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Social Science Inquiries into Female Achievement: Recurrent Methodological Problems

Barbara L. Richardson
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Debra R. Kaufman

SOCIAL SCIENCE RESEARCH ON WOMEN

Only recently has the female experience become part of the academic consciousness. The impact of this awakening, or consciousness-raising on methodological issues can be well illustrated by a review of developments in one controversial area of research on women—achievement. In this paper we will briefly trace the impact of a growing feminist consciousness as it was gradually revealed in the changing methodological approaches of several disciplines—psychology and sociology—toward the study of achievement and women. Generally, these disciplines have failed to address the types of questions, or to design the kinds of experiments, needed to validly measure the achievement and social progress of women. At stake, theoretically, operationally and politically, is the issue of authenticity, or the question of whose perceptions of reality the current measures of achievement actually best represent.

We emphasize in this paper the methodological importance of considering the entire research process from more than the investigator's point of view. Like other contributors to this volume, our perspective grows out of a tradition of feminist scholarship that favors an interdisciplinary analysis and

political awareness of our own responsibilities in the research endeavor. Our analysis will illustrate the importance of maintaining the integrity of multiple views of reality when designing research or interpreting data on female aspirations and accomplishments. Embedded as it is in the mainstream of social science, the twentieth-century study of women's achievements illustrates most of the common methodological biases found in research on women and gender roles throughout the 1960s and 1970s. (For excellent discussions of systematic measurement bias in general, see Campbell, Shakeshaft, and Wallston in this volume.)

The traditional approach to studying women's achievement has been heavily influenced by models emphasizing differences between the sexes with norms and reference points based on men's lives and experiences. In the social sciences, the effort to explain differences and make comparisons among various social groups has commonly been hampered by reliance on methods derived from "trait theories." Much of the achievement research we critique in this paper is based on this approach. Trait models look for correlations between and among individual bits of behavior—between personality constructs like dependency to specific achievement behaviors like competitiveness on anagram tasks or persistence after failure. We believe trait theory, as used in the study of achievement, neglects issues of special concern to gender-role researchers and students of social change. Its emphasis on early learning, linear models, internalization, and stabilized traits, provides a restricted view of the achievement process. Our methodological critiques of research on female achievement in psychology and social psychology—of the measurement of need-achievement, self-esteem, attribution, fear-of-success and failure—should be viewed with an appreciation for the pervasive importance of the economic and historical forces shaping women's place in the larger social structure (Kaufman and Richardson 1982).

NEED-ACHIEVEMENT AND MOTIVATION

In psychology, achievement-motivation research was slow to include females in its samples. On the few occasions when women were studied, their patterns of behavior conformed less reliably to the expected models (Lesser 1973; McClelland et al. 1958; McClelland 1961; Veroff 1958; Veroff et al. 1953). Until the 1970s, females were generally the exception, rather than the rule, in most studies of achievement motivation. Thus, much information has been lost on the achievement patterns of females in these age cohorts. The applicability of the classical achievement constructs and measures—the Thematic Apperception Test (TAT), laboratory studies of risk-taking—were not examined with female counterparts at that time. Such methodological issues remained to be explored by a generation of researchers expressly interested in women's own achievement patterns.

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Such feminist scholars moved beyond the piecemeal observations of trait theory by drawing on the more integrative concept of gender role. However, even with the new burst in scholarship on female achievement over the past decade, the androcentric biases of the traditional measures of the early expectancy-value school of achievement research were slow to receive acknowledgment—particularly from within the field. Even when confronted with growing empirical evidence concerning the inadequacies of the theories when applied to women, the original formulations of need-achievement have shown little change (Atkinson 1978). This unresponsiveness is due, in part, to the fact that the arguments the critics are raising have implications far beyond those of concern to women and achievement theory alone. This pattern of creative scholarship through reintegration of the female experience with traditional masculine models is a theme that can be illustrated throughout the achievement literature. (Frieze 1975; Hoffman 1974a, 1974b; Kaufman and Richardson 1982; Mednick, Tangri, and Hoffman 1975; Maehr 1974; Weiner 1972, 1974).

Now, nearly three decades after the original research began, we can reexamine those studies contrasting males and females on the need to achieve, with new knowledge based on gender-role research. To take one example, the interpretation of a female's projective responses to achievement cues, stories told for a Thematic Apperception Test, has been admirably reanalyzed by Maccoby and Jacklin (1974). They argue that when girls respond with fewer achievement-related themes to female pictures it may be due to their subjective assessments that girls and women as a social group are not generally achievers in our society and *not* to their *own* low achievement motivation. While a variety of methodological factors have been suggested to account for these findings, the overwhelming evidence suggests that children are displaying a knowledge of which set of gender roles—and consequently which sex—is more valued and therefore destined to achieve in this society (Kaufman and Richardson 1982). A major contribution of Maccoby and Jacklin's analysis is their admonition that projective measures should not necessarily be equated with subjects' own real-life achievement motivation.

In the section to follow, we address another area of social psychological literature commonly used to explain women's achievement motivation and behavior: self-identity. We will see several of the methodological problems already noted in need-achievement research and consider the issue of validity from both a political and methodological perspective.

STEREOTYPES OF SUBJECTS—SELF-ESTEEM AND IDENTITY

In achievement research, especially in experimental situations, there is a tendency to ignore social context and focus on motivation, personality traits, and internal forces. In clinical and qualitative studies, there is often an

overdeterministic view about behavior, an assumed correspondence between learned choice and performance. More often than not, learned choice is equated with free will—especially in accounting for women's achievement styles. Too often, a subject's awareness of cultural stereotypes or gender attributes is measured as an irrevocably *internalized* part of the personality (Kaufman and Richardson 1982). When personality measures are assumed to predict long-term achievement behaviors, there are often many hidden stereotypical views about the capacities of the subject and her interest or will to control her own fate. The continuing debates concerning the achievement drives and motives of poor young black women are a case in point.

In the late 1960s, Grier and Cobbs (1968), drawing on much clinical experience, described the self-image of the black adolescent female as one in which "the cards are stacked against her and the achievement of a healthy mature womanhood seems a very long shot indeed" (Grier and Cobbs, cited in Ladner 1972, p. 85). Joyce Ladner critiqued this analysis of the potential of the young black female. Ladner pointed out the stereotypic assumptions about black women guiding such interpretations. She suggested that the degree of impairment to self esteem and motivation has been widely exaggerated and is rarely approximated in real life (Ladner 1972, p. 8).

Countering with evidence from different population samples and other empirical studies, she suggested that when compared to their white counterparts, black children may fare very well. She cites a more representative sample from a study of junior high school students in a rural southern town (Gaughman and Dahlstrom 1968) in which black children described their home lives as happier than average, and themselves as being very satisfied with the kinds of persons they were. Ladner observes, "clearly, if the self-concepts of these children have been unduly damaged, this fact is not reflected in their interview statements about themselves, nor in the educational and vocational aspirations which they report for themselves, and which they seem optimistic about realizing" (Ladner 1972, p. 83).

Ladner's critique also reflects the growing concern in the social sciences with the overdeterministic tone used in explaining the attitudes of individuals toward failure and nonachievement when they are members of an oppressed group. She does not deny that racism has taken a heavy psychological and physical toll on black men and women. Rather, she argues that the measures of attitudes and behaviors used to assess self-esteem underestimate the complexity of feelings and beliefs. She emphasizes the importance of devising indicators that will be sensitive to distinctions between awareness of cultural expectations and personal aspirations; between self-worth and the opportunity to achieve; between theoretical variables and issues of importance to the subjects themselves. The validity of inferences drawn from clinical populations, self-reports of behavior, or attitudes measures in times of stress and social change, go beyond methodological concerns in their potential implications (Guttentag and Salasin 1977).

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As explanatory variables, aspirations and expectations may have quite different meanings for youth so far removed from the basic economic resources necessary for contemporary success and achievement.

The research on the correlates of self-esteem and achievement among black females represents one approach found in the achievement literature. Here especially, stereotypical views of subjects and their personalities can lead experimenters to be insensitive to important distinctions among respondents and thereby to the construction of invalid measures. On the other hand, stereotypical views held by subjects for researchers in an experimental situation can also add to systematic misperceptions. The attitudes expressed by young black females to middle-class researchers may not accurately capture their real attitudes. Ladner's critique challenged Grier's and Cobbs's assumption that a black women "does not have standards of her own and experiences self-rejection when she finds herself unable to do more than imitate the standards of white society" (Kaufman and Richardson 1982, p. 56). There is evidence that even when black respondents acknowledge that theirs is not the "more valued race" in society, they have a capacity to maintain a positive self-identity. Similar observations and comparisons have also been made for females of all ages in our culture.

In the area of achievement, where social goals can change so rapidly in their accessibility, it is especially important to allow for differences to emerge between cultural awareness and personal beliefs. Cultural stereotyping is especially evident in the early research on minority female achievement. The research questions asked and the constructs chosen are receiving renewed scrutiny by investigators especially sensitive to these sorts of systematic biases. (McAdoo 1974; Myers 1975; Wright 1975). These controversies over meaning and measurement further illustrate the broader political and philosophical assumptions underpinning our research inquiries. We believe that the entry of women and minorities into developmental research continues to heighten the consciousness of the field and generate far richer understanding of the achieving self.

LUCK, FEAR, AND ACHIEVEMENT ATTRIBUTION

Another active area of research on female achievement grows out of cognitive and social psychology and is known as attribution theory. In the achievement literature generated by attribution theory (Deaux 1976; Deaux and Emswiller 1974; Frieze 1975; O'Leary 1977; Weiner 1972, 1974), women seem to take less personal credit or responsibility for their achievements than do men. The inference problems noted in other areas of achievement research emerge in this aspect of the study of female achievement as well. As greater empirical attention has been given to female attributional patterns, the observed results suggest the need for modifications in the original hypotheses.

An early investigation, influential in the development of an attribution theory of sex differences in achievement was Crandall, Katovsky and Crandall's 1965 study of adolescents between the ages of 11 and 17. This study was one of the first to suggest that females become more anxious and concerned about failure as they progress through school and are more likely to blame themselves rather than others for failure. More recent research has sought to document the same pattern, suggesting that males commonly attribute success to a stable internal factor (ability) and failure to an external unstable factor (e.g., bad luck), whereas females appear to be less likely to credit themselves if they succeed (Bar-tal and Frieze 1977; Deaux 1976; McHugh, Frieze, and Hanusa 1982).

Women's achievement patterns in the attribution research paradigm are ambiguous with regard to the aspects of the experimental situation to which females may be responding (for a more extensive review and critique see McHugh, Frieze, and Hanusa 1982). Considering the range of possible interpretations from the empirical work emerging from this model, Kaufman and Richardson (1982, p. 53) ask:

> Are female subjects responding to attributions about gender role acquired in their earliest socialization or to present assessments of their abilities? Are they feeling the same way that they are responding behaviorally? To what are they responding – a cue, a stereotype, an experimenter in an achievement-specific context? Are their responses merely socially approved tactics or a genuine devaluation of the self? Do women actually feel less pride in their accomplishments or are they simply more modest than men?

O'Leary raises similar questions concerning the failure-related anxieties and attributions of failure among females in this research. She suggests that these behaviors may also represent a "defensive strategy used to avoid being held personally responsible for success and/or failure" (1977, p. 97).

In general, sex difference research has been struggling with the construct validity problems arising from the use of self-report measures. The designs used in attribution research studies often rely upon some form of self-report on the part of subjects. Research on contemporary gender role stereotypes has reliably demonstrated that males are expected to show self-assurance while females are taught to present themselves in a self-effacing fashion (Bem and Bem 1970). Generally, females are also thought to be less defensive in self-report measures than men. Therefore, we may be measuring the subject's sophisticated reading of sex role expectations, rather than her own estimates of personal worth or capability. As a result, research designs that include multiple indicators can provide more sophisticated evaluations of validity (see Beere, Campbell, Jacklin, and Walston in this volume). Through the 1970s, laboratory data on college students were often generalized beyond the

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experimental setting as evidence that women were less likely than men to view themselves as skilled or competent, showing reluctance to accept personal responsibility for their achievements (Bardwick 1971, 1974, 1979). This conclusion appears unwarranted in view of the heavy reliance much of the work in this area placed upon subjective assessments.

Since achievement research first began including females in its investigations, many more guidelines have emerged to help refine the traditional methods and anticipate systematic biases. More recent research using attribution theory and design is attending to gender role factors as intervening variables. Publications are now available to describe the ways in which research situations may differ in their salience, familiarity, relevance, and meaning for males and females (Deaux 1976; Frieze et al. 1978; Frieze, Whitley, and McHugh 1982; O'Leary 1977; Sherif 1979; Sherman and Denmark 1978; Unger and Denmark 1975). These research compendia review a range of social factors now recognized as potential sources of sex-typed variation. They include discussions of the effects various experimental designs may have on subjects. Males and females will react differentially, for instance, in response to the sex of the experimenter and the sex ratio of participants (as noted in Chapter 6).

In its own survey of the available research evidence, the APA Division 35 Task Force on nonsexist guidelines concludes that the data demonstrate that "gender-by-situation" interactions are more the rule than the exception. They write (McHugh, Koeske and Frieze 1981, p. 20) that the problem is widespread:

> The failure to specify or to study the social meanings attached to these varied constituents of a research situation, including its temporal duration, amounts to the "fundamental attributional error" of assigning cause unduly to dispositional determinants of behavior and to neglecting person-environment interactions.

Attribution research has continued to rely heavily on classical research designs and measures of achievement. Consequently, reviewers of this literature tend to urge caution when considering generalizations about women's achievements beyond the laboratory setting.

CONSTRUCT VALIDITY AND THE POLITICS OF POPULAR APPEAL—FEAR OF SUCCESS

Related to the fear of failure and directly derived from the expectancy-value model of achievement is the fear of success or, more accurately, the motive to avoid success (Horner 1968, 1972, 1978). This popular construct has

received wide public and professional attention over the past decade, raising new controversies over the classical measures of need-achievement research, and their applicability to women. We choose here to emphasize the positive contribution the dialogues surrounding this theory have had for the development of research on female achievement and feminist scholarship. For more detailed methodological critiques of the fear-of-success construct and its validity, we refer the reader to analyses in this volume and elsewhere (Beere 1983; Campbell 1983; Paludi 1982; Tresemer 1977). The interest in the fear-of-success concept has continued, despite the fact that subsequent research has not confirmed some of the earliest formulations about the motive (Hoffman 1974a, 1974b, 1975; Condry and Dyer 1976). Two propositions critical to the construct validity of Horner's original formulation have not been clearly and repeatedly supported: that the motive to avoid success was inextricably tied to a woman's feelings of femininity, and that it was a stable characteristic of the personality that was being tapped through projective and competitive measures (Kaufman and Richardson 1982).

While major sex differences have not been consistently supported over time, the continuing methodological controversies surrounding the motive to avoid success have spurred some important questions which helped refine achievement theory for both sexes. For instance, Depner and O'Leary called for a more interdisciplinary direction when their data did not support Horner's original formulations (1976). These authors suggest that women's psychological barriers to entry into male-dominated occupational roles need not be limited "to the realms of achievement motivation or motivation alone" (1976, p. 267). They argue that the issue of achievement among women is broader than the question of why women fail to strive for success: "Individuals often fail to aspire to roles which they view as attractive. There are probably many reasons for this, some of them motivational or otherwise intrapsychic, others are better understood at a macro level" (1976, p. 267). These concerns with the fear-of-success construct echo Ladner's reservations with the measures of identity. Both focus on very narrow dimensions of achievement.

Currently, many young scholars based in experimentally oriented fields but familiar with the broader perspectives of women's studies are expanding their field's research parameters. Feminist researchers are reanalyzing and reinterpreting the existing literature. We also see a shift outward from individual to social variables and formulations. This tendency to move toward multilevel interdisciplinary research designs is characteristic both of feminist scholarship and of much social change research. Increasingly research guided by this more interdisciplinary or feminist perspective is generating questions about the value of success itself. There is a wide range of variables that help determine achievement expectancies, many of which are likely to shift in importance over the course of a lifetime and across generations. Hoffman's work on changes in individuals and across age groups grew directly out of her

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interest in replicating the earlier fear-of-success findings. There is a definite momentum to move beyond experimental definitions of achievement to women's life experiences, family situations, and actual career opportunities. New guidelines are developing for framing research questions and shaping inquiry. From the methodological controversies of the 1970s there appears to be a newly emerging approach to female achievement research. It is grounded in gender-role theory and sensitive to the sociohistorical context (Duberman 1975; Gordon 1977; Hochschild 1975; Howe 1975; Kanter 1978; Kaplan and Bean 1976; Lipman-Blumen 1976; O'Leary 1977; Parlee 1975; Thorne and Henley 1975).

FEMALE ACHIEVEMENT AND STATUS ATTAINMENT IN THE SOCIOLOGICAL PERSPECTIVE

Women's achievements are difficult to analyze within the theoretical models and methods available in the literature on the sociology of work, mobility, and stratification (Blau 1978; Duncan, Featherman, and Duncan 1972; Featherman 1978; Haller and Portes 1973; Sewell and Hauser 1972, 1975; Treiman and Terrell 1975). Operational definitions, scales, and measures are based on the patterns of male career paths. For example, the accepted sociological definition of the labor force is restricted to those working for pay or actively seeking work (Hauser and Featherman 1977; U.S. Congress: Senate Committee on Labor and Human Resources 1979; U.S. Department of Labor 1978). Acker warns of the biases likely to surround research inferences drawn from inquiries that systematically exclude unpaid work as an analytic category in labor force analysis. (Acker 1978).

It has taken some time for the field to appreciate the methodological hazards of attempting to generalize directly from men's to women's experiences. A striking example of a research area ripe for constructive change is the field of social stratification, an area of great prestige in sociology and heavily influenced by male investigators. Over the past decade, literature dealing with occupational and eductational choice, and/or social mobility, has come to be referred to as status attainment, or more generally, stratification research. Mobility, in the sociological sense, simply refers to the process by which one comes to attain or achieve a particular occupational or educational level in society. Research inquiries are predicated on the untested assumption that male experiences are representative for the population at large. The committee reviewing sexist biases in sociological research describes this issue as "inadequate specification of the research problem," and recommends greater attention to variables that transcend sex-stereotyped divisions.

In the stratification literature, both educational and occupational achievements are conceptualized as a part of a long-range process. We will concentrate on two measurement issues—timing and choice—and refer the reader to several excellent reviews that detail an even broader range of methodological concerns (Alexander and Eckland 1974; Bibb and Form 1977; Kaufman and Richardson 1982; Keller and Zavarolli 1964; Laws 1975, 1976, 1978; Marini and Greenberger 1976; Wolf and Rosenfeld 1978). Several philosophical assumptions about achievement in the American system are worth noting. In both the achievement motivation literature and the stratification literature, there is an assumption that the processes involved in social mobility and success are based primarily on universalistic criteria. Competence, ability, performance, and the timing of a career choice rests primarily within the control of the individual. Work in these areas gives little attention to the different effects that gender has on the decisions and career paths of each sex. This is a serious oversight, given the clear evidence that gender roles act as intervening variables, in accounting for women's individual routes to achievement and their quite different paths from men's (Baruch 1974; Birnbaum 1975; Ellis 1952; Epstein 1970; Frieze et al 1978; Mednick, Tangri, and Hoffman 1975; Oppenheimer 1968; Stein and Bailey 1976; Unger and Denmark 1975).

A critical methodological issue in social science research is devising measures that are sensitive to individual values which shift in relation to changing historical, cultural, and economic factors. Most researchers attempting to study achievement or mobility are faced with the need to separate hopes and aspirations of individuals from the realistic expectations they may have, given the actual opportunities available in the opportunity structure. The illustration that follows from the status-attainment literature points to the importance of this issue in the research on career goals and occupational accomplishments.

The dynamic relationship among and between gender role and career choice variables is poorly accounted for in the current status attainment literature. That is, an individual's goals, values, and perceptions of both the opportunity structure and her his ability (at any particular point) are ordinarily combined and evaluated in one single measure, with insufficient regard to the impact gender roles may have at different points in the life cycle. This combining of qualitatively different and changing variables into a single dimension of aspiration has been critiqued in social-stratification research before. The practice tends to underestimate the ambitions (as tempered by reality) characteristic of social groups experiencing racial, ethnic, or age discrimination in a culture (Elder 1968, 1974; Empey 1956; Han 1969; Rosen 1969). What one hopes for may be quite different from what one expects, and this is particularly true during periods of rapid social change. For example,

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> ...the three groups showed little difference in the occupations they reported having considered as children. All had considered wife and mother (homemaker most frequently); and all had considered professional careers (the married professionals most). The most career-oriented (single professionals) had the highest proportion undecided at the early stage, suggesting that their career choices entered their life later than the standard female occupational map....

Women's occupational outcomes can rarely be attributed to early expressions of aspirations measured at a single point in time. Given the different pressures and decision points affecting the two sexes in our culture, the timing and importance of key life events needs to be considered for each.

Until researchers take into account a more realistic and common understanding of the female experience, our efforts at explaining women's achievement patterns will have little practical utility. In 1976 some researchers were suggesting that "even with the tremendous growth in the number and visibility of status attainment researchers, the present hypothesized paradigm is inadequate" (Falk and Cosby 1975, p. 314). There is evidence, as in the achievement literature, of methodologies better designed for the study of women. One that is illustrative of promising work in this area is being developed by Falk and Cosby (1975). Their reworking of earlier status-attainment models includes new and relevant items such as an individual's marital status, sex of sibling(s), and stage in family life cycle. The improvement of this model over the ones described earlier are readily apparent. They give new consideration to the roles women play—sister, girlfriend, wife, and mother.

SUMMARY AND CONCLUSION

Despite the recent outpouring of popular and academic works explaining women and their achievements, the social sciences have yet to develop measures and methods that authentically describe as well as predict female achievement. Even with rapidly accumulating empirical information there is continuing theoretical, philosophical and political disagreement about women

and their achievements. The findings on female achievement which we have reported here have generally been gathered while using narrow experimental definitions, and college-aged samples. Less studied, but more representative adult populations, for whom sex differences are generally less consistent, should provide some useful information on the validity of both theory and method. The premium contemporary researchers place upon predictable results contributes to the tendency on the part of researchers to return repeatedly to similar sampling populations. In the expectancy-value tradition, when data on females did not conform to those on white college males, the women, rather than the theory were regarded as the source of error. Females were singled out as being different from males because they did not fit a model that was already proving inadequate for expanded samples of male subjects.

Without representative sampling and broader validation of instruments, theorists remain at odds in their interpretations. The predictive validity of our measures becomes particularly critical if we are concerned with anticipating how much carryover exists between the experimental context and the objective realities women face in their daily lives. Even when we are convinced that we have adequately constructed our measures it is critical to remember that our sampling procedures may have unintentionally minimized variation, conflict, and ambiguity. What consensus we have achieved may be an outcome of having focused on a limited range of age, class and ethnic groups. Although feminist scholars are generally advocates for more inclusive models, they too, are often tempted by the convenience of captive college populations.

The most popular theories of female achievement in both psychology and sociology have been slowly moving to develop, modify, and expand existing methods and theories to incorporate both male and female experiences. There are, however, some methodological pitfalls that social change researchers of all persuasions need to resolve. Social desirability and stereotyping are both persistent problems. Projective measures are often ambiguous and difficult to interpret, as are self-reports and attitude scales—particularly when removed from any measures of real-life behavior. Sample populations for studying both male and female achievement remain narrow in age and background. Our statistical techniques are designed for charting "linear career trajectories" rather than the timing and choices characteristic of most women's actual experiences in today's job market. The continued growth of women's caucuses and sections on gender role research in our professional organizations is needed. They should begin to provide a forum for critical evaluation and development of the emerging models and methodologies in achievement research. To date, the findings on female achievement have been confounded by a legacy of measurement problems familiar to social change researchers working in related areas. What is called for now is persistence in refining our methods, measures, and constructs, as well as our theories.

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