2.8
Female and Male	10	5.6
Male	159	89.3
Unknown	4	2.2
Total	178	99.9

In the 15 articles authored or co-authored by a female, two contained acknowledgements to at least one woman while these plus two other articles contain reference to assistance. Three articles authored by males acknowledge at least one woman's assistance while seventeen others acknowledge only males or anonymous reviewers.

In summary, women appear either as authors or are recognized in the acknowledgements of eighteen (10%) of the EAQ articles during the decade of the seventies. In eight articles they are either the major or the only author.

Focus of EAQ Articles: Of the 178 articles analyzed, 90, or slightly more than half of the articles were judged relevant to human or social characteristics or interaction. The remaining 88 articles were judged neutral with regard to the theoretical significance of gender since they tended to deal with issues or models not involving human or social interaction; and thus were not expected to address gender issues.

As is often true with arbitrary dichotomies, differentiating between the two categories was difficult and sometimes quite subjective. A few issue-oriented discussions did not fall clearly into either camp and were usually placed arbitrarily in the neutral category. This was done even when discussion of gender issues might have been (and in one case was) an important part of the article, because the ideas discussed were too abstract to classify systematically. Some of the issues raised in these borderline articles should be addressed.

1. Critiques of current organizational models and theories applied to education and/or their historical development should address the absence of feminine models and the current absence of female participation in the male-modeled organizations. While several articles discussed organization theory, only one mentioned women's absence

from both theories and higher levels of actual organizations. The author cited research which suggested better definition of the environments surrounding organizations "in order to understand what is happening to women in organizations."⁷ For the most part, however, critiques fail to question aspects of theory which may be gender-related, such as the male norms and behavior which form the basis of Barnard's theory.⁸

2. Failure to question underlying masculine assumptions leads to a perpetuation of those beliefs in more applied aspects of research such as instrumentation. Thus, an article focusing on the development of an instrument builds on concepts of power and hierarchy, formalization and rule following, and centralization and line staff control.⁹ Left out of such dictionaries of constructs are the possible confounding influences of male/female behaviors on principal/teacher role performance. Thus for example, autonomy is measured solely in terms of a male construct and the autonomy of the teacher alone in her/his classroom is ignored.
3. Similarly, articles which focus on equity issues -- whether they relate to hiring and remuneration or equitable finance and benefits -- fail to address issues which might be female-related such as greater female participation or benefits other than financial.

Thus, it would appear that even authors dealing with neutral topics could often derive more breadth and insight from their consideration of issues in educational administration by stepping outside of the male frame of reference and formulating questions which take female experience into account.

As mentioned previously, the body of literature with which the major portion of this critique is concerned is that which addresses human or social characteristics and is thus directly related to gender issues. Most of these inquiries deal with humans in organization and such specific issues as professionals in a bureaucracy, motivation and satisfaction, and organizational climate.¹⁰ Other important topics include leadership, decision making, and supervision. The method most often used to attack these questions is some form of survey (usually mailed). Occasionally, designs such as reviews, naturalistic inquiries, experiments, and post hoc analysis of large data bases are utilized.

While female authors tend to be involved in research concerning human or social interaction, the small number of female authors prohibits conclusions regarding topic preference

Language Usage: The majority of articles (112 or nearly two-thirds) are written as though women do not exist. Not only are the pronouns he, him, and his used in these articles but the writers employ exclusive terms such as "men of power,"¹¹ "administrative man,"¹² "man in the middle,"¹³ and "one-man-deciding-along-model."¹⁴

A few authors make a valiant effort to include females and then fail miserably at equity when they come to identifying the gender of administrators or leaders. For instance, Bruno and Noltingham manage to avoid sexism in discussing students, teachers, supervisors, and specialists, but turn to the pronoun "he" when referring to a school administrator.¹⁵ Another author uses "he/she" in referring to members of teacher-parent organizations but resorts to "he" and "himself" for teacher union leaders.¹⁶

Approximately one fourth of the articles are consistently non-sexist and inclusive of both females and males in their language use. A few more avoid the issue by making no mention of persons. Non-sexist language in the *EAO*, however, tends to take the form of non usage of gender-associated pronouns. Thus, a review of ten volumes of research in administration presents the reader with very few references to a leader as "she". At least one example is a mixed bag:

The skill with which the leader can apply his [sic] technical knowledge and managerial techniques to the organization and not violate his [sic] own philosophical base will determine the degree of effectiveness which he/she is able to achieve¹⁷ (emphasis added).

Perhaps the journal's editorial board needs to take a consistent stand, similar to the American Psychological Association or the American Educational Research Association's editorial policies.¹⁸

Androcentric Bias in Problem Selection and Formulation

The conspicuous characteristics of *EAQ* articles and their authors during the 1970s, thus, seem to indicate a tiny female presence. About half of the articles, however, deal with topics in which gender could theoretically play a part. We turn now to that subset of ninety articles to determine the actual frequency with which gender issues are addressed. Critiques of research in other social science disciplines have indicated that problem selection and formulation that is theory-based frequently fails to consider gender-related issues. The neglect of these issues is often obscured by a failure to adequately explore the theoretical specifications which lead to selection and formulation of a problem for study. Thus, gender may crop up as a piece of data that was included in statistical analysis but never actually developed as an integral part of the problem formulation. The issues elaborated in this section attempt to catalogue the significance of gender as a theoretical construct in problem selection and formulation of research reported in the *EAQ*. These issues merely suggest areas for possible exploration and are not meant to be an exhaustive critique.

Discussion of Theory: As can be seen from Table 1, while gender is touched upon in thirty-four articles, it is explored as a theoretical variable in only nine of the ninety studies in which gender could be theoretically significant. This does not mean that only nine studies reported information on sex or even that only nine carried out statistical tests with sex as an independent variable. It does mean that gender is involved in the problem formulation of only nine articles.

Inclusion in the problem formulation section means anything from stating that gender differences are theorized in one aspect of the problem to development of a problem that centers on a gender issue. An example of the former is the suggestion that male and female professors may fee¹

differently about collective bargaining issues.¹⁹ The latter is illustrated by only two articles, both in Volume 15, which deal with equity in hiring practices in schools. One reviews previous research and speculates on why the number of women in administration has not increased,²⁰ while the other examines attitudes toward female administrators.²¹

The paucity of studies that explore gender implications in the formulation of the problem is amazing when one considers that almost three-fourths of the articles dealing with social or human characteristics have as their topics motivation and satisfaction, the professional in the bureaucracy, organizational climate, leadership, or decision making. Since the socialized behaviors of males and females in these circumstances often differ, the absence of consideration of possible gender effects severely weakens the problem statements and formulations.

Topic Selection: While seventy-two articles were judged to deal with topics significant to all people, eleven articles explored male-identified issues while only two addressed female-oriented subjects. Five topics were categorized as neutral.

The topics which covered human behavior were never described as relating to both males and females; authors, we suppose, assumed that readers would make that connection although the prevalent use of sexist language and the mental picture most products of the public school system have of administrators as men would frequently lead readers to believe that the research reported was relevant only to male behavior. The burden is placed almost completely on the reader to remember that "yes, Virginia, an administrator can be a woman." Similarly, the articles addressing male only issues do not state that fact. Conversely, one article dealing with feminine characteristics

deemed particularly successful for certain aspects of school administration and supervision pointed out explicitly that men as well as women can and do possess these characteristics. Thus, the topic was ultimately shown to be significant for both women and men.²²

The bulk of the research was based on theories derived from research in corporate settings where male constructs and values thrive. Thus, large gaps in the literature need expansion to include female behavior.

For example, schools are seldom used as models despite the fact that, unlike industry, school work forces are unique since "subordinates" are professionals working with humans. What would be the implications of the classroom being used to study administrative behavior? While organizational theorists use a number of settings for investigative purposes, the model is seldom extended to include the school as classroom. One *EAC* study treats teachers as managers;²³ how many treat administrators as teachers?

While some theorists may argue that school systems have been compared to hospital systems as organizations that also work with humans, the analogy has most frequently been faulty.²⁴ Why are administrators likened to doctors (which leaves teachers parallel with nurses)? Doctors work with patients just as teachers work with students. Teachers have aides just as doctors have nurses, and hospitals have administrators who do not work directly with patients just as schools have administrators who do not work directly with students. While this analogy may not be complete, at least the parallels are properly related. How many doctors, for example, are required to be nurses before they can become doctors? Most states require some teaching experience before becoming an administrator. This fact alone should point up a problem with the hospital analogy.

Why, when schools have historically worked with children, is not the home a more well utilized model for understanding behavior? Topics, such as transition from home to school for children, teachers, and administrators are sorely under-researched. Perhaps the time has come for the efficiency model of education to fall by the wayside to be replaced by the family model which is applied in very few settings today.

These three topics are but a few of the many underresearched areas which, we believe, derive from total preoccupation with male settings for understanding administrative behavior or strategies. More attention to topics significant for women would bring about a necessary broadening of the scope of educational administration inquiry.

Even when topics are described as significant for both women and men, particular aspects of the topic addressed in the inquiry may be of special salience to only one sex or the other. Of the research which investigates more female aspects than male, one is a review of legal cases most of which are gender-neutral but three of which relate solely to women: pregnancy leave; relationships between hiring and marital status, pregnancy, or parenthood; and sex equity in competitive sports.²⁵ The other articles are the two previously mentioned²⁶ which deal specifically with the exclusion of women from administration -- the one demonstrating that exclusion has not been due to lack of merit and the other which examines the role of attitudes.

Articles which are based upon a male model derive concepts through male eyes and upon male experience. They explore characteristics of leadership and followership which stress power, influence, and control²⁷ for the former and loyalty, competitiveness, and teaming²⁸ for the latter. Mention is never made of female flexibility which can replace a rigid need for control or of female socialization which may render the team model unnecessary.

Studies of role conflict don't address the conflict between private and public roles which has become more salient as dual career families increase and which is an issue for both females and males.²⁹ Studies in the *EAQ* fail to explore the effect of gender on motivation and aspiration³⁰ nor do they seek factors in addition to the traditional male motivators³¹ which might contribute to job satisfaction and performance. One of the masculinely oriented models deals with professional commitment from a male perspective³² and the second focuses on policy making from the point-of-view of how males perform and perceive themselves.³³ The latter study while mentioning that only men are in the sample, never addresses the fact that inferences about the population as a whole would thereby be limited.

Only five of the articles treating human or social issues contained an explicit formulation of the research problem to either or both men and women. In other words, only five authors inform readers to which sex the research may be generalized. In a field which contains gender imbalance by role such neglect of explicit formulation is, at the least, shoddy scholarship.

In addition to these inquiries focusing on a single gender, 48 studies deal with problems supposedly applicable to both women and men. Thirty additional research pieces *are so vague* in their formulation as to not reveal the gender of the group for which the problem is formulated. Even among those problems evidently formulated for persons of both genders, lapses into statements such as "two men - administrator and faculty member"³⁴ leave the reader unsure of the actual generalizability of results to members of both sexes.

Most research topics were judged by us to apply to both women and men. However 19 inquiries formulate the problem inadequately, usually applying a male framework to both genders. One example of a model being inappropriately

applied in this way is a study of reactions of secondary school students to control.³⁵ A male approach to control and reaction is formulated and the possibility that female students may react differently to control than males is never explored. In a similar vein, a respective of the field of educational administration, deals only with the actions of 34 men. This is typical of this kind of inappropriate application, where, although the behavior or accomplishments both sexes should be included in the study only one is mentioned.

While 43 articles were found to explore topics which transcended sex-stereotyped divisions, all of these studies were identified by the same member of this team. This finding has prompted the researchers to further explore this issue, expanding concepts and rethinking assumptions

One of the problems in identifying studies which transcend sex-stereotyped divisions is the confounding of sex-stereotype with role-stereotype. For example, a series of studies on decisional participation³⁵ have grown out of the work first published in the *EAQ* by Belasco and Alluto.³⁶

The decisional choices offered in this work and picked up by subsequent studies involve role stereotypes. The situations are framed in such a way that some are immediately relevant to teachers and some are far removed from their immediate concerns. Consequently, even a teacher who might be interested in influencing the budget process at her or his school would not be likely to express a desire to participate in "planning school budget" when surveyed by researchers. The topic is role-stereotyped to administrators, or aspiring administrators, most of whom are male. Thus, when such a study concludes that men are more interested in participation in budgeting than are women, as this study does perhaps the real conclusion should be that persons who see themselves as administrators tend to indicate stereotypic administrative interests while those who see themselves as teachers, respond in teacher appropriate ways. This possible role-confounding throws a shadow of doubt not only on possible confusion

between role- and sex-stereotyping but also on the conclusions regarding decisional participation in this series of studies which persist in defying common sense regarding the desire of professionals to participate in controlling their own environment. Since teachers tend to be female and administrators to be male, we don't know if the interests identified are sex stereotypic or role stereotypic.

An example of a study which does transcendent sex- and role-stereotypes develops a linear programming model for salary determination which puts teachers and administrators on the same salary schedule.³⁷

Role Conceptualization: Of the 90 studies under consideration, 16 were identified as involving men's and/or women's roles. Eleven of these studies placed both sexes in their traditional roles. Three studied women outside of traditional roles while two dealt with men outside of their traditional roles. Men outside of their traditional role were teachers and women outside of their traditional role were administrators or post-secondary instructors. In the case of women as post-secondary teachers, the treatment might be considered pejorative; these women were consistently seen as, and expected to be, less involved and more critical than were the men.³⁸ Similarly, in a review of legal decisions pregnancy, marriage, and sports involvement are perceived as a "problem" which is female generated.³⁹ Men also become parents, get married, and want to be involved in sports. Of course, other populations are seen as "problems" in a discussion of legal decisions, simply by the nature of the topic.

Additionally, women are identified with traditional roles which are often treated pejoratively. Teachers are referred to as "professionals"⁴⁰ (in quotation marks) or not seen to be status holders "a modicum of exchange between women and informal status holders."⁴¹ These references stand out in a literature where mention of women is extremely limited.

In summary, selection and formulation of research problems, to the extent that it is discussed at all, tends to be carried out in a world from which females are isolated. When women are included, they are most frequently viewed through male-biased paradigms. The inquiries resulting from such theoretical grounding can be expected to suffer from similar myopic tendencies.

Androcentric Bias in Review of Previous Research

One of the serious lapses in reviews of research is the failure to reference both studies which support and those which challenge the research question under consideration. Studies which favor or even deal with women are theories that have been left out. Thus, for example, an article on aspiration fails to bring in the research that finds differences between women and men,^{41a} while a study using the pupil control ideology questionnaire fails to point out that women have consistently been found to be less custodial than men.^{41b} Other problems with the research reviews are that gender composition of samples tend not to be mentioned and inadequacies in methods of reviewed research are seldom discussed.

Gender of Samples in Reviewed Research: Fewer than five percent of the articles dealing with human or social characteristics ever mention the gender make-up of the samples identified in the research studies reviewed. This number is even less than the number of inquiries that explored gender in discussion of theory. Among the four articles that mentioned sample make-up of previous studies, only one performed this function consistently; the remaining three articles were content to report the proportions of males and females of only one or two studies. The proportions, where reported, tended to contain an imbalance of males.

Perhaps it should not be surprising that the gender composition of reviewed literature goes virtually unreported in view of the predominant tendency to keep the proportion of males and females making up samples in the original articles themselves a secret. Whatever the reason for the information

being excluded, reviews of literature should provide some indication of who is included in the summarizations and not leave the reader with stereotype-based suspicions.⁴²

Of the five articles which report research on the inferiority of females, none cite the methodological weaknesses of the original studies.⁴³ While discussion of methodological weaknesses of research reviewed is notably absent from the *EAQ*, in general, authors who use such research to build a case for female inferiority should be sure of the strength of their arguments. Some of the ways in which females were reported to be inferior were that they were described as less professional,⁴⁴ less involved,⁴⁵ and more isolated⁴⁶ solely on the basis of their femaleness.

Selection of the Sample

The design of research reported in the *EAQ* is, like the development of the problem, frequently not explicit, thus creating problems for persons wishing to critique any aspect of the research design. Information regarding population specification and sample selection, variable selection and definition, and model specification and statistical test must often be pieced together like a puzzle from clues in the text and tables. Thus questions regarding the characteristics of the sample are often inferred rather than gleaned directly from statements in the article. In fact, the proportion of women and men making up the samples included in our review can be determined directly in only 20 of the 90 studies in which gender could be of significance. It is interesting to note the kinds of populations for which gender make-up tends to be reported. When students are the population of interest, five out of 11 (45%) of the studies report the proportions of females and males. When teachers are the focus, the number is seven out of 24 (29%). When a combination of teachers, students, and administrators are involved, five out of 20 (25%) of the articles report gender make-up of the sample. However, none of the 14

inquiries on administrators alone report the proportion of females and males in the sample. Thus, as we discuss the gender balance or imbalance of inquiries reported in the *EAQ*, it must be realized that we are, for the most part, not talking about studies of administrators at all.

Gender of Samples: Nine (10%) of the articles can be said to report balanced samples--that is, not more than 70% of one sex. However, this does not mean that the remainder of the studies contain unbalanced samples. Another ten percent falls into the category, but the bulk of the remaining studies (over 70%) fail to report the gender composition of their samples at all. Even in the twenty-five articles in which gender was considered a variable of interest, only 11 (or slightly less than half) reported the proportion of each sex represented in the sample.

Such an oversight might be excused in a field where representation of the sexes was balanced. But in schooling, where two of the major populations of interest--teachers and administrators--are known to be highly gender imbalanced, failure to address the gender make-up of a sample can lead to serious misinterpretation of results.

Imbalance in the samples tends to be in stereotypic directions; the majority of administrators are male and the majority of teachers are female.⁴⁷ However, even in populations where one would expect a balance, or where we might expect more females than males, there are still samples which are predominantly male.⁴⁸

In many of the articles where proportions are not reported, the reader is led to believe that the entire sample is male by the language utilized and the constructs formulated.⁴⁹

Justification for Imbalance: It would seem a general rule that, for purposes of comparing females to males, an equal proportion of each sex should be included in the sample. However, when a researcher is attempting to reflect the make-up of the population of interest such a balance may not be possible. An explication of both the population and the sample would enable the reader to know if reality is being adequately represented. In our review, three articles reporting imbalanced samples appeared to be drawn from a population in which the proportion of males and females was not equal. However, even in these few cases, the issue is not adequately addressed; readers are left to *infer* that population imbalance is the reason for imbalance in the samples.⁵⁰

Thus, more explicit attention could and should be paid to the gender make-up of populations and samples in educational administration research.

Androcentric Bias in Method and Instruments

While validation is sometimes very carefully addressed when research findings are transferred from another field to the field of educational administration,⁵¹ the problem of transferring research findings from inquiries involving predominantly male samples to those populations which include females is never acknowledged in the *EAQ* of the seventies. Merely including the few females that are "out there" in the male-dominated administration research framework does not signify valid research on the population as a whole. The validity of male-conceived, derived, and substantiated data collection procedures and instruments should be carefully tested with females before they are utilized with populations of both sexes.

Instruments and Surveys: Instruments or surveys biased in some way were identified in about 25% of the 90 articles addressing human or social characteristics, while in eight studies, data collection devices were categorized as having no discernable bias. The remaining articles which used instruments or surveys did not include instrument reference and thus could not be critiqued.

Bias in instruments fell into four categories: maintenance of traditional roles;⁵² failure to measure aspects of a construct which might relate to women's concerns or perceptions; direct transfer of instruments from a predominantly male field to a predominantly female field; and exclusion of female experiences from study.

For instance, some measures force respondents into traditional roles and thus those roles are maintained in the analysis of responses. For example, socioeconomic status was defined both by father's occupation and education⁵² and by allowing only one bread winner to respond.⁵³ More blatantly, questionnaires involving administrators often refer to them consistently as men thus excluding women from the respondent's mental picture.⁵⁴

One type of gender bias in data collection devices is sometimes very subtle, as illustrated by the following example. An inquiry on the relationship of work values to job satisfaction⁵⁵ defines and measures social values as interest in the needs of students and in the social development of the work group, while professional values are defined as subject and staff orientation. Thus, values which have been seen as traditionally female are, by definition, social, not professional values and are so measured.

Examples of the measurement of only male aspects of an issue are found in studies of motivation, professionalism, and leadership. In a study of reward structures, teachers were asked to respond to items measuring recruitment,

retention, and absenteeism.⁵⁶ These measures of retention and absenteeism may have had other meaning for women. For instance, absenteeism may be related to the presence of small children at home rather than to a teacher's feelings about her or his job. Similarly, likelihood of retaining a female teacher may depend more on the stability of her husband's work than on her own commitment.

In at least one study, an instrument developed to measure managerial attitudes and performance is administered to teachers⁵⁷--a leap, (with no discussion of validation), presumably from one gender to another as well as from one field to another.

Finally, there are several ways and reasons for simply excluding females from study. In one experiment on group decision making,⁵⁸ the problem assigned for group solution is one developed by the National Aeronautics and Space Administration. The language describing the equipment for the problem would be understandable to someone with a background in the armed forces, a limitation which excludes most women. The article does not inform us as to whether or not there were women in the groups, but if there were, they were at a distinct disadvantage.

In a study of student alienation,⁵⁹ no attempt is made to get at some of the reasons females might feel alienated. Thus, despite a balanced sample in this inquiry we are provided with an inadequate understanding of human behavior.

Finally, in one case an author explicitly eliminates femaleness from his instrument.

In order to avoid introducing the critical and important variable of sex into this study, it was determined that all (hypothetical) applicants must be of the same sex.

It should not be inferred, however, that the investigator

is not an advocate of including women in training programs for educational administration.⁶⁰

The author is doing the reader a favor seldom performed in the *EAQ* of being explicit about the limitations of the instrument he sent out to a sample of superintendents of unknown (but presumably male) sex. Unfortunately, he forgets these limitations when he generalizes the results of his study to all applicants, both female and male.

Validation is another of those procedures seldom mentioned in the *EAQ*. Nearly two-thirds of those studies containing instruments made no mention of validation. Of the articles which did discuss validation, only two mentioned the gender composition of the groups used in the validation process. Both of these groups contained both females and males. It would seem that validation should be more frequently addressed and that the groups used for validation purposes be described in order that readers may judge the adequacy of the process.

Interviewing: Although the majority of the research reported in the *EAQ* during the decade of our review is survey research, the bulk of this is mail surveys. In the few instances when interviews are conducted, we are seldom told the sex of the interviewer or the interviewees. Although we sometimes inferred that the researcher was the interviewer, most of the time we were left speculating on the gender of both the interviewer and the respondents. In only one case is it clear that interviewing does not take place across sexes, in this case males interview male legislators.⁶¹

Clearly, a great deal more needs to be done to eliminate androcentric biases in measures and methods in educational administration research.

Interpretation of Research Results

There is a tendency for researchers in educational administration to say nothing about gender differences in the formulation of the problem, to review no literature relating to gender differences, to fail to report the proportion of females and males in the sample (or even suggest that females exist), to address no issues from a female perspective in the data gathering devices, but then to suddenly report differences between males and females on a variable of interest in the section of the article on results of the study. Thus, while only nine articles discuss the implications of gender on their problem, 16 report gender differences in the conclusions while eight report no differences (some of these instances of no differences occur in the same articles in which differences are found on other factors).

It is interesting to note that in some cases, even when no statistically significant differences are found between females and males behavior, the arithmetic differences are still reported and discussed. Authors write as though they can't believe they found no difference:

While males held more militant attitudes than females and teachers held more militant attitudes than administrators, the differences in militancy were not enough to be statistically significant in predictive importance.⁶² Women professionals report... being less influential on their superiors' decisions and less frequently consulted by their superiors than men professionals. However, statistical significance is not reached in either case. No significant differences exist on the remaining items, although all the differences are in the hypothesized direction.⁶³

On the other hand, when statistically significant differences are found they are not referred to in the subsequent discussion of results. In fact, out of sixteen articles which report differences between females and males, only slightly more than half discuss the implications of those differences. In one research report on teacher absenteeism, number of female teachers in a building was found to correlate inversely with building size, task-relevant communication, and absenteeism and to correlate positively with satisfaction with pay.⁶⁴ We notice that only absenteeism is related to the subject of the research, and we are told that percent females and absenteeism fail to be significantly related when satisfaction with pay and travel time to work are controlled. No implication for policy or theory are drawn from this reporting of data. The discussion is dropped when the numbers have been reported, and we find ourselves wondering why the question was asked.

Another problem with the discussion of differences, when it occurs, is the tendency to not seek out alternative explanations. For example, a study that found female teachers more satisfied than males also found a greater difference in the satisfaction of elementary and secondary school teachers.⁶⁵ No attempt is apparently made to determine whether there might be some confounding of the two variables and if differences are really due to teaching level and not gender. The article continues by offering simplistic conclusions:

It is apparent that increased participation should be afforded to younger males in the secondary schools in order to increase their satisfaction.⁶⁶

It is not at all apparent that this conclusion is accurate, especially when the teaching level is taken into consideration.

A final general point must be made regarding the interpretations of research results before we proceed to some specific issues. There is an almost complete failure to discuss findings of no difference between female and male behavior, of the eight articles reporting no differences, only one addressed these non-differences between the sexes.

Generalizations: Of the 47 inquiries which implied a generalization to both sexes, six (or about 13%) were based on data gathered from samples that represented both sexes relatively equally. Four of these studies utilized samples that were all or predominantly male and three drew their conclusions from samples in which 75% or more of the sample were women. However, nearly three-fourths of the 47 studies did not report gender composition of the sample.

Generalizations to specific populations tend to be vague and often there is a fine line between a stated inference to both sexes or an inference taking place in the mind of the reader. In one study of school structure and teaching practice,⁶⁷ five conclusions are discussed. Three of the conclusions are neutral and are discussed in sexually neutral language; the remaining two conclusions are not. The first is that "teachers' perception of their own behavior may not be accurate"; a statement which avoids sexist language but is typical of the pejorative way in which teachers are treated in the *EAQ*. The other negative conclusion is stated as follows:

the likelihood of the teacher's changing her presumably convenient system of teaching in any substantial way, voluntarily, is relatively slight.⁶⁸

This generalization to women only could in no way be predicted by the portion of the article which precedes it. Sex was not introduced as a variable of interest nor was the sex of the sample reported. Why is a generalization made to women when, presumably, the article has been dealing throughout with women and men? Care should be taken that generalizations

are made only to the population which the sample represents and that representativeness should be explicit.

Our review found that four reports of single-sex studies had titles which reflected that concentration. Conversely, 18 articles covering single sex studies are not properly entitled. One study which purports in its title and abstract to be of high school students turns out to deal only with male high school students.⁶⁹ Proper entitlement is a facet of reporting which the *EAQ* should monitor more carefully.

When incorrect inferences are made, the tendency is to speculate beyond the questions explored in the study; to interpret or highlight some of the data reported while ignoring other data; to interpret similar findings differently for various populations; or to assure a casual relationship without exploring alternative explanations. One of the articles on women administrators provides an example of going beyond the boundaries of the study. The review finds that women tend to have many qualities which are more suited for school administration than those qualities more often considered masculine. While acknowledging that women should try to retain the feminine qualities, the authors suggest that "aspects of traditional femininity that have hampered women's progress for centuries must be discarded."⁷⁰ They do not tell the reader what these aspects are and it is well that they don't because at no time does their review report on studies of these characteristics except to report that studies find that fewer women than men "express administrative career aspirations." The authors would have been better off to close with their discussion of women's merit and suggest further questions for others to study.

Another author was selective in his interpretation of data. In studying some of the characteristics of a group of student misbehaviors as compared to those who had not been referred for discipline, he makes the following statement:

Thirty percent of the experimental (misbehaviors') group mothers work, (sic) as opposed to twenty-five percent of the control mothers It is difficult to determine what the occupational data suggest as regards the school behavior of experimental and control students.⁷¹

Data which the author neglects to highlight indicates that, most homemakers as well as most mothers who work outside of the home tend to have non-misbehaving children. Perhaps more complete interpretation would allow additional patterns to emerge.

A study of teachers' zones of acceptance revealed that women had a wider zone of acceptance than men and that similarly post masters degree persons had a wider zone of acceptance than those with less education. But when it comes to interpretation the similarity ends. Women "apparently still accept the traditional subservient role of women in American society" while "the finding that teachers with graduate degrees have a larger professional zone of acceptance leads to speculation concerning the kind of impact the typical graduate program has on teachers."⁷² While the authors do speculate, later in the article, that those who do graduate work may be more prone to acceptance, it is interesting that for women the difference is initially due to role while other persons have been affected by outside forces.

A final example of improper inferencing sees differences in motivation (measured by competitiveness, work pressure, reward seeking, etc.) between women and men as the reason women are not school administrators. Alternative explanations are not explored.⁷³

In some articles inferences are suspect when they are not drawn separately for women and men. One study finds teachers higher than administrators on creativity, independence, physical development, and kindness while finding that administrators value status more highly than do teachers. The difference is attributed to rank and status values are found to be "peculiar to possessors of hierarchical ambition" reflecting "once again upon the general problem of organizational succession."⁷⁴

The author found that age, sex, and teaching experience explained only fourteen percent of the variation in values, but since we are not told the proportion of women and men who were in administration and/or teaching roles we are not sure that differences in rank wasn't confounded with differences in gender.

Explanation of Gender Differences: In most articles differences were not discussed, only ignored or reported. In the cases where they were discussed and attributed to some cause, two were attributed to socialization of American females and one was attributed to the stigma of being a woman, hence different.⁷⁵ The differences are never speculated to stem from the educational setting itself which places and retains women in traditional roles. Much more questioning needs to take place regarding real gender differences, the value of the differences, and how those differences may be strengthened and utilized in all domains of education.

Conclusions

That androcentric bias is evident in all phases of the research in ten volumes of the Educational Administration Quarterly is clear. Androcentric bias in research method and conceptual framework is a sign of shoddy scholarship and lack of methodological and conceptual sophistication. These charges are not new to a field of study not known for strong research. As the field continues to attempt to raise its standards, androcentric bias will hopefully be eliminated since no careful researcher or theorist intentionally introduces bias and limitations to her or his research. As theories are expanded to include female experience and female perspectives, we will truly move toward an understanding of human behavior.

Notes

1. See, for instance, M.E. Lockheed and S.L. Stein, "The Status of Women's Research in Educational Publications," *Educational Researcher*(February 1980): 11-15; and Sadker, M. and Sadker, D. *Beyond Pictures and Pronouns: Sexism in Teacher Education Texts*. U.S. Department of Health, Education, and Welfare, Office of Education.
2. See Campbell, P.B. *The Impact of Societal Biases on Research Methods*. Washington D.C. Social Processes/Women's Research Team. National Institute of Education, November 1980; and Elshain, J.B. *Methodological Sophistication and Conceptual Confusion: A Critique of Mainstream Political Science*. J.S. Sherman and E.T. Beck (Eds.), *The Prism of Sex*. Madison, Wisconsin: The University of Wisconsin Press, 1979.
3. Eichler, M. *The Double Standard*. New York: St. Martin's Press, 1980; Shakeshaft, C. *Dissertation Research on Women in Academic Administration: A Synthesis of Findings and Paradigm for Future Research*. Doctoral Dissertation, Texas A&M University, 1979; Sherman, J.A. and Beck, E.T. *The Prism of Sex*.
4. See D. E. Griffiths, "Another Look at Research on the Behavior of Administrators," in G. L. Immegart and W. L. Boyd, *Problem-Finding in Educational Administration* (Lexington, Massachusetts: Lexington Books, 1979), p. 41.
5. The framework on which both the data collection instrument and this analysis are based is derived directly from an outline prepared by The Committee on the Status of Women in Sociology and published in the *American Sociological Association Footnotes* (January 1980): 7 - 9. Explanations of each factor analyzed in this paper borrow heavily from the descriptions and examples presented in that document.
6. More typical than piecemeal treatment of gender is no treatment at all. The issue is ignored systematically throughout article after article when attention to it could seriously alter conclusions. One example can serve to illustrate this pervasive phenomenon in the EAQ reported research. A

study of loyalty to superiors by W. K. Hoy and L. B. Williams, "Loyalty to Immediate Superior at Alternate Levels in Public Schools," *Educational Administration Quarterly* (Spring 1971): 1 - 11, commences without acknowledging the male orientation of the topic. No mention is made of a possible difference in perspective between men and women, and literature is reviewed without any mention of gender composition of those studies cited. The setting is established as elementary schools with teachers and principals as the objects of study. The proportions of males and females involved are not reported, an instrument is administered which assumes the principal to be male, and no possibility of differences between male and female loyalty patterns are explored. This blindness to possible gender differences occurs in an inquiry which purports to place a male model of behavior onto an institution typically staffed predominantly by females. How could the results fail to be confounded by gender-related differences in perspective? This pattern is not an anomaly; it is repeated in many different settings (some male dominated, some female dominated) and with various theoretical constructs (mostly male based) in each volume of the *EAQ* of the 1970's. Clearly, not much more can be said about the sexist bias of articles like this except that it exists. Thus, much of this paper will focus on inquiries which do attempt to address the issue of gender in more or less limited ways. Lest it appear that we are placing would be authors in a no-win situation (you're damned if you do and damned if you don't address gender) we would like to make it clear that the attempt to deal with the implications of gender differences (or likenesses) for administration of schools is admirable. Perhaps (but not necessarily) the attempts would exhibit more insight if female researchers or practitioners were consulted during design or interpretation phases.

7. D. E. Griffiths, "Intellectual Turmoil in Educational Administration," *Educational Administration Quarterly* (Fall 1979): p. 47.
8. See, for example, E. B. Smith, "Chester Barnard's Concept of Authority," *Educational Administration Quarterly* (Winter 1975): 21 - 37 and E. B. Smith, "Chester Barnard's Concept of Leadership," *Educational Administration Quarterly* (Autumn 1975): 37 - 48.
9. L. K. Bishop and J. R. George, "Organizational Structure: A Factor Analysis of Structural Characteristics of Public Elementary and Secondary Schools," *Educational Administration Quarterly* (Autumn 1973): 66 - 80.
10. Our framework for classifying the topics of articles was derived from that utilized by W. K. Hoy and L. G. Miskel in their treatment of administrative theory, *Educational Administration: Theory, Research, and Practice* (New York: Random House, 1978).
11. M. W. LaMorte, "Rights and Responsibilities in the Light of Social Contract Theory," *Educational Administration Quarterly* (Fall 1977): 31 - 48.
12. E. M. Bridges, "Administrative Man: Origin or Pawn in Decision Making?" *Educational Administration Quarterly* (Winter 1970): 7 - 25.
13. A. B. Carroll, "Role Conflict in Academic Organizations: An Exploratory Examination of the Department Chairman's Experience," *Educational Administration Quarterly* (Spring 1974): 51 - 64.
14. D. L. Piper, "Decision making: Decisions Made by Individuals vs. Those Made by Group Consensus or Group Participation," *Educational Administration Quarterly* (Spring 1974): 82 - 95.

15. J. E. Bruno and M. A. Nottingham, "Linking Financial Incentives to Teacher Accountability in School Districts," *Educational Administration Quarterly* (Autumn 1974): 46 - 62.
16. C. T. Kerchner, "From Scopes to Scope: The Genetic Mutation of the School Control Issue," *Educational Administration Quarterly* (Winter 1978): 64 - 79.
17. W. Konnert and O. B. Graff, "The Sine Qua Non of Organizational Effectiveness," *Educational Administration Quarterly* (Fall 1976): pp. 7 - 8.
18. In addition to exclusion of women in general through sexist language, references to specific individuals in discussions of theory or educational administration history often include only males - no matter how comprehensive they claim to be. See, for example, W. G. Walker, "U.C.E.A.'s Bright Son at Morning: The Commonwealth Council for Educational Administration," *Educational Administration Quarterly* (Spring 1972): 16 - 25; E. J. Van Meter, "Theory in Educational Administration: An Instructional Module Teaching Approach," *Educational Administration Quarterly* (Autumn 1973): 81 - 95; and J. C. Johnson, Jr., "Educational Policy Study and the Historical Perspective," *Educational Administration Quarterly* (Spring 1975): 38 - 54.
19. P. Feuille and J. Blandin, "determinants of Attitudinal Militancy Among University Faculty," *Educational Administration Quarterly* (Winter 1976): 54 - 66.
20. J. M. Frasher and R. S. Frasher, "Educational Administration: A Feminine Profession," *Educational Administration Quarterly* (Spring 1979): 1 - 13.

21. J. Stockard, "Public Prejudice against Women School Administrators: The Possibility of Change," *Educational Administration Quarterly* (Fall 1979): 83 - 96.
22. Frasher and Frasher, "Educational Administration."
23. A. M. Mohrman, Jr., R. A. Cooke, and S. A. Mohrman, "Participation in Decision Making: A Multidimensional Perspective," *Educational Administration Quarterly* (Winter 1978): 13 - 29.
24. J. Hills, "Problems in the Production and Utilization of Knowledge in Educational Administration," *Educational Administration Quarterly* (Winter 1978): 1 - 12.
25. M. W. LaMorte, "The Fourteenth Amendment: Its Significance for Public School Educators," *Educational Administration Quarterly* (Autumn 1974): 1 - 19.
26. Frasher and Frasher, "Educational Administration" and Stockard, "Public Prejudice."
27. See, for example, D. W. Spuck, "Reward Structures in the Public High School," *Educational Administration Quarterly* (Winter 1974): 18 - 34; D. L. Colton, "The Influence of an Antistrike Injunction," *Educational Administration Quarterly* (Winter 1977): 47 - 70; and Scott, "Charismatic Authority."
28. See, for example, C. Miskel, "The Motivation of Educators to Work," *Educational Administration Quarterly* (Winter 1973): 42 - 53; J. A. Conway and

- J. Ables, "Leader-Team Belief System Con ruenice and Relationships to Morale Within Teaching Teams," *Educational AadminISTRATION Quarterly* (Spring 1973): 22 - 33; and W. K. Hoy, W. Newland, and R. Blasovsky. "Subordinate Loyalty to Superior, Esprit, and Aspects of Bureaucratic Structure," *Educational AadminISTRATION Quarterly* (Winter 1977): 71 - 85.
29. For a typical male oriented discussion of role conflict, see R. V. Hatley and B. R. Pennington, "Role Conflict Resolution Behavior of High School Principals," *Educational AadminISTRATION Quarterly* (Autumn 1975): 67 - 84.
30. An example of an article which did address differences is J. Goldstein, "Professional Mobility in Israel's Secondary Schools: Results of a Survey of Attitudes," *Educational AadminISTRATION Quarterly* (Spring 1976): 51 - 67. An article which did not mention differences is B. D. Anderson and R. M. Tissier, "Social Class, School Bureaucratization and Educational Aspirations," *Educational AadminISTRATION Quarterly* (Spring 1973): 34 - 49.
31. See T. Stephens, "Innovative Teaching Practices: Their Relation to System Norms and Rewards," *Educational AadminISTRATION Quarterly* (Winter 1974): 35 - 43 and Goldstein, "Professional Mobility."
32. R. Thornton, "Organizational-Professional Commitment and Supervision of the Junior College Teacher," *Educational AadminISTRATION Quarterly* (Spring 1971): 25 - 39.
33. Milstein and Jennings, "Educational Interest Group Leaders."
34. Campbell, "Educational Administration,"

35. See, for example, Hollon and Gemmill, "A Comparison of Female and Male Professors."
36. J. A. Belasco and J. A. Alluto, "Decisional Participation and Teacher Satisfaction," *Educational Administration Quarterly* (Winter 1972): 44 - 58.
37. J. E. Bruno, "An Alternative to the Fixed Step Salary Schedule," *Educational Administration Quarterly* (Winter 1970): 26 - 46.
38. Hollon and Gemmill, "A Comparison of Female and Male Professors."
39. LaMorte, "The Fourteenth Amendment."
40. J. Hills, "On Accountability in Education," *Educational Administration Quarterly* (Winter 1974): 1 - 17.
41. Forsyth and Hoy, "Isolation and Alienation."
42. Research on some far-fetched populations sometimes cited in the reviews of the literature which impact on expectations regarding female and male differences in the population of interest in the study. In one example (Hollon and Gemmill, "A Comparison of Female and Male Professors"), separate studies involving engineers in one case and nurses in the other were cited as evidence for hypothesizing that female and male professors would differ in satisfaction levels. In the first place, the comparison of engineers and nurses would certainly involve more basic differences than just sex, and, secondly, the parallels connecting nurses to professors eludes us.
- 42a. Anderson and Tissien, "Social Class."
- 42b. W. J. Foley and R. Brooks, "Pupil Control Ideology in Predicting Teacher Discipline Referrals," *Educational Administration Quarterly* (Fall 1978):

43. The one article (Frasher and Frasher, "Educational Administration,") that reviewed research comparing female to male administrators and found most of the studies to favor females challenged the conclusions of studies that found males superior citing the bulk of evidence. No critique of methodology for either class of study was carried out, however.
44. Belasco and Allutto, "Decisional Participation."
45. Hollon and Gemmill, "A Comparison of Male and Female Professors."
46. Forsyth and Hoy, "Isolation and Alienation."
47. See, for example, A. H. Yee, "Do Principals' Interpersonal Attitudes Agree with Those of Teachers and Pupils?" *Educational Administration Quarterly* (Spring 1970): 1 - 13, which reports proportions for the administrator and teacher samples separately.
48. See, for example, S. B. Palonsky, "Hempies and Squeaks, Truckers and Cruisers - A Participant Observer Study in a City High School," *Educational Administration Quarterly* (Spring 1975): 86 - 103.
49. See, for example, J. A. Sarthory, "Structural Characteristics and the Outcome of Collective Negotiations," *Educational Administration Quarterly* (Autumn 1971): 78 - 88; D. W. Holland and L. G. Tweeten, "The Geographical Distribution of Schooling Benefits: Implications for Public School Finance," *Educational Administration Quarterly* (Spring 1973): 63 - 74; and W. F. Glueck and C. D. Thore, "The Role of the Academic Administrator in Research Professors' Satisfaction and Productivity," *Educational Administration Quarterly* (Winter 1974): 72 - 90.

50. See, for example, R. F. Campbell and L. J. Newell, "A Study of Professors of Educational Administration: A Summary," *Educational Administration Quarterly* (Autumn 1973): 3 - 27.
51. For an excellent example of valid transfer of research from another field to educational administration, see W. E. Caldwell and F. W. Lutz, "The Measurement of Principal Rule Administration Behavior and Its Relationship to Educational Leadership," *Educational Administration Quarterly* (Spring 1978): 63 - 79.
52. Anderson and Tissler, "Social Class."
53. Hollon and Gemmill, "A Comparison of Male and Female Professors."
54. See, for example, Hoy and Williams, "Loyalty to Immediate Superior" and Caldwell and Lutz, "The Measurement of Principal Rule Administration Behavior."
55. R. J. Coughlan, "Job Satisfaction in Relatively Closed and Open Schools," *Educational Administration Quarterly* (Spring 1971): 40 - 59.
56. Spuck, "Reward Structures."
57. Mohrman, Cooke, and Mohrman, "Participation in Decision Making."
58. Piper, "Decisionmaking."
59. S. Long, "Dimensions of Student Academic Alienation," *Educational Administration Quarterly* (Winter 1977): 16 - 30.

60. J. E. Thomas, "An Exploration of the Demand for Specialists in Educational Administration," *Educational Administration Quarterly* (Spring 1972): p. 57, Note 2. Presumably, the author would also advocate the employment of those female educational administration students.
61. Milstein and Jennings, "Educational Interest Group Leaders."
62. Feville and Blandin, "Determinants of Attitudinal Militancy," p. 64.
63. Hollon and Cemmill, "A Comparison of Female and Male Professors," pp. 85 - 86.
64. E. M. Bridges and M. T. Hallinan, "Subunit Size, Work System Interdependence, and Employee Absenteeism," *Educational Administration Quarterly* (Spring 1978): 24 - 42.
65. E. A. Holdaway, "Facet and Overall Satisfaction of Teachers," *Educational Administration Quarterly* (Winter 1978): 30 - 47.
66. Belasco and Alutto, "Decisional Participation," p. 56.
67. R. S. Adams R. M. Kimble, and M. Martin, "School Size, Organizational Structure, and Teaching Practices," *Educational Administration Quarterly* (Autumn 1970): 15 - 31.
68. Ibid, pp. 28 - 29.

69. Palonsky, "Hempies and Squeaks." Another interesting facet of this study is that, while it reports no differences between females and males, examples of reports on the subjects from female teachers are consistently negative. Reports from teachers of male or unidentified sex are positive or neutral. Such pejorative treatment of female teachers is all-too-frequent in the EAQ.
70. Frasher and Frasher, "Educational Administration," p. 11.
71. D. L. Duke, "Who Misbehaves? - A High School Studies Its Discipline Problems," *Educational Administration Quarterly* (Fall 1976): p. 74.
72. D. W. Kunz and W. K. Hoy, "Leadership Style of Principals and the Professional Zone of Acceptance of Teachers," *Educational Administration Quarterly* (Fall 1976): pp. 60 - 61.
73. C. Miskel, "The Motivation of Educators to Work," *Educational Administration Quarterly* (Winter 1973): 42 - 53.
74. C. Hodgkinson, "Organizational Influence on Value Systems," *Educational Administration Quarterly* (Autumn 1970): p. 53.
75. Forsyth and Hoy, "Isolation and Alienation."

APPENDIX A

DATA COLLECTION SHEET

Vol. _____ (1 to 2) No. _____ (3) Article No. _____ (4 to 5) Page No. _____ (6 to 8)

Characteristics of Article

1. Sex of Author(s) (9 to 12)

Female	_____	_____	_____	_____	(1)
Male	_____	_____	_____	_____	(2)
Unclear	_____	_____	_____	_____	(3)

2. Individual(s) Acknowledged (13 to 16)

Female	_____	_____	_____	_____	(1)
Male	_____	_____	_____	_____	(2)
Unclear	_____	_____	_____	_____	(3)
Organization	_____	_____	_____	_____	(4)

3. Type of Aid (17 to 20)

Personal	_____	_____	_____	_____	(1)
Clerical	_____	_____	_____	_____	(2)
Editorial	_____	_____	_____	_____	(3)
Data Provision	_____	_____	_____	_____	(4)
Substantive	_____	_____	_____	_____	(5)
Methodological	_____	_____	_____	_____	(6)
Financial	_____	_____	_____	_____	(7)
Unspecified or Other	_____	_____	_____	_____	(8)

4. Nature of the Article (21 to 22)

Theoretical		
Issue	_____	(01)
Model	_____	(02)
Other (Specif.)	_____	(03)
Empirical		
Historical	_____	(04)
Review or Meta-analysis	_____	(05)
Qualitative	_____	(06)
Survey	_____	(07)
Experimental	_____	(08)
Post Hoc Data Analysis	_____	(09)
Other (Specify)	_____	(10)

4

Research Problem Selection and Formulation

Gender-blind social theory

5. Is gender a theoretically significant variable?

Article deals with human/social characteristics _____ (23-1)
Article is neutral _____ (23-2)
(If neutral, rest of data may be skipped)

6. Are possible gender implications in the theory discussed?

Yes _____ (24-1)
No _____ (24-2)

Significant topics ignored

7. What is the topic? _____ (25 to 26)

8. What organizational setting constitutes the source of the topic or provides the basis for comparison? _____ (27 to 28)

9. Is the topic treated as significant for women and men?

Women only _____ (29-1)
Men only _____ (29-2)
Both _____ (29-3)
Neither _____ (29-4)

Selective treatment of topics

10. Are aspects of the topic related to women or men treated?

Female aspects	Male aspects	Neutral aspects
_____	_____	_____
_____	_____	_____
_____	_____	_____

Women _____ (30-1)
Men _____ (30-2)
Both, but female emphasized _____ (30-3)
Both, but male emphasized _____ (30-4)
Balanced treatment _____ (30-5)
Neither _____ (30-6)

11. What is the research site? _____ (31 to 32)

Inadequate specification of research problem

12. Is the research problem formulated for women or men only?

Women only _____ (33-1)
Men only _____ (33-2)
Both women and men _____ (33-3)
Unclear _____ (33-4)

13. Is this formulation explicitly noted?

Yes _____ (34-1)
No _____ (34-2)

14. What is the designated population? _____ (35 to 36)

15. Does the theoretical model apply to women or men only?

Women only _____ (37-1)
Men only _____ (37-2)
Both _____ (37-3)

16. Is it appropriate for the model to apply to one gender?

Women only _____ (38-1)
Men only _____ (38-2)
Both _____ (38-3)

17. Is gender included as a variable of interest?

Yes _____ (39-1)
Included in a category such as "personal characteristics"
but not explicitly cited _____ (39-2)
No _____ (39-3)

18. Does the topic transcend sex-stereotyped divisions?

Yes _____ (40-1) How? _____
No _____ (40-2)

Perjorative labeling or conceptualization

19. Does the "problem" identified involve women or men outside of prescribed roles?

Women outside of role _____ (41-1)
Men outside of role _____ (41-2)
Women in role _____ (41-3)
Men in role _____ (41-4)
Women-Men both in separate and traditional roles _____ (41-5)
Women-Men both in separate nontraditional roles _____ (41-6)
Women in role and Men outside of role _____ (41-7)
Women outside of role and Men in role _____ (41-8)
Women-Men's roles not involved _____ (41-9)

Review of Previous Research

Failure to mention sample imbalance of previous studies

20. Is there reference to gender composition of samples in single studies cited? (42 to 43)

Never mentioned _____ (01)
Mentioned _____ (percent)

Failure to note that samples are unbalanced in the body of literature

21. Is the body of literature reviewed single-sex or does it have highly imbalanced sex ratios?

Single sex - female _____ (44-1)
Single sex - male _____ (44-2)
Unbalanced - female _____ (44-3)
Unbalanced - male _____ (44-4)
Balanced _____ (44-5)
Balance or imbalance not noted _____ (44-6)

Methodological weaknesses of previous research ignored

22. Are studies cited which reach conclusions that one sex or the other is inferior?

Female inferior _____ (45-1)
Male inferior _____ (45-2)
Neither inferior _____ (45-3)

23. Are methodological weaknesses of studies cited?

Yes _____ (46-1)
No _____ (46-2)

Selection of Sample

Women or men arbitrarily excluded from sample

24. Who is included in the sample?

Women only _____ (47-1)
Men only _____ (47-2)
Both, but more than three-fourths women _____ (47-3)
Both, but more than three-fourths men _____ (47-4)
Balanced _____ (47-5)
Proportion of women and men not provided _____ (47-6)

Inadequate justification for exclusion of women or men

25. If unbalanced, what are the reasons?

Imbalance in population _____ (48-1)
Unequal response _____ (48-2)
Convenience _____ (48-3)
Lack of familiarity _____ (48-4)
Personal preference _____ (48-5)
Theoretical grounding _____ (48-6)
Not clear _____ (48-7)
Balanced _____ (48-8)

Validity Issues

Biased question wording in surveys

26. Are data gathering instruments worded in a biased manner?

Sexist language _____ (49-1)
Questions worded so as to maintain traditional role
distinction, such as administrator-teacher _____ (49-2)
Other apparent bias (explain) _____ (49-3)
Questions appear nonsexist and unbiased _____ (49-4)
Questionnaire or samples from questionnaire not included _____ (49-5)
Not applicable - instrument not used _____ (49-6)
(Note data gathering technique and possible bias)

Scales validated on a single sex

27. How were the scales validated?

On a single sex - female _____ (50-1)
On a single sex - male _____ (50-2)
On both sexes _____ (50-3)
Validation not mentioned _____ (50-4)
Sex of validation group not reported _____ (50-5)

Cross-sex interviewing

28. Did interviewing take place across sexes?

Females interviewed males _____ (51-1)
Males interviewed females _____ (51-2)
Each interviewed the other sex _____ (51-3)
Each interviewed only own sex _____ (51-4)
Sex of interviewer not reported _____ (51-5)
No interviews occurred _____ (51-6)

Interpretation of Research Results

29. How many gender-based differences are reported? _____ (52 to 53)
30. How many instances of no difference are reported? _____ (54 to 55)
31. How many age-based differences are reported? _____ (56 to 57)
32. How many experience-based differences are reported? _____ (58 to 59)
33. Are gender-based differences interpreted in the conclusions section?
- Yes _____ (60-1)
- No _____ (60-2)
- None found _____ (60-3)
34. Are findings of no differences between sexes interpreted in the conclusions section?
- Yes _____ (61-1)
- No _____ (61-2)

Over-generalization of single-sex studies

35. Are conclusions derived from the sample studied?
- Generalize to both sexes _____ (62-1)
- Generalize to women _____ (62-2)
- Generalize to men _____ (62-3)
- Not specified _____ (62-4)

Improper entitlement of single-sex study reports

36. Is the sex makeup of the sample reflected in the title?
- Yes _____ (63-1)
- No _____ (63-2)
- Sex of sample not reported _____ (63-3)

Inferences unwarranted by the data

37. Are conclusions derived from the indicators measured?
- Inferences regarding women derived involving data not gathered _____ (64-1)
- Inferences regarding men derived involving data not gathered _____ (64-2)
- Inferences not made regarding women or men separately _____ (64-3)
38. Differences between women and men are attributed to
- Biological gender differences _____ (65-1)
- Psychological gender differences _____ (65-2)
- Social factors correlated with gender in United States _____ (65-3)
- No differences discussed _____ (65-4)