The measurement of masculinity and femininity: Engendering categorical realities

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Abstract

The study of gender attributes, masculinity and femininity, has comprised a major research program in twentieth-century psychology Historical examination reveals that this research program has produced not cumulative discovery but a pattern of repetition and reification Researchers have repeatedly attempted to ensure the reality of masculinity and femininity, and have even introduced methodological techniques that privilege their observational statements on that reality Similar patterns have occurred in the case of androgyny research, despite expectations that the androgyny construct would remedy the shortcomings of masculinity and femininity concepts When analyzed in historical context, these gender concepts are found to share ethnopsychological origins—roots in social practices and prescriptions Contextual analysis also provides telling details about researchers normative interests If we choose to terminate such fruitless ventures and to generate novel understandings of the social world, then we must undertake critical self-appraisal and adopt a new metatheoretical grounding

When the protagonist of Virginia Woolf's *Orlando* is suddenly transformed from male to female, he/she has minimal difficulty adjusting to a new form The recent shift from the bipolar, apparently antiquated concepts of masculinity and femininity to one of androgyny, though purportedly a major reformulation, actually intimates a similar facile accommodation While different in kind, both changes rely on mundane oppositions—those cultural concepts that ordinarily signify masculine and feminine Both changes constitute fairly undramatic revisions rather than radical transformations

The study of femininity and masculinity, comprising a massive scientific project across 90 years of experimental psychology, depicts a curious recurrence of these cultural concepts The research exemplifies the repetition, with minor modifications, of several central stipulations about masculinity and femininity Conventional litera-

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ture reviews strive to identify significant advances in gender research, to chart the "breakthroughs" or "discoveries" as it were, but they neglect what is stable and common to the studies A perspective that acknowledges the repeated similarities is needed to begin to appreciate the virtual reification of the existence, contents, and evaluative dynamics of masculinity and femininity concepts Such a perspective attends to the procedures through which those stipulations were defended and sustained It illuminates some of the nonempirical reasons for maintaining certain categorical stipulations about femininity and masculinity and, in turn, intimates how these categories bolstered prescriptions for appropriate social behavior

The contents of the masculinity and femininity categories are familiar even to those uninitiated into gender-role research They are constituted by global polarities found in common personality dimensions instrumental vs expressive, agentic vs communal, active vs passive, independent vs dependent characteristics At this level the categories are straightforward and represent nothing more than what is ordinarily meant when one is said to be like a man or woman in our culture In addition, it is presupposed that the categories are consistent within the individual and that the individual has a sincere desire to manifest them appropriately The enduring presence of the categories is readily apparent, and in the light of recent feminist studies, so is the unhappy coincidence that the dichotomous personality signifiers indicate behavior norms for social relations between men and women The present exploration, then, moves beyond these acknowledged conditions in order to locate the means by which scientific psychologists (while avowing an ethos of objectivity, disinterestedness, and impartiality) retained the categories How, in the face of contradictory empirical findings and of nonobservable postulates, were they sustained? The answer involves more than just revealing unreasonable or unscientific practices, because the assumptions under question were also maintained through normal and legitimate scientific procedures For their maintenance it was necessary that psychologists occasionally override scientific knowledge as well as the knowledge of ordinary people

The first section of this study examines the procedures and rhetoric whereby even scientific knowledge was rendered dubious in order to uphold the reality of femininity and masculinity The second section describes the ways in which psychologists were able to verify the nearly ephemeral gender entities as a psychological *reality* and claim *privileged* access to *observing* and *assessing* that reality Once this psychological phenomenon was secured, the study of masculinity and femininity seemed to consist simply of healthy competition for

the most efficient and elegant assessment techniques The apparent breakdown of the extended research tradition came primarily through challenges raised by feminist scholarship, and even the subsequent revisions of androgyny theory ultimately proved insufficient to meet those challenges

The methodology of the present study departs from conventional criticism by looking not at faulty scientific ideas but at how the research practices themselves were constructed to foster certain interests and even to confect certain realities Historical studies have identified some of the misogynists and androcentric theories in psychology Yet we must look beyond cranks and heresies to understand how normal scientific practices were integral to the construction and maintenance of an "engendered" psychological reality The study does not deny the existence of gender differences but rather questions the particular forms ascribed to these differences and the means by which they were sustained The fact that these practices confirmed the mundane realities of social life, the ethnopsychology of gender categories, makes it surprising that psychologists even had the troubles they did in locating masculinity and femininity

Discovering Masculinity and Femininity through Science

In his comprehensive review of sex difference research, Havelock Ellis (1894) noted the ideological distortions frequently imposed on the subject For these ideological biases, Ellis prescribed the remedy of empirical inquiry, particularly the "new" scientific psychology which "lays the axe at the root of many pseudoscientific superstitions' (p 513) However, he cautioned that science reveals only factual, not potential, conditions, for "our present knowledge of men and women cannot tell us what they might be or what they ought to be, but what they actually are, under the conditions of civilization" (p 513) Within a decade, numerous American psychologists had taken up the question of sex differences While acknowledging the precedent of Ellis's work, they professed closer alignment with the empirical spirit of providing what Helen Thompson Woolley (1903) described as the "original investigation" that his study lacked (p 2) As did many of her cohorts, Thompson Woolley reached somewhat different conclusions than Ellis, for though she admonished pseudoscientific theorizing and anticipated the fruits of objective experimentation, she believed that modifications in social life could or would alter psychological sex differences With agreement on the correct methods for knowledge acquisition, Ellis and Thompson Woolley disagreed on whether or not the psychology of the sexes

might change, or be perfected, with the former betting on nature's desires and the latter on the effects of social organization Nevertheless, the psychologist's task was not to explore the dynamics of social perfectibility but to better the process of knowledge production The normative notion of bettering gender arrangements was taken to be another problem altogether

Thompson Woolley's careful laboratory research resembles a host of similar studies, many of them conducted by women (such as Mary Whiton Calkins, Leta Hollingworth, Catherine Cox Miles, and Margaret Floy Washburn) who, with the new opportunities for higher education, turned to intellectual questions that were not far removed from their own lives (Rosenberg, 1982) Thompson Woolley's dissertation (1903) reported experiments on sex differences in motor, affective, sensory, and intellectual abilities Within the next three decades hundreds of studies assessed these sex differences as well as those to be found in the association of ideas, color preference, handwriting, remembering of advertisements and moving pictures, motor efficiency, nervous behavior of nursery school children fear responses, reading speed, credulity regarding fortune telling, stammering, scope of attention, reasoning, and ideals and tastes, not to mention knowledge of psychology after the first course (see Allen, 1927, 1930, Hollingworth, 1916, 1918, Johnson & Terman 1940, Thompson Woolley, 1910, 1914)

The research on the psychology of sex created some confusion because many of the studies reported no or minor sex differences and those finding differences often indicated female superiority Probably no study equalled the impact of the intelligence research as measured by the new mental tests In revising the Binet-Simon Intelligence Scale, Lewis Terman (1917) tested 1,000 children and found slight superiority of girls The results led him to consider why women had not attained eminence and ultimately to suggest that their failure "may be due to wholly extraneous factors Even before Terman's standardized test, other investigators found few significant sex differences on measures of mental abilities In her 1914 review of the psychology of sex, Thompson Woolley reported these findings with a cynical conclusion "On the whole then girls have stood better than boys in measures of general intelligence So far as I know, no one has drawn the conclusion that girls have greater native ability than boys One is tempted to indulge in idle speculation as to whether this admirable restraint from hasty generalization would have been equally marked had the sex findings been reversed!" (p 365) The reported differences were often so slight that Hollingworth (1918) claimed that any reviewer who restricted himself to

reporting sex differences on mental traits would "automatically tend to do himself out of his review He would have very little to report" (p 428)

Despite such enthusiasm, the wide-scale operation to attain objective scientific knowledge of the psychology of sex faltered, and by 1930 was mired in complications due to inconsistent findings and a paucity of studies on social factors as well as to professional difficulties of the women psychologists who undertook a substantial amount of the research (see Rosenberg, 1982) Yet, the persistent spirit behind the project was far from exhausted though the problems encountered by experimentalists were serious For those who had posited the superiority of males on tasks involving general mental ability the ground had fallen away, for the new intelligence tests left their position unsubstantiated While experimental studies were indicating that males and females diverged on some measures, they gave no coherent explanation of these differences They ultimately provided no final test of theory—no indication of whether the differences were environmentally or biologically determined And because a number of variables could not be controlled, the critical experiment to ascertain the respective natures of males and females could not be performed, at least not on conventional ethical grounds This limitation plagued more than John B Watson who, in his autobiography claimed "regret" at not having established "a group of infant farms" where various races could be reared under controlled conditions (1936, p 281), a variation on his earlier proposal for a human laboratory "where squads can be kept at work Their food, water, sex, and shelter could then be kept under very definite control" (1924, p 214) In describing these impracticable experiments, some contemplated such perfect controls as Arcady, for their constitution required elimination of all gender-related discrimination (Hinkle, 1920, Thompson Woolley, 1903) What several decades of research apparently had disclosed is that males and females differed on some psychological measures and were similar on others, and that the decisive experiment for ascertaining the essence of gender, while resembling a nonsexist environment, was unfeasible

The solutions to these problems were of several types Some psychologists seemed indifferent to the experimental research and proceeded to publish theoretical statements on the psychology of men and women These researchers frequently intimated that the actualization of psychology as a true science had not yet happened, but they took license as professionals to conjecture, to proffer scientific expertise, on an important psychological and social issue While lacking experimental evidence, these statements nevertheless

represented knowledge of the new "scientific intelligence" as Lippmann (1922) called them, the social scientific experts who had gained a public spotlight during the reform period and later through involvement in the war effort Thus, G Stanley Hall (1922) explained that the flapper, rather than exemplifying the demise of femininity in the American woman, actually represented "the bud of a new and better womanhood, and the evolutionary progress of civilization toward maternal femininity " He added, "Our Simon-Binet tests can grade and mark, at least for intelligence, but here they baulk, stammer, and diverge" (p 780) Watson (1927) identified the dangerous characteristics of modern women which guaranteed that men would opt out of marriage in the next fifty years and suggested behaviorist femininity through careful hygiene for sexual attractiveness Others turned toward the new "glandular psychology" to learn the final word on masculinity and femininity

While these respondents exhibited what charitably could be called benign neglect of empirical evidence, others, assured that psychology as science had arrived, stipulated the means for discovering the *real* nature of masculine and feminine A minor study published in 1922 epitomizes the general logic behind these newer explorations and, therefore, is worthy of extended quotation

> The mental test seems to have said its utmost on the subject of sex differences, and the results have been on the whole surprisingly at variance with the insistent prejudices of the average man and woman
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> When common sense and science clash it is more often science that has the last word, but not always Occasionally the worm turns, and a supposedly scientific doctrine unacceptable to common sense continues to be scrutinized until a glaring flaw is discovered either in the method or the interpretation of results that led to the doctrine The history of medicine is strewn with the wrecks of such doctrines, and psychology bids fair to number at least its fair share of derelict 'scientific' notions
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> Very much the same may be said of the small differences apparent in the test scores of men and women So far as these results suggest the interpretation that the mental differences between the two sexes are after all comparatively insignificant, they suggest something that common sense and universal experience refuse to allow Such results again promise to stand as the mark of the inadequacy of the psychological test to get at the most important features of mental differentiation (Moore, 1922, p 210)

Moore depicted the important feature of maleness and femaleness in "natural emotional aptitude, of an unyielding innate divergence that predominates the enthusiasms that are to be expected from the two sexes in identically the same environment" (p 211) He proceeded to test his hypothesis by measuring these "natural aptitudes" as they were expressed in conversations of men and women on Broadway He found that male-to-male conversations were typically about money and business while woman-to-woman conversations were about persons of the opposite sex His hypothesis was confirmed

In addition to natural aptitudes, other researchers looked for maleness and femaleness in such phenomena as levels of "mental energy" (Leuba, 1926), the "unconscious" (Hamilton, 1931), and in "mind" (Jastrow, 1918, p 303) Jastrow found the intelligence test to be both "partial" and 'artificial," claiming that "deeper and more comprehensive are the allied and supporting processes which gave the cutting edge to the instrument, and determine the temper of the mind, the manner and spirit of its use " Real psychological processes corresponding to masculinity and femininity in everyday life are located "in the habitat of deep psychology, where traits are at once subtle and profound Here the feminine mind, as all minds in the specialized aspects, becomes most revealing" (p 314) Discontented with the extant empirical research, this last group of psychologists was convinced that the *real* substance of masculinity and femininity existed but not in what was measured by the myriad mental tests They argued from the logical premise that *if other* human sciences, notably anatomy, physiology and pathology reveal man as man and woman as woman, then "What reason is there to suspect psychology to enter a dissenting opinion?" (Jastrow, 1918, p 303)

Producing the Subject of Psychological Science

Given these general trends in psychology, and given the rather audacious ad hoc theorizing without supporting "facts," or without any facts, it appears that some psychologists were engaging in sex role stereotyping Perhaps they were subjects of a "cultural lag" similar to that which Eagley (1978) detected in some psychologists of a later period But while investigations of masculinity and femininity seem to have diverged from conventional research practices, perhaps to accommodate particular sex role stereotypes, they also converged with those practices in several revealing ways They emphasized detached objective observation and the consequential devaluation and even denigration of subjective observations The

ordinary observer or self-observer came to be seen as an incomplete psychologist at best (Watson, 1919, Robinson, 1926), he or she was unable to identify the true causes of behavior (Dashiell, 1928) The image of the incompetent subject gained support not only with the intensified dedication to rigorous objective techniques but also with concurrent assumptions about the complexity and causal interdependence of human actions (Haskell, 1977) The idea of the causal complexity of human action gained adherents throughout the early twentieth-century, and it dovetailed with another social assumption adopted by psychology the increasing human disorder and the consequent need for rational control While these concerns were voiced in the progressive era (Haber, 1964, Wiebe, 1967) and reinforced with the successes of applied social science in the war effort, they were amplified by psychologists in the 1920s and 1930s (O'Donnell, 1979, Samelson, 1979, Sokal, 1984) Scientists in general showed escalated concern about human ignorance and about the scientists leadership responsibilities (Kaplan, 1956, Tobey, 1971) For instance Edward Thorndike (1920) suggested that the average citizen, the "half-educated man,' should relinquish decision making to the experts

Similar portraits of human irrationality were depicted by psychologists as were the pleas for scientific, particularly psychological, control (Danziger, 1979, Morawski, 1982, 1983, 1984b) Psychologists became more vocal about their role in bringing social problems under control (Allport, 1924, Angell, 1929, Dunlap, 1920, 1928, Terman, 1922 a and b) For many, control became a fundamental component of the definition of psychology "Ultimately it is a desire to get *control*" (Dashiell, 1928, p 6) Even the seemingly most detached researchers saw the world in "dire need" of control over human conduct (Hull, 1935, p 515)

Of the institutions needing control, marriage and family life were thought to be central for they constituted the primary source for individual well-being and for socialization of adjusted adults Researchers proceeded with several premises that the family is universal, the nuclear family being the most natural form, that the role of the mother is primary in the socialization of children, and that childrearing failures were to be interpreted as failures of mothers Intimated in these premises is the preference for studying only adult heterosexual relationships in the context of the nuclear family (Morawski, 1984b)

The shifts in research orientations over the four decades indicate more than innovative conceptual strategies for pursuing an empirical question, they represent an intriguing deviation from mainstream

psychology The conceptual changes proceeded from a search for corporeal differences, then to cognitive and behavioral differences, and eventually to postulates about hidden but salient, nonconscious substrates of masculinity and femininity To some extent the changes resemble the broader transition from structuralism and introspectionism to behaviorism which was then occurring in American psychology However, the study of the sexes deviates significantly from that pattern The rise in behaviorism, although meeting more resistance than is typically believed, involved an extensive exorcism of nonobservable or mentalist phenomena Even excluding extremists such as John B Watson and Karl Lashley there was an emerging consensus that psychology consisted of the objective study of observable events Mind, self, consciousness, and personality traits were like epiphenomena Personality traits were taken as merely descriptive aspects of more fundamental causal mechanisms since they are, behaviorally speaking, "the individual's characteristic reactions to social stimuli, and the quality of his adaptations to the social features of his environment" (Allport, 1924, p 101) The ascendency of objective and behavioral psychology foreshortened the search for any real mental mechanisms, even though individual differences research continued, behaviorism challenged the plausibility of interior mental entities such as ethnic and racial traits (Cravens & Burnham, 1971, Samelson, 1978, 1979)

Psychologists' particular interests in the diagnoses and eventual remediation of social disorders provides an important clue to the persistent intrigue with male and female psychological functioning These interests help explicate the continued discourse on masculinity and femininity which often deviated from current theoretical and methodological trends and disregarded empirical findings At least hypothetically, standardized tests promised to rectify some of the empirical problems while serving the overall practical interests in control Hence there ensued a quiet transition from the study of sex differences to the exploration of "masculinity" and "femininity "

The Solution of Terman and Miles

Challenged by the muddled state of masculinity and femininity research and specifically "by the lack of definiteness with respect to what these terms should connote," Lewis Terman and Catherine Cox Miles (1936, p vi) undertook an extensive project in the early 1920s They were moved by the questioning of the very existence of such entities which was being made by some psychologists and anthropologists, notably Margaret Mead Nevertheless, they began with

the premise that masculinity and femininity were real Terman and Miles understood their task to resemble the earlier efforts to eradicate misconceptions about intelligence like Binet's transformation of intelligence research, they sought "a quantification of procedures and concepts" (p vi) They believed that despite the failures to determine the origin of sex-related attributes and the inability to attain observer agreement on the content of these attributes, there existed considerable clarity in the composite pictures of femininity and masculinity Hence, the only assumption Terman and Miles suspended was that about origins, however, like previous researchers they lamented the ethical impossibility of conducting the study, the experimental rearing of infants, that could reveal those origins (p 464)

Terman and Miles (1936) constructed a test to give "a more factual basis" to ordinary concepts of masculinity and femininity by accumulating test items on which males and females differed (p 3) A preliminary version of the test was given to members of Terman's group of gifted children, and in this pretesting they observed their first case of a high cross-sex scorer displaying homosexual tendencies, or "sexual inversion " The final product of the psychometric project was a 910-item test with seven subtests word association, ink-blot association, general information, emotional and ethical attitudes, interests, opinions, and introvertive response Most subtests were compiled by modifying existing tests on those phenomena according to two criteria selection of items that best discriminate the responses of males and females, and maximization of the efficiency and economy of test administration Items were converted to multiple-choice format where two of the response alternatives were feminine and two masculine Validity was assessed by ascertaining overlap of score distributions for male and female samples and by correlations with independent measures of femininity and masculinity Since there was no other psychometric measure for ascertaining validity, comparison data were obtained from clinical studies

The contents of the test perhaps now appear as an intriguing cultural artifact, but it did discriminate successfully between females and males Scores of the sexes differed on average by 122 points and only about 10 out of 1000 subjects of each sex had scores exceeding the mean of the other sex (Terman & Miles, 1936, p 371) The Attitude-Interest Analysis Test (AIST), as the M-F scale was titled to mask its purpose, contains masculine response items such as those requiring negative responses to the questions "Do you like to have people tell you their troubles?", "Do you usually get to do the things that please you most?", "Do you sometimes wish you had never been

born?", and "Do you feel that you are getting a square deal in life?" Femininity points are attained by responding negatively to the questions "Do people ever say you are a bad loser?", "Do you feel bored a large share of the time?", and "Were you ever fond of playing with snakes?" Masculinity points are gained by replying that you dislike foreigners, religious men, women cleverer than you are, dancing, guessing games, being alone, and thin women Femininity points are accrued by indicating dislike for sideshow freaks, bashful men, riding bicycles, giving advice, bald-headed men, and very cautious people

AIST correlated with only a small number of other personality inventories and poorly with measures of marital adjustment The scores varied considerably for different age groups (for both sexes, scores declined in older samples), and the test was susceptible to faking Qualitative comparison of the test results and clinical measures of abnormalities such as homosexuality and female delinquency was more promising The AIST detected "roughly, degree of inversion of the sex temperament, and it is probably from inverts in this sense that homosexuals are chiefly recruited" (p 467) Despite its limitations, Terman and Miles endorsed the scale and its potential Use of the AIST promised to "help clean up the confused notions which are current with regard to what constitutes masculinity and femininity of personality The fact seems to be that most of us have not acquired the ability to discriminate very clearly the genuinely masculine from the genuinely feminine" (pp 465–466)

Convinced of the everyday inability to make such discriminations and of the detrimental effects of such judgment errors, Terman and Miles conducted a study on psychologists showing that even professionals, without the use of scientific techniques such as the AIST, were inadequate judges of masculinity and femininity (pp 454–459) Such findings supported the hypothesis that "the test scores do have behavioral correlates but that ordinary observers lack adeptness in detecting them" (p 465) The authors confidently anticipated use of the test in clinical diagnosis and in ameliorating familial and marital maladjustments They refrained from relating their results to the environment-heredity controversy over the origins of sex differences However, they offered a clear conception of psychological well-being, a model equating mental health with definitive correspondence between psychological and biological sex ascriptions The subsequent research of Terman and Miles further attests to their interest in relating mental health to gender-based psychological characteristics (Miles, 1942, Terman, 1938)

Production of M-F

Theirs was the first major attempt to assess quantitatively the existence of masculinity and femininity in the psychological realm of temperament and to do so without postulating causality or nature/nurture influences Terman and Miles had introduced a way of accessing the reality of masculinity and femininity that became a model for constructing scales over the next 25 years Most of the tests shared with their predecessor three assumptions that masculinity and femininity existed but at a level that could not be readily identified by the ordinary observer, that the attributes were so psychologically charged that subjects had to be deceived of the true nature of the test lest they fake their response in order to appear socially desirable, and that femininity and masculinity were distinct qualities which were somehow related to psychological stability and deviancy, notably homosexuality and familial troubles The first two assumptions were supported by the popularity of social theories that conceptualized human action as complex, causally interdependent, and beyond the self-knowledge attainable by the ordinary observer Later investigations confirmed these conjectures when empirical evidence was found to contradict everyday analysis Psychometric assessments were showing pedestrian attributions of femininity and masculinity to be in error The third assumption, that of adjustment and mental health, corresponds with the mandates for reconstructing psychology into a more objective behavioral science that would better serve social control As stated by two psychologists engaged in an extensive study of sex and marriage "Some of us feel that if we were permitted to train the management, fewer of the exploring children would get hurt, and more of them would find the happiness they are looking for" (Hamilton & MacGowan, 1928, p 287) Understanding intimate heterosexual relationships, sexuality, and family life comprised a substantial obligation for socially responsible psychologists

Just as these assumptions directed conceptualizing about the form and location of "gendered" psyches, so Terman and Miles (1936) also indicated their content In a qualitative analysis of the findings, they described the masculine psyche as adventurous, mechanically and object oriented, aggressive, self-asserting, fearless, and rough, and the feminine psyche as aesthetically and domestically oriented, sedentary, compassionate, timid, emotional, and fastidious The two composite minds resemble the Victorian sex role schema of separate spheres (Lewin, 1984 b and c, Rosenberg, 1982) This reconstituted schema lent certainty to the increasingly fuzzy question of the nature

of the sexes, and was similar in content to the one Robert Yerkes (1943) generated from his studies of male and female chimpanzee behavior (see Haraway, 1978) This gender schematization can be contrasted with the concurrent changes in the actual social positions of men and women and the alterations and confusions of gender images and roles (for examples, see Filene, 1974, May, 1980, Showalter, 1978) Given the social conditions of the period, the M-F scale itself may have served more than a taxonomic or descriptive function, it offered prescriptions for a moral order Here the case of Ernest Hemingway's writing is suggestive While portraying rigidly sex typed characters in his published fiction, his unpublished works include characters who betray, escape, or eschew conventional gender attributes (Latham, 1977) A somewhat different example of two levels of reality is apparent in writings of John B Watson in which the strong argument for total conditioning and environmental adjustments were to provide behavior directives primarily for certain classes, including that of women (Harris, 1984) Invoking certainty can appear to arrest the flux of an uncertain social reality Whatever the intended or unintended prescriptive function of the AIST may have been, and whatever the discrepancy between the test findings and other social indicators may mean, the form and content of the scale are significant, for they came to inform later assessment techniques and normative evaluations

Reproduction of M-F Inventories

Although the AIST was developed according to a psychometric procedure of selecting test items for their ability to discriminate the criterion groups of men and women, it lacked theoretical coherence due to the variety of psychological phenomena tapped by the subscales Later attempts to construct M-F instruments often focused on a more specific range of psychological phenomena and were considered in terms of particular personality theories For instance, in the same year that Terman and Miles published their study, two quite specific inventories were reported, one by Edward K Strong and the other by J P and Ruth Guilford Strong (1936) prepared a Masculinity-Femininity subscale for his general inventory of vocational interests, the Strong Vocational Interest Blank (SVIB) He reported that although both sexes exhibited more feminine interests with age, sex differences were a major indicator of occupational interest Strong suspended pronouncement on the origin of these differences, and simply concluded his study by asking, "Are the differences in interest of engineers and lawyers to be found in

differences in hormone secretions, or in early attachment to father instead of mother, or in the possession of certain abilities in which the sexes differ?" (p 65) On the one hand, Strong (1943) cautiously noted that the interests of males and females were more similar than different and that because his inventory also assessed similarities, it was in this sense superior to Terman and Miles' test On the other hand, he admitted that his inventory was limited in the psychological dimensions it assessed, in the end, he deferred to the findings of Terman and Miles A later test of occupational preferences also incorporated a M-F subscale (Kuder, 1946)

Guilford and Guilford (1936) attained a sex temperament measure through factor analysis of a test of introversion-extroversion Guilfords' 101-item Nebraska Personality Inventory contains five factors, one of which is *M* Although initially viewing the factor as "masculine-ideal," the investigators chose the "more noncommittal letter *M*" (p 121) to signify a factor that was "perhaps masculinity-femininity, or possibly a dominance or ascendance-submission factor" (p 127) The tentative identification of the masculinity factor later was described with considerable certainty (Guilford & Zimmerman, 1956, Lewin, 1984c) Both the scales of Strong and of the Guilfords, while ostensibly appraising different psychological dimensions, indicated greater aggressiveness, dominance, and fearlessness in males and greater emotionality, subjectivity, and sympathy in females In both cases checks on external validity were limited and inconclusive

Masculinity and femininity comprised a subarea of interest in other inventories designed primarily to assess psychological abnormalities S R Hathaway and J C McKinley devised the Minnesota Multiphasic Personality Inventory (MMPI) in 1940 to measure traits of importance to the practitioner who "wishes to assay those traits that are commonly characteristic of disabling psychological abnormality" (Hathaway & McKinley, 1951, p 5) Many of their items were inspired by Terman and Miles' inventory, others were original The MMPI manual gives no information about the construction of the M-F subscale although other evidence suggests that it was compiled using only a criterion group of 13 male homosexuals (Lewin, 1984b) In developing a subscale of psychological femininity for the California Psychological Inventory (CPI), Harrison Gough (1952) attempted to create a less obtrusive instrument than the MMPI or SVIB Gough selected items according to both their differentiation between male and female responses and their subtlety The resultant 58 true-false questionnaire, containing items like "I am inclined to take things hard," discriminated between males and females but was only moderately successful in identifying psychological abnormalities and in

correlating with judgements of trained observers (Femininity, as interpreted in this scale, is characterized as sensitivity, timidity, compassion, acquiescence, subjectivity, and sentimentality) A shortened version of the scale, the version that was integrated into the CPI, was examined for cross-cultural validation, accurate identification of adjustment problems, and correlation with other M-F scales, these checks were only moderately successful (Gough, 1966, 1975) A third scale of this type is the M-F subscale of the Depauw Adjustment Inventory (Heston, 1948)

Most of these researchers were concerned that their tests might be susceptible to either faking or reflecting cultural ideals Yet they typically concluded, as did Guilford and Guilford (1936), that their test was sufficiently complex to elude the acumen or disingenuous calculations of the normal subject Other researchers were not so readily convinced and sought to eliminate two possible contaminants of the conventional scales (1) "cultural" biases and (2) the possibility that subjects could deceive testers, and themselves, given the ostensibly common tendency to obscure issues of sex identity Solution to these problems of cultural and psychological "noise" was sought by testing symbolic representation through projective techniques, symbolic representation was believed to be beyond cultural constraints and the subject's awareness of self Kate Franck (1946) designed a projective test of M-F based on the subjects' choices of pictures with male or female symbols This and other studies assumed that normal subjects would prefer opposite sex symbols The projective study of drawing styles indicated that men close off areas, expand the stimulus, seek unity, and use angular and sharp lines while women leave areas open elaborate within the stimulus area, and blunt or enclose sharp lines (Franck and Rosen, 1949) Men tend to create objects such as towers, tools, and mechanical vehicles Women tend to construct vases, windows, flowers, and human figures Franck and Rosen compared their findings to Erik Erikson's analysis of children s play constructions and to Freudian psychoanalysis, they suggested the universality of symbols, and offered guidelines for evaluating maladjustments in role identification Other attempts to appraise the "hidden" or "unconscious" of masculinity and femininity identification employed projective devises such as draw-a-person (Caligor 1951, Machover, 1949), the Thematic Apperception Test (Webster 1953), and open-ended word association (Goodenough, 1946)

During the 40-year period, 1930–1970, projective tests were not the sole means for circumventing cultural artifacts and subject biases Several researchers adopted rating scales to permit the subject to evaluate self and others, by indirectly assessing social "ideals" or

"stereotypes,' they could check deviations from those baselines (Berdie, 1959, Reece, 1964) Berdie (1959) claimed that the adjective check list, because it enabled self-other statements, could measure not just "dimensions" of personality but also "processes" including ' such things as identification, repression, self-acceptance, and perception' (p 327) These researchers presumed the primacy of sex role identification for mental health, and that direct behavioral responses which reflect these underlying processes comprised valuable information for clinical practice Measurement of other behavior indices of masculinity and femininity sometimes (Gray, 1957) though not always (Rosenberg & Sutton-Smith, 1959) linked sex role identification with these elusive or unconscious psychological processes

The qualitative definitions of masculinity and femininity were consistent among these tests, though quantitative reliability checks did not always confirm such consistency (Constantinople, 1973) The tests were routinely constructed with the three core assumptions originally adopted by Terman and Miles that masculinity and femininity were unavailable to the ordinary observer, that deception was required to deter the subject's natural tendency toward complicity, and that masculine and feminine traits were indicators of psychological adjustment But the later scales had added grounds for making more adamant claims By the late 1930s the idea of psychological femininity and masculinity located beyond the awareness of the person was being corroborated by depth psychology The works of Freud, Jung, and Erikson, all of which gained popularity during the period, hypothesized that potent gender attributes were nonconscious In addition, experimental research in general psychology was disclosing the various ways that subjects could bias responses, and these findings prompted attempts to design methods for circumventing such "faking" (Caligor, 1951) Thus, the constructs of masculinity and femininity, concepts which more than one researcher compared to atoms and genes, came to be described as knowable but not without calculated pursuit Note how the search for the phenomena is described

> when we come to deal with what is often called the "private world" of the individual, comprising as it does, the feelings, urges, beliefs, attitudes, and desires of which he may be only dimly aware and which he is often reluctant to admit even to himself, much less to others, the problems of measurement are of a very different nature Here the universe which we wish to assay is no longer overt and accessible but covert and jealously guarded (Goodenough, 1946, p 456)

The subject typically complicated this search by deceptive behaviors "A man may be an athlete, may know all about automobiles and fly a plane—and yet be afraid of women Everyone has known such people, for there are many, who use behavior labeled masculine or feminine by our society to hide their disorientation, often from themselves" (Franck & Rosen, 1949, p 247)

Other test compilers checked to ensure that subjects' stereotyped ideas about masculinity and femininity did not interfere with the more "subtle" or "true" indices (Nichols, 1962, Reece, 1964) Despite such precautionary circumventions, the constructs of the gender types, when put in verbal form, did not vary much from test to test Masculine is powerful, strenuous, active, steady, strong, self-confident, with preference for machinery, athletics, working for self, and the external/public life Feminine is sensitive, compassionate, timid, cautious, irritable, acquiescent, sentimental, preferring artistic and sendentary activities, and the internal/private life Nevertheless, with the near certainty of the constructs' existence few researchers pronounced on their origins

Feminist Difference Complaint or Challenge?

Although problems of validity were occasionally noted, the general techniques of assessing masculinity and femininity were continued until the 1970s A serious challenge to the tests appeared with Anne Constantinople's (1973) examination of three central postulates the unidimensionality of femininity and masculinity, their bipolarity, and their definition in terms of sex differences in item-response She offered convincing evidence of the theoretical vacuity of the masculinity-femininity construct While Constantinople's critique examined M-F tests specifically, related research on sex and gender further compromised the tests' accepted validity Theories of sex roles and sex role socialization were criticized for positing conventional norms for appropriate gender behavior (Block, 1973, Carlson, 1972), for making differential evaluations of male and female attributes (Helson, 1972, Rosenberg, 1973), and for assuming temporal stability of gender-linked traits (Angrist, 1972, Emmerich, 1973) These researches, and those in feminist studies generally, imperiled not only the credibility of M-F scales but the very reality of "masculine" and "feminine "

An expedient solution to the resulting quandary was offered with the concept of androgyny and the accompanying techniques for its assessment Introduced in 1974, the Bem Sex Role Inventory (BSRI) measured the ideals of masculinity and femininity in a manner

enabling comparison of the degree to which an individual rates high on both attributes It measured the degree to which an individual is "androgynous," and hence psychologically healthy (Bem, 1974, 1977) During the next few years several similar scales were created (Berzins, Welling, & Wetter, 1978, Heilbrun, 1976, Spence, Helmreich, & Stapp, 1975) Initially, the most popular of these androgyny measures, the BSRI, was recognized as successful in predicting gender-related behaviors, in expanding the range of appropriate or healthy responses (Bem, 1974, 1977), and in detecting life-span changes (Maracek, 1979, White, 1979) The concept was expediently adopted to help explain a wide range of human behaviors, especially those for which clear gender differences were found The scale became a popular tool for explaining activities in the hospital and boardroom, in the school and romantic encounters The very idea of androgyny was received as a solution to the ostensible "sexism" of talking about masculinity and femininity In fact, it offered an escape from openly endorsing those gender categories and a new ideal for evaluating behavior (Bem, 1977, Kaplan, 1976, Lee & Scheurer, 1983) That ideal has little if any relevance to psychosexual matters and illustrates a heightened concern with complex cognitive competencies While the initial M-F scale of Terman and Miles was intended to tap psycho-sexual maladjustments, the androgyny scales exhibit little relation to sexuality (Storms, 1980) Androgyny researchers have tended to eschew consideration of sexuality in favor of correlating androgyny and those complex cognitive styles believed to be essential in, for example, the workplace (see Colwill, 1982)

The concept has also received both empirical and theoretical challenges, some of which fault androgyny research with incorporating the very same presuppositions that it was intended to eliminate The critics noted that the newer models retain, even if unintentionally, certain values associated with masculine and feminine, and thus contribute to their ossification as universals (Lott, 1981, Hefner & Rebecca, 1979) Associated with these normative stipulations are untenable prescriptions for psychological health (Kenworthy, 1979) For instance, Sampson (1977) indicated how the "self-contained individualism" assumed in the concept of the androgynous person is a dubious yet essentially unquestioned norm Others noted how the androgyny models neglect negative attributes and gender similarities (Rosen & Rekers, 1980, White, 1979) And although purportedly sensitive to changes in gender attributes within the individual, these models do not explicate the broader cultural conditions that may mediate or transform these attributes (Kaplan, 1979, Kenworthy,

1979, Sherif, 1982, Worell, 1978) The concept of androgyny has also yielded a questionable record in empirical investigations The findings of a recent meta-analysis of androgyny research not only confirm some of the theoretical complications but also suggest that neither the BSRI nor the PAQ even adequately predicts psychological well-being (Taylor & Hall, 1982)

The androgyny models were advanced to replace theories that were circumscribed by history and culture, yet they apparently failed to confront their own historically constituted limitations (particularly by assuming transhistorical stability) They renovate rather than replace the rejected presuppositions about the ontology, structure, and desirability of gender concepts (Morawski, 1984a) The criticisms essentially demonstrate that androgyny research proceeded without critical scrutiny of the arguable metatheoretical foundation that subtly guided the entire enterprise of explaining the psychology of gender (Sherif, 1982, Taylor & Hall, 1982, Unger, 1983) Bem (1979) has also come to question the concept She has suggested that the androgyny concept would sow the seeds of its own destruction by immobilizing the cultural categories of masculinity and femininity and, hence, by undermining its own foundation in those very categories Bem's (1983) reconsideration of the androgyny construct does acknowledge the historical and cultural processes involved in the construction of gender dichotomies However, to end the repetitions and sanctioning of a particular reality requires more than acknowledging history It demands a comprehensive reevaluation of our scientific practices, particularly the reflexivity and empowerment of psychological knowledge

Repetition in Discoveries

Androgyny research exhibits telling resemblances to the earlier work on femininity and masculinity Undoubtedly androgyny models no longer prescribe correspondence between biologically ascribed sex and psychologically ascribed gender roles, and they dismiss altogether the issue of sexual deviancy These "liberating" implications have tended to obscure other qualities of the androgyny scales, most notably their retention of the categorical constructs of femininity and masculinity along with the cultural values associated with them As such, androgyny may be viewed as extension of an enduring process of pursuing the "real " It forms part of an ostensibly progressive and maybe interminable scientific search for psychological essences by reference to somatic body types, to mind stuff, to personality matter, and eventually to roles and cognitive styles

Androgyny research is part of a pattern whereby appeals to these hypothetical constructs are invoked to locate the hypothetical constructs which were posited initially (those of the masculine and feminine) The process consists of continued indexicality of constructs where, even in the case of androgyny, the idea of gender types is substantiated by indexical relation to previously conjectured constructs The process in turn engenders objectification and ossification of the constructs The polarities of masculine and feminine, retaining qualities such as "instrumental" and 'expressive" or agentic' and "communal" action, become fixed, even reified They come to represent ahistorical entities that potentially can be treated as referents of particular behaviors, traits, or ideals Masculinity and femininity, then, become symbolic signifiers *and* the signified Despite the apparent emancipatory implications of the androgyny theories, they, too, are embedded with limiting conditions and valuational underpinnings dictated by these polarities

A further process operating throughout, by way of protecting the theory from external contamination, might be called "assessment control " There has developed an increasing wariness toward the commonsensical independent reports or everyday interpretations have become a bias to be minimized or eliminated by implementing deceptive techniques and psychometric complexities One consequence of this last procedure is the distancing of theory from everyday life Further, regarding questions of power and privilege, distancing has significant implications for the establishment of norms of conduct Here we approach the issue of perfectability and must recognize that any conception of betterment—be it of health, working life, or gender arrangements—requires some notion of the good The masculinity-femininity theorists, purportedly by detaching their conceptual work from social life, have tacitly defined normative objectives by way of reference to an ideal of society and individual behavior within that society For the earliest theorists the ideals were framed by the nineteenth-century division of labor in both the private and public realms The test makers of the 1930s and 1940s aligned their ideals with social relations as typified by the nuclear family (hence the concern with marital adjustment, homosexuality, parenting) Their norms were also tied to perceptions of the possible collapse of these social relations The implicit objectives of the androgyny theorists mirror the virtues of corporate democracy where self-contained individualism and role flexibility (behavioral inconsistency) are desired

These normative stipulations need not be purposively imposed, their indirect infusion into theoretical work can be seen in the

periodic occurrence of unintended reflexivity The history of gender theorizing illustrates how psychologists' participation in and reflection upon cultural life can affect the primary stipulations in their work (Eagley, 1978, Rosenberg, 1982) Although these occurrences were not the focus of the present study, it is clear that research strategies were altered as a consequence of psychologists' experiences of the world wars, suffrage, the feminist movement of the 1960s, and general transitions in public life

The support given to the idea of androgyny by feminist psychologists raises several obvious questions Why did feminists not only subscribe to but participate in the reiteration of cultural concepts and consequently endorse the underlying moral edicts? On one level it is apparent how the concept was, in some senses self-serving feminist psychologists have been primarily white, professional women who could find in androgyny theory an inspiring model for their own roles in a predominantly male world (not to mention their interests in the desired roles of their male peers) Here may be one case of unintended reflexive thinking On another level, feminist psychologists may have been vulnerable to the lures of scientific ideals, and to the essentialist psychology that historically underlay the scientific ethos of skeptical empiricism, disinterestedness, and impartiality Science has been extolled as the primary if not sole technique to work against prejudice and discrimination Especially for those trained in scientific methods, it is not easy (or sometimes permissible) to acknowledge how scientific rationality itself is fallible (see Lykes & Stewart, 1983), yet the grounds of rationality are derived by social consensus and can be renegotiated and even transformed during normal scientific practice (Knorr-Cetina, 1981, Shapin, 1982) That feminist psychologists throughout the century would entrust their work to the superior rationality of scientific knowledge makes sense (as does the particular faith in psychology with its legacy of social reformism) This adherence is even more comprehensible given the resistance of the discipline to critically confronting the positivist metaphysics and naive realism which has both prefigured our observations of psychological reality as well as foreshortened our understanding of epistemological alternatives

Toward New Theory

The exploration of masculinity and femininity is but one aspect of the history of gender research, and although highly informative work on the subject is now appearing (Lewin, 1984a, Rosenberg, 1982, Shields, 1975, 1982), further investigation is needed Such historical

ventures, along with those on the history of the actual practices of gender relations, offer correctives to current research (Morawski, 1984a) The history reviewed here suggests a reconsideration of the entire project of developing theory through a critical unpacking of our habits of theorizing and the generation of new theoretical frameworks Such reconsideration begins with a critical and historical framework It is critical in the sense of holding that all attempts to establish knowledge claims should be evaluated not simply in terms of empirical confirmation but also in terms of the very criteria of reliable knowledge and rationality that are attributed to the knower (psychologist) It is historical in the sense that knowledge claims must be understood as historical products, as constructions guided by particular interests and problematics Neither of these provisions necessarily implies any radical relativism (Rorty, 1982, pp 160–175)

Given this general superstructure, several issues fundamental to constructing gender theory must be considered Most obvious is the need to take the broader context, and consequently reflexivity, seriously (Unger, 1983) The comprehensive social context must be understood if, borrowing Sherif's (1982) illustrations, we are to understand why the androgynous person may not be a political feminist or how social power relates to gender-linked behaviors Such contextualist understanding requires sociological, anthropological, and historical studies (Morawski, 1983, Sherif, 1982) and is inescapably political (Parlee, 1979) A corollary is the need for the researcher to undertake critical self-appraisal as well as assessment of the stipulated canons of rationality (Addelson, 1983, Harding, 1984, Jaggar, 1984) and of the social and political facets of his or her work (Buss, 1979, Eagley, 1978, Flanagan, 1981, Sampson, 1977) Masculinity and femininity research demonstrates how the scientific questions of gender necessarily imply political questions in that even the androgyny theorists posit an idealization of society Mere tacit endorsement of this idealization (in the case of androgyny an idealization where advances in technology and welfare may mitigate the bases for some gender distinctions) harbors debatable stipulations about the kind of world we are promoting

The second major area of reconsideration concerns replacing conceptions of human nature that have either distorted or impeded research on gender In light of the history of gender and of psychology generally, it seems prudent if not profitable at least to consider a working conception of human beings *as* human beings And if we require any metaphors of powers or essences, those atoms of psychological actions, we consider that they be located in the act of the

search, in *language* and its context of use Simply assuming that human beings are active social agents involved with moral ambitions and with the construction of psychological realities generates numerous possibilities for future research Some contributions in this direction include the study of the phenomenology of gender labeling (Kessler & McKenna, 1978), dialectics of sex role transcendence (Hefner & Rebecca, 1979), alternatives to the orthodox psychoanalytic theories of socialization (Chodorow, 1978, Dinnerstein, 1976, see Steele, in press), and gender styles in moral decision making (Gilligan, 1982) These basic conceptions also imply reappraisal of the conventional modes of assessment control it is necessary to examine how we empower certain voices (the researcher's) and not others with inordinate privilege, and how we define authority and rationality (Addelson, 1983, Harding, 1984) Whether this empowering is seen as the hegemony of masculine science or as a concomitant of everyday life, in gender research it has profoundly affected theory as well as empirical findings

These general architectonics simply intimate possibilities for theory construction which are informed by a systematic rereading of the historical record They address some of the repeatedly evaded temporal, epistemological, and moral dimensions of research Yet if we choose to participate in generating novel ways of looking at the social world as, at least hypothetically, scientists have sought new ways of viewing the natural world, then we must first audit our inventory of artifactual and conventional beliefs

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