The Relationship Between Women's Perceptions of the Campus Environment

and Self-Esteem as Moderated by Women's Identity Attitudes

by
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ABSTRACT

Title of Thesis: The Relationship Between Women's Perceptions

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An examination of the relationships among undergraduate
women's self-esteem, perceptions of the campus environment, and
women's identity attitudes (i.e., attitudes about, and
identification with, women and the sociopolitical issues unique
to women) was conducted. 649 female undergraduates, freshman
through seniors, were surveyed in classes at the University of
Maryland, College Park campus. Results indicated that Encounter
(characterized by rejection of previously held stereotypical
views about women and heightened awareness about the socio-
political issues unique to women) and Immersion-Emersion
(characterized by active rejection of male supremacist values and
beliefs) attitudes were positively related to perceptions of
gender bias in the campus environment and inversely related to
self-esteem. Internalization (chararacterized by acceptance and
pride in one's women's identity) attitudes were inversely related
to perceptions of environmental gender bias and positively
related to self-esteem. Perceptions of gender bias were
inversely related to self-esteem, indicating that the more

negatively one viewed oneself the more likely one was to perceive

the campus environment as biased, or conversely that the more

positively one viewed oneself the less likely one was to perceive

inequities reflecting gender bias in the campus environment.

Implications for counseling and future research are discussed.

Dedicated to my grandparents, Doris and Mitchell Melich,
and my mother, Nancy Melich,
with appreciation and love.

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Chapter 1

Introduction

The Relationship Between Women's Perceptions of the Campus Environment

and Self-Esteem as Moderated by Women's Identity Attitudes

Women today experience greater educational and career
opportunities than ever before. More women are entering
institutions of higher learning and pursuing careers once thought
only appropriate for men. However, despite the greater numbers
of women entering American colleges and universities, women
undergraduates may not be benefitting from the campus environment
as well as they might. From freshman to senior year,
undergraduate women's academic and career aspirations have been
reported to decrease (Astin, 1977; El-Khawas, 1980) as has their
self-esteem (Baird, 1974; Churgin, 1978; Denny & Arnold, 1985).
Furthermore, research has shown that despite their superior
performance in high school, in college women earn lower grade
point averages than men (Churgin, 1978; El-Khawas, 1980).

These findings suggest that women may not enjoy full
equality of opportunity during their college years. Although men
and women may attend the same colleges and universities, their
experience of the campus environment may be very different.
Inequities in the campus environment (e.g., the relative lack of
female role models and mentors) may serve to undermine
undergraduate women's self-confidence and limit their career
aspirations (Hall & Sandler, 1982). How an individual is
affected by the campus environment may be determined, in part, by

her perceptions of and attitudes about women in society.   A
complex relationship may exist between perceptions of the campus
environment, women's identity attitudes (i.e., attitudes about,
and identification with, women and the socio-political issues
unique to women), and self-esteem.   This relationship potentially
affects women's experience at college.   An analysis of each of
these variables seems warranted in order to better understand the
effect of perceptions of the campus environment on women's
undergraduate experience.

Women students' experience of the campus environment may
differ from that of their male counterparts in several ways.
Several researchers have suggested that covert, as well as overt,
inequalities may be working to maintain unequal opportunity (Hall
& Sandler, 1982; Rowe, 1977).   Hall and Sandler proposed that
inequities in the manner in which women are treated, both in and
out of the classroom, have detrimental effects on women's
academic and/or career development.   Faculty may inadvertently
treat men and women differently, resulting in decreased
confidence and career aspirations for women.   These differential
behaviors include interrupting women more, preferring men when
choosing student assistants, and providing men with more
nonverbal support (e.g., giving men more eye contact and nodding
and gesturing more in response to men).   Additional research has
shown that in male-taught classes men account for the majority of
interactions, while in female-taught classes the participation of
female students increases (Karp, 1976; Sternglanz & Lyberger-
Ficek, 1977).   Furthermore, women perceive less support from
their professors than do their male peers (Hite, 1985).   The

impact of such a learning environment is to put women students at a disadvantage by "discouraging classroom participation; ... minimizing the development of collegial relationships with faculty; dampening career aspirations; and undermining confidence" (Hall & Sandler, 1982, p. 3).

There is little doubt that the college environment plays an important role in shaping students' personal, academic, and professional development (Astin, 1977; Feldman & Newcomb, 1969). However, the impact of the environment may be mediated by individual difference variables. How a woman understands and is affected by the campus environment may be influenced by her attitudes about, and identification with, women and the socio-political issues unique to women. For example, an individual who is aware of environmental inequities and perceives them as sexist may not show the decreased self-esteem of the woman who attributes them to her own inadequacies.

However, a model is needed for understanding women's manner of valuing and identifying with women. One possibility is that the various models of minority identity development that have been proposed to account for Black and other minority group's identity development (Atkinson, Morten, & Sue, 1979; Cross, 1971) can be extended to apply to women. Helms (1984) has described an individual's racial identity development as a process of moving "from a stage of racial consciousness characterized by self abasement and denial of their Blackness to a stage characterized by self-esteem and acceptance of their Blackness" (p. 154). To the extent that women's identity development can be assumed to

follow the same course, then one would expect women's identity development to evolve from a stage characterized by devaluation of women's identity to a stage characterized by acceptance and security with regard to women's identity. However, this formulation concerning women's identity development is speculative, though similar theoretical positions have begun to appear in the literature (e.g., Downing & Roush, 1985). In order to provide a means for operationalizing women's identity development, Helms (personal communication, December 5, 1984) adapted the Cross and Atkinson et. al. identity models. In Helms' model each stage is associated with specific women's identity attitudes rather than racial identity attitudes.

In stage one, Pre-encounter, individuals hold stereotypical views about women, and think and behave in ways that devalue their women's identity. They are likely to identify with and idealize male supremacist values and beliefs. In the second stage, Encounter, individuals begin to challenge the accepted values and beliefs of the Pre-encounter stage as a result of contact with new information and/or experiences which heighten awareness about those socio-political issues unique to women. In the third stage, Immersion, the individual idealizes women, actively rejects male supremacist attitudes and values, and is unable to differentiate male supremacist values from instrumental values. The individual is motivated to combat oppression (e.g., by joining political organizations) and get in touch with women's history, culture, and tradition. In the fourth stage, Emersion, the individual feels torn between notions of loyalty and responsibility to women and notions of personal autonomy. The

individual begins to question absolute rejection of male values. In stage five, Internalization, the individual achieves a feeling of inner security with regard to women's identity.   Idealogical flexibility and a desire to eliminate all forms of oppression are characteristic of this stage.

Social comparison and reference group theory (Festinger, 1954; Hyman & Singer, 1968; Morse & Gergin, 1970) provide evidence to support the hypothesis that the impact of the campus environment may be moderated by women's identity attitudes. These theories suggest that when objective evidence is lacking, other people are used to assess one's abilities, convictions, and values.   In the absence of such objective evidence, much self-valuing is determined by the comparison reference group (e.g., Rogers, Smith, & Coleman, 1978; Strang, Smith, & Rogers, 1978). Plas and Walston (1983) suggest that "because of external factors restricting women's advancement, such comparisons may be self-defeating.   However, comparisons with other women in similar situations may serve to enhance self-esteem" (p. 47).   Their investigation of this assertion for a group of women interested in pursuing science careers showed that female-oriented variables (e.g., valuing of women, size of female network, perceived emotional support from women) were substantially more influential in predicting self-valuing than were male-oriented variables (e.g., valuing of men).   Thus, it seems reasonable to expect that an identity stage associated with high levels of valuing of women and support from women (e.g., Internalization) would be positively related to self-esteem, whereas a stage associated

with low levels of these variables (e.g., Pre-encounter) would be negatively related to self-esteem.

Furthermore, the reference group with whom the individual identifies may influence her satisfaction with the learning environment (Ellison & Trickett, 1978). Moos (1979) has suggested that perceived similarity to various reference groups is related to satisfaction with them. For example, if the campus is perceived to have a learning environment which presents predominately stereotypical views about women, those who hold such views (e.g., Pre-encounter attitudes) would be expected to be more satisfied with the campus environment than would individuals not holding such views (e.g., Immersion attitudes).

Thus, each stage of women's identity may be associated with a particular reference group and specific attitudes about women in society. These stages may be directly related to self-esteem. Prager (1982), who defined identity in terms of the presence or absence of a crisis and commitment in four areas (occupation, religion, politics, and sexual values), employed interviews to determine the identity status of each subject. She found that self-esteem, as measured by the Texas Social Behavior Inventory, was enhanced by achievement of identity in college women. Self-esteem has also been found to be related to racial identity attitudes. Researchers examining this relationship found that racial identity attitudes corresponding to Pre-encounter and Immersion attitudes were associated with low self-esteem whereas those corresponding to Pre-encounter and Internalization attitudes were associated with high self-esteem, although Internalization was not significantly related (Parham & Helms,

1985).

If the women's identity model and the racial identity model are parallel, it is reasonable to expect that women's identity attitudes may be related to self-esteem. Furthermore, perceptions of inequities existing in the campus environment and their effect on self-esteem may be moderated by women's identity attitudes. Specifically, if the campus environment is perceived as presenting stereotypical views about women, it is reasonable to expect that women at higher stages of women's identity (e.g., Internalization) would have higher self-esteem and be more aware of inequities existing in the campus environment than would women at lower stages of women's identity (e.g., Pre-encounter).

Thus, an empirical analysis of how perceptions of the campus environment affect self-esteem during women's undergraduate years seems warranted. Knowledge of how women's identity attitudes influence this relationship can assist counselors and educators in identifying the individuals most likely to experience decreased self-esteem as a result of perceptions of existing inequities and in giving more informed advice as to how to cope with inequities if they do exist.

Empirical investigations of undergraduate women's perceptions of the campus environment and how those perceptions may be related to individual difference variables (e.g., women's identity attitudes) and psychological variables (e.g., self-esteem) are lacking. Thus, the present study will investigate the relationships among perceptions of the campus environment, women's identity attitudes, and self-esteem.

Chapter 2

Literature Review

This chapter is divided into seven sections. The first

section presents the work of several theorists in the area of

self-esteem. In the second section, correlates of self-esteem

are discussed. Several theories of person-environment

interaction are reviewed in the third section. In the fourth

section, literature in the area of campus environmental

assessment is discussed. Relevant literature in the area of sex-

role identity/attitudes, including how they have been assessed

and their relationship to self-esteem and achievement is

presented in the fifth section. The sixth section presents a

discussion of women's identity development models, and the

seventh section presents literature on the relationship between

identity development and self-esteem.

Self-Esteem

Self-esteem has long been a construct of interest to

psychologists. In 1890, William James defined self-esteem as the

self-judgemental part of one's total self-concept. James

proposed that self-esteem was derived from three sources: (a)

self-evaluation of one's value, (b) one's aspirations and

achievements, and (c) physical expressions of self (e.g.,

friends, clothes). According to James, high self-esteem is

indicative of high congruence between aspirations and achievements.

The importance of sociological influences on self-esteem was

first described by Cooley (1902). Cooley proposed that an

individual's self-esteem is profoundly affected by the social

milieu in which he or she functions and the people with whom he or she interacts. The notion of the "looking glass self", described by Cooley (1902), postulates that an individual's self-perceptions are determined by how the individual believes he or she is perceived by other people. Three elements are included in the looking glass self: the individual's perception of how he or she appears to other people, the individual's perception of how that appearance is evaluated, and the individual's reaction to that evaluation (e.g., pride or humiliation) (Wylie, 1979). In Cooley's (1902) theory, a sense of self always involves a sense of other people (Wells, 1976).

More recent research (Rosenberg, 1965) has also described self-esteem from a sociological perspective. Rosenberg described self-esteem as an evaluative attitude; "how the individual actually rates him [or her] self with regard to a particular characteristic (p. 246). These self-estimates are assumed to vary in importance, depending on how much the individual cares about a particular characteristic. Rosenberg argued that the individual's social context (e.g., his or her direct experience of positive or negative evaluations) and the availability of supportive reference groups (e.g., peers) are crucial elements in self-esteem development.

Ziller (1973) also emphasized the influence of the social environment on self-esteem. According to Ziller, individual perceptions of self-esteem are determined by processing cues from other people in the environment. Self-esteem is considered to be a function of the interrelationship between the self and

significant others in the environment (Cotton, 1979).

Coopersmith (1967), has defined self-esteem as a "personal judgement of worthiness that is expressed in the attitudes the individual holds toward him [or her]self (p. 5). Coopersmith (1967) proposed that self-esteem consists of two parts: the individual's self-perception and the behavioral manifestations of the individual's self-esteem. Four antecedents to self-esteem were delineated by Coopersmith (1967): (a) success (social acceptance and academic achievement), (b) values (individual standards for various activities and situations), (c) aspirations (hopes), and (d) defenses (individual styles of coping with success or failure). According to Coopersmith (1967), self-esteem "expresses an attitude of approval or disapproval, and indicates the extent to which the individual believes himself [or herself] to be capable, significant, successful, and worthy" (p. 5).

In summary, several theorists (e.g., Cooley, 1902; Ziller, 1973) have asserted that an individual's perceptions of how he or she is evaluated by other people play an important role in the development of self-esteem. This may have important implications for undergraduate women. For example, if undergraduate women perceive themselves as being evaluated negatively by others in the campus environment (e.g., professors, advisors) or perceive the campus environment as being nonsupportive of them, their self-esteem may be adversely affected. Consequently, the present study was designed to empirically examine whether or not women perceive differential treatment (e.g., with regard to encouragement of academic and career goals) during their college

years and, if so, how their self-esteem is affected by it.

Correlates of Self-Esteem

Clinical and experimental studies reviewed by Coopersmith (1967) provided evidence that self-esteem has pervasive and important effects. These studies indicated that high levels of self-esteem are associated with greater happiness, personal satisfaction, and greater effectiveness in meeting environmental demands. Furthermore, high self-esteem may serve to liberate the individual from the demands of social groups, thus enhancing the likelihood of exploratory and independent activities (Coopersmith, 1967). Conversely, low self-esteem has been associated with depression (Beck, 1967; Wilson & Krane, 1980) and poor general adjustment (Ellis & Greiger, 1977; Rios-Garcia & Cook, 1975).

Research has also indicated that individual's with high self-esteem have higher aspirations and are more likely to achieve those aspirations whereas individuals with low self-esteem set lesser goals for themselves and fall shorter of achieving those goals (Coopersmith, 1967). Individuals with low self-esteem "... anticipate that their goals will remain unfulfilled, their ambitions frustrated. This pessimism presumably lowers aspirations and this lack of confidence will, in the nature of a self-fulfilling prophecy, increase the likelihood of aborted, half-hearted efforts" (Coopersmith, 1967, p. 148).

Self-esteem has been theoretically and empirically related to achievement in the school setting (Cotton, 1979). Purkey

(1970) observed that students with positive perceptions of themselves and their abilities were more likely to succeed than students with negative self-perceptions. The importance of self-esteem in the process of achievement has been noted by several researchers (e.g., Battle, 1982; Coopersmith, 1967; Gilman, 1969). These studies indicate that self-esteem is important for academic acheievement and the formation and fulfillment of academic and career goals. The importance of this issue for college women in particular, has been highlighted by several studies which indicated that women experience a decline in self-esteem (Baird, 1974; Churgin, 1978) and academic and career aspirations (Astin, 1977; El-Khawas, 1980) during their college years.

This pattern of higher levels of self-esteem for college men and lower levels for college women appears to start at a young age. In a study on self-esteem in school children Battle (1976) did not find significant differences in self-esteem for boys and girls, but noted that boys tended to report higher self-esteem scores as they got older. For example, elementary-grade girls obtained higher self-esteem scores than elementary-grade boys, but boys scored higher than girls at the junior high level. A study conducted on college students (Battle, 1977) revealed that the gap continues to widen in the college years.

Related research has indicated that whereas girls generally out-perform boys in the school setting, they give lower estimates of their own academic and intellectual potential than do boys (Battle, 1982). Several studies have indicated that whereas boys

over-estimate their potential, girls' estimates are slightly
lower initially and become more pessimistic as their educational
careers continue (Battle, 1976; Fisher & Waetjen, 1966; Ford,
1967; Flannagan, 1964).

Battle (1982) has hypothesized that school-age girls may
outperform school-age boys because the preponderance of female
elementary school teachers causes boys to lack exposure to males
with whom to identify. Interestingly, the opposite trend exists
in post-secondary education, where the majority of professors are
male. Several researchers (Hall & Sandler, 1982; Hite, 1985)
have argued that the lack of female role models and mentors for
college women may contribute to decreased self-esteem and
dampened academic and career aspirations.

In summary, several studies have demonstrated that self-
esteem is associated with academic achievement (e.g., Battle,
1982; Coopersmith, 1967; Gilman, 1969; Purkey, 1970) and with the
formation and fulfillment of aspirations (Coopersmith, 1967).
Research has also indicated that during their college years,
women's self-esteem decreases (Baird, 1974; Churgin, 1978; Denny
& Arnold, 1985) as do their academic and career aspirations
(Astin, 1977; El-Khawas, 1980). This decline in self-esteem and
aspirations may result from women's experience of inequities in
the campus environment (Hall & Sandler, 1982; Rowe, 1977). These
studies point to the importance of empirically investigating how
the perceptions of the campus environment affect self-esteem for
undergraduate women.

Theories of Person-Environment Interaction

Environments have powerful effects on human behavior (Insel & Moos, 1974). The interactionist theory of behavior provides one philosophical base for evaluating these environmental effects. The interactionist position conceptualizes behavior as a function of people interacting with their environments (Coyne, 1975). Historically, theoretical work on this position has been conducted by several psychologists (e.g., Angyl, 1941; Murphy, 1947; Murray, 1938). Despite these investigations, until recently psychological research has focused primarily on the contributions of the person or the environment (Huebner, 1980). However, recent empirical investigations have demonstrated that environmental properties may account for more of the variance in behavior than measures of traits or biographic and demographic background data (Insel & Moos, 1974). Furthermore, "environments shape adaptive potentials as well as facilitate or inhibit initiatives and coping behavior" (Insel & Moos, 1974, p. 186).

Murray (1938) first described the concept of viewing behavior as an outcome of the relationship between personal needs and environmental "press". He proposed that "personality" is a manifestation of specific individual needs. These needs are potentially met or frustrated by the environment (i.e., environmental press). Murray's model provided a starting point for studying behavior as a product of the interaction between personality needs and environmental press (Insel & Moos, 1974).

The emerging discipline of "social ecology" has developed out of the interactionist theory of behavior. Social ecology considers people interacting with both physical and social

environments and has an explicit value orientation in that it is interested in assisting people in functioning at maximal effectiveness (Insel & Moos, 1974). Social ecology led to an ecological theory of university environments. "Campus ecology" is concerned with the individual student, the campus environment, and primarily the relationship between the two (Banning, 1978). According to Banning, campus ecology has a value orientation similar to that of social ecology in that it is concerned with maximizing personal development. Campus ecology provides a theoretical perspective from which to evaluate the importance of the campus environment and student-environment transactions in affecting individual functioning/dysfunctioning. The importance of such an evaluation is highlighted by Insel and Moos (1974) who suggest that the environmental climate in which people function affects a variety of variables including self-esteem and performance. Given these effects it seems reasonable to expect that these variables might affect women on college campuses as well.

Campus Environmental Assessment

Several approaches have been used in assessing campus environments. For example, some researchers (e.g., Astin & Holland, 1961) have defined the environment in terms of the typical characteristics (e.g., total number of students, average intelligence of students) of its members. Other studies (e.g., Astin, 1965) have used specific observable student behaviors (e.g., number of social activities per week) to define the college environment. A third approach has defined the

environment in terms of how it is perceived (e.g., Pace & Stern, 1958). The perceptual approach is based on the premise that an how an individual perceives the environment will influence how he or she will behave in that environment (Insel & Moos, 1974). These three approaches have been presented in the literature as valid techniques for measuring the campus environment. However, because the present study is concerned with perceptions of the campus environment, only perceptual measures and their correlates will be reviewed here.

Perceptual Measures of the Campus Environment. Pace and Stern (1958) elaborated upon Murray's (1938) concept of environmental press in their study of "atmosphere" at universities and colleges. They constructed the College Characteristics Index (CCI) which consists of 300 items that measure 30 kinds of press, each parallel to an analogous need scale (from the Activities Index, Pace & Stern, 1958). The CCI asks students to indicate, via true or false responses, whether the described activities, policies, procedures, attitudes, and impressions are characteristic of their college. The university environment is therefore defined by its rules and regulations, classroom methods, student-faculty relationships, and facilities. Thus, perceptions of the students with regard to their college are taken to constitute a measure of environmental climate and this climate is assumed to influence their behavior. Support for this assumption was provided by Pace and Stern's finding of a relationship between student-environment congruency and student satisfaction and productivity (cited in Walsh, 1978).

The College and University Environment Scales, or CUES,

(Pace, 1969) are a shorter, revised version of the College Characteristics Index. The CUES were designed for the purpose of "defining the atmosphere or intellectual-social-cultural climate of the college as students see it" (Aulepp & Delworth, 1976, p. 100). They are primarily used as a tool in assessing discrepancies between institutional goals and student perceptions of the existing environment. The CUES consists of 160 statements to which students respond via a true-false option. The college environment is assessed along five dimensions: Pragmatism (the college's emphasis on practicality, organization, material benefits and social activities); Community (friendliness and warmth of the campus); Awareness (an active cultural life, emphasis on asthetics and intellectual development); Propriety (politeness and conventionality); and Scholarship (academic rigor and achievement). Two additional subscales, the Campus Morale and Quality of Teaching and Faculty-Student Relationships, were developed using items contained in the five original scales.

The Institutional Functioning Inventory, or IFI, (Peterson, Centra, Harnett, & Linn, 1970) was developed to "assess the extent to which colleges were 'functioning optimally' in the areas to which they were ostensibly committed" (Baird, 1972-73). These areas were measured by 11 scales. They are: Human Diversity, Concern for Improvement of Society, Concern for Undergraduate Learning, Intellectual-Aesthetic Extracurriculum, Freedom, Democratic Governance, Meeting Local Needs, Self Study and Planning, Concern for Advancing Knowledge, Concern for Innovation, and Espirit. The IFI has been most commonly used in

evaluating faculty perceptions of various aspects of a given institution, however, it may also be used to examine differences in the perceptions of subgroups, or as a technique to monitor change within the institution (Blankenship, 1985).

The Transactional Analysis of Personality and Environment (TAPE) (Pervin & Rubin, 1967) was developed to "study student perceptions of themselves, parts of their college environment, and the college environment as a whole" (p. 623). Students rate each of several concepts (e.g., self, ideal self, college, ideal college, faculty, administration, students) on 52 scales using an 11 point semantic differential. Thus, students provide data for both person and environment measures on one form (Delworth & Hanson, 1980). Pervin (1968) proposed that the optimal person-environment fit occurs when the environment assists the individual in moving his or her perceived self toward his or her ideal self. A good "fit" between person and environment is thought to result in greater satisfaction, increased performance, and reduced dissonance in the individual (Morril & Hurst, 1980). Pervin (1967) has provided evidence in support of the hypothesis that perceived self-college similiarity is related to satisfaction with the college environment.

The Classroom Environment Scale (Moos & Trickett, 1974) and the University Residence Environment Scale (Moos & Gerst, 1974) utilize student perceptions to measure the relationship (e.g., support and affiliation), personal growth, and system maintenance and change dimensions of the environment. These scales examine "similar underlying patterns in a wide variety of social environments" (Moos, 1976, p.5). Moos (1979) has found classroom

climate to be related to student satisfaction, creativity, and self-esteem.

The Environmental Satisfaction Questionnaire, or ESQ, (Corazzini, Wilson, & Huebner, 1977) was designed to meet the practical and unique requirements of specific campus environments. The first step toward this goal is achieved by interviewing students, faculty, and staff to identify problem areas; prior research on the characteristics of the target campus can also provide pertinant information. The ESQ is comprised of two parts: In Part I, students are asked to respond, via a Likert-type format to 11 items in terms of whether a particular item represents a problem for them (e.g., "My major is preparing me for a job"). In Part II, they are asked to provide environmental referent data (e.g., coping responses and suggestions for change). The ESQ assesses the degree of "fit" between university students and their environment and gathers information on how students cope with "mismatches" and their suggestions for change.

Studies Examining Sex Equity. The Student Perception Questionnaire, or SPQ, (Pearce, 1983) was designed to assist faculty members in understanding the dynamics that take place in their classes via anonymous feedback from students regarding their perceptions of classroom interactions. The SPQ is comprised of four demographic items and 15 additional items which have a multiple choice response option. This instrument measures several in-class behaviors including the frequency of student participation, the perceived opportunities for involvement, and

the student's reasons for participation or non-participation.
The design of the instrument is such that it can be administered,
scored, and evaluated by the individual faculty member. This
evaluation is designed to provide the faculty member with
information useful in changing and/or improving instruction.

Bogart (1981) developed the Institutional Self-Study Guide
on Sex Equity for Postsecondary Educational Institutions (ISSG)
under the auspices of the American Institutes for Research. This
inventory package consists of an introduction and instruction
book, and five checklists which evaluate practices, policies, and
conditions affecting sex equity for university staff,
administrators, faculty, and students. The ISSG was designed to
assist institutions in identifying problem areas and in making
voluntary changes to increase sex equity at the institution. The
Institutional Self-Study Guide is intended for the use of
university faculty and administrators, accreditations agencies,
and women's advocacy groups.

Leland (1980) designed a study to examine gender differences
in the undergraduate experience and to provide recommendations
based on that examination. This report is comprised of five
papers on various aspects of the undergraduate experience (e.g.,
academic and intellectual development, student perceptions of
faculty support and involvement), two analyses specific to the
characteristics of Brown students, papers from the conference
Women/Men/College: The Educational Implications of Sex Roles in
Transition (December, 1977) and a summary report to the Brown
Corporation. The project staff sampled over 3,000 undergraduates
from six institutions: Barnard College, Brown University, the

State University of New York at Stony Brook, Dartmoth College,
Princeton University, and Wellesley College. The research team
used a 20 page questionnaire which focused on four general areas:
academic performance; student-faculty relations; values,
attitudes and social relations; and career goals and planning.

An analysis of the data collected on the students at Brown
revealed that "in general women's self-concept is less positive
than men's with regard to many traits connected with academic and
professional success" and that "women students report a fairly
significant occurrence of sexist behavior and attitudes on the
part of their male peers (Leland, 1980, p. 283).

In summary, several studies have demonstrated that person-
environment congruence has a significant effect on student
satisfaction (Astin & Holland, 1961; Pervin, 1967) and self-
esteem (Moos, 1979). However, one shortcoming of the research on
person-environment interaction is that gender is seldom
considered as a "person" variable. Furthermore, gender bias has
been neglected as an environmental variable in evaluating person-
environment "fit". Those studies which have examined gender bias
in the campus environment (e.g., Leland, 1980) have not
investigated this environmental variable within the person-
environment interaction framework.

Leland (1980) has demonstrated that environmental gender
bias dampens career aspirations and self-esteem. Despite these
findings, there is a paucity of instruments designed to measure
environmental gender bias. The nature of several of the existing
instruments (e.g., the 20 page length of the questionnaire

employed in The Brown Project (Leland, 1980) make them

inappropriate for use in other settings. The need for an

instrument designed to assess environmental gender bias that

could easily be employed in a wide variety of university settings

led to the development of the Campus Environment Survey (Leonard,

personal communication, November 15, 1984). This survey was based

on Hall and Sandler's (1982) monograph on gender bias in the

classroom, The Student Perception Questionnaire (Pearce, 1979),

The Institutional Self-Study Guide for Sex-Equity (Bogart, 1981),

and The Brown Project (Leland, 1980). The Campus Environment

Survey was designed to assess how students view and experience

the campus environment with regard to gender bias.

Blankenship (1985) used the Campus Environment Survey to

examine gender differences in perceptions of the campus and

classroom climate. This study examined three sample groups on

the University of Maryland at College Park campus: Women's

Studies Certificate students, non-Women's Studies women, and non-

Women's studies men. Results indicated that women reported more

gender bias on campus than did men. Further, Women's Studies

Certificate students perceived more gender bias than did the non-

Women's Studies women and the non-Women's studies men. Another

study using the Campus Environment survey sampled returning women

and traditional age women on the University of Maryland at

College Park campus (Spitz, 1985). The results of this study

indicated that returning women perceived the campus as more

friendly and felt they were treated more seriously by faculty and

their advisors than did traditional age women. These studies

indicate that the Campus Environment Survey may be an appropriate

tool for use in research investigating the effect of environmental gender bias in university settings.

Perceptions and Effects of the Campus Environment.   The college environment clearly influences students' personal, academic, and professional development (Astin, 1977; Feldman & Newcomb, 1969).   Given the high percentage of women currently attending institutions of higher learning, it seems prudent to investigate how undergraduate women perceive and are affected by the college environment.

Undergraduate womens' experience of the campus environment may differ considerably from that of their male peers, even when they attend the same colleges and universities (Hall & Sandler, 1982).   Several researchers have suggested that covert, as well as overt, inequities in the campus environment may be preventing undergraduate women from enjoying full equality of opportunity during their college years.   Rowe (1977) labels these covert inequalities "microinequities" and defines them as the "minutiae of sexism" which, while individually may appear trivial, collectively serve to maintain unequal opportunity.   Rowe states that many of the instances of discrimination that women and minorities encounter in educational institutions take subtle forms which make them difficult for individuals to notice or counter.   She suggests that the collective impact of these "microinequities" is a hindering of learing and a decreased opportunity to attain good jobs.

In a review of the literature of over 50 researchers, Hall and Sandler (1982) detail the numerous "microinequities"

demonstrated by faculty and male peers that can have a detrimental effect on the academic and/or career development of women. These behaviors include: having little eye contact with women, asking more follow-up questions of men, using sexist humor in class, and calling on men more often. As a result of this type of treatment, several studies have suggested that women may be less likely to seek help from a professor and develop collegial relationships with faculty. Consequences such as these may cause women students to experience decreased self-confidence about goals and abilities.

For example, Hite's (1985) survey of 481 doctoral students revealed that regardless of field, men experienced more role congruence (i.e., comfort with integrating several roles into one's lifestyle) than did women and perceived more support from their professors than did their female collegues. The author concluded that women's higher attrition rate at the doctoral level may result from this perceived lack of role models and mentors.

Sternglanz and Lyberger-Ficek (1977) conducted an observational analysis of student-teacher interactions in 60 college classes which revealed that in classes taught by males, male students engaged in proportionately more student-teacher interactions than did female students; no sex difference was found in female taught classes. A study conducted at Harvard University (Krupnick, 1985) provided partial support for these findings. Analysis of videotapes of 24 classes revealed that male students talked much longer in classes in which the instructor was male and the majority of students were male. In

female-taught classes female students spoke three times longer
than they did in male-taught classes. Similar results were found
by Karp (1976) who studied student behavior in the college
classroom through observation of ten classes. Results indicated
that the majority of interactions were accounted for by a small
percentage of students in both large and small classes. Men
accounted for the majority of interactions in all classes; but
with women instructors, the participation of women students
increased. Male instructors were more likely to directly
question male students, whereas female instructors did not show a
gender bias in their direct questions. However, students
reported in a questionnaire that the gender of the instructor
made no difference in their likelihood of participating in a
class, indicating that they may not have perceived these sex
differences. These findings support Rowe's (1977) assertion that
"microinequities" often go unnoticed, while at the same time they
may serve to undermine confidence, discourage classroom
participation, and prevent students from seeking help outside of
class.

Thorne (1979) has proposed that still another factor, the
speech patterns used most frequently by both sexes, contributes
to minimizing the classroom participation of women students.
These include devalued patterns of speech more often found among
women (e.g., softer speech, questioning intonation for
declarative sentences) and patterns of male verbal control (e.g.,
talking and interrupting more). She cites research on gender
differences in classrooms and other settings to suggest that as a

result of these gender differences in speech patterns, women students are less inclined to talk in class, and when they do have the opportunity to speak, their comments may be ignored or not taken seriously. As Brooks (1982) has stated "results indicating that women talk less both in frequency and duration, are more easily interrupted, and support and defend their ideas less have import for academic performance of female students" (p. 684). Hall and Sandler (1982) have suggested that these patterns of interaction can alienate women from the educational process, undermine their self-confidence, and reduce their career aspirations.

In a recent longitudinal study which provides support for a number of Hall and Sandler's (1982) conclusions, Denny and Arnold (1985) surveyed 86 college students who were valedictorians, salutorians, and honor students in high school and found a sharp decline in self-esteem and estimates of their own intelligence among top female students after they had spent one year in college. This study of 45 women and 36 men revealed that 23 percent of the men and 21 percent of the women perceived themselves to be "far above average in intelligence" when they were high school seniors, but by the time they were sophmores in college, only 4 percent of the women still rated themselves at that level, while 22 percent of the men did. These results contrast markedly to those found by the Women's College Coalition (cited in Mann, 1985) which reported that alumnae of women's colleges found their colleges to be "responsive to changes brought about in the women's movement and gave them high ratings on such issues as bringing successful women from the outside into

the institution, encouraging students toward careers, and
fostering self-confidence (p. C3). These results indicate that
the campus climate may not be providing undergraduate women with
an environment which encourages their pursuit of academic and
career goals and which ameliorates their self-confidence.

Undergraduate womens' experience of differential treatment
may not be confined within the walls of the classroom. In an
extension of their earlier monograph, Hall and Sandler (1984)
asserted that "the institutional 'climate' outside the classroom
plays a crucial role in fostering or impeding women students'
full personal, academic, and professional development" (p. 2).
They highlighted problems in areas including: admissions and
financial aid, academic advising and career counseling, campus
employment, athletics, and student government. Some behaviors
which contribute to a "chilly" campus climate for women include:
providing women with less time and attention in out-of-class
settings, advising women to lower academic and career goals,
questioning women, but not men, about their seriousness or
purpose, assigning women to lower-level work positions than men
workers of equal ability and experience, and blaming women for
instances of harassment or rape. As a result of these types of
inequities womens' meetings with advisors and others may not be
as helpful as the same sessions for men; the opportunity to gain
leadership experiences may be reduced; and women may feel
helpless and alienated, especially when channels for discussion
and appropriate remedies are lacking.

Men and Women Learning Together: A Study of College Students

in the Late 70's or The Brown Project (1980), directed by Carole
Leland, provides some documentation of Hall and Sandler's (1982,
1984) assertions. This report examined differences in the
college experiences of over 3,000 men and women who were surveyed
from six institutions. The report includes papers on sex
differences in academic and intellectual development, faculty-
student interaction and student perceptions of faculty support
and involvement, possible factors which shape future plans of men
and women, and women's self-concepts. Conclusions based on
analysis of the data collected at Brown include: though women
received higher grades in high school than men, they earned lower
averages than men while in college; fewer women felt self-
confident concerning their preparedness for graduate school; in
many regards (e.g., academic ability, leadership ability) the
self-image of women was lower than that of men; and whereas women
reported experiencing sexism from both faculty and peers, the
perceived sexism from peers was greater than that from faculty.

Robinson and Cooper's (1984) survey of 230 male and 72
female technologically oriented college students highlights the
importance of self-esteem for academic success. The results of
this study indicated that self-concept of ability (i.e.,
attitudes and perceptions about one's intellectual or academic
abilities) was a mediating variable between intellectual ability
and academic performance. Self-concept was found to be
positively correlated with academic success.

In one of the few studies other than The Brown Project that
examined gender differences in perceptions of the college
environment, Follett, Andberg, and Hendel (1982) surveyed 238

veterinary medicine students with regard to relationships with peers and faculty, attitudes and behaviors of self and fellow students, and perceptions of policies and services in the college. Results indicated that significantly more women than men perceived gender discrimination in the college (including perceptions of offensive remarks made by opposite-sex instructors). When asked to give examples, women cited sexist remarks, nude females in slide presentations, and feeling "belittled" when they asked questions in class.

In summary, whereas studies in various areas (e.g., verbal dominance, classroom participation) give evidence to support the assertion that women experience a "chilly" campus climate and are adversely affected by it, few studies have directly examined the extent to which undergraduate women perceive inequities in the campus environment. Thus, this study will empirically examine whether or not undergraduate women perceive differential treatment during their college years and, if so, how their self-esteem is affected by it.

Sex-Role Identity

The association between sex-role behaviors and attitudes and psychological adjustment was investigated by early sex-role researchers (Robinson & Green, 1981). The premise underlying this research was that a healthy sex-role identity entailed differentiation of masculine and feminine polarities, each representing one end of a single bipolar continuum (Constantinople, 1973). Thus, within this personality trait paradigm, an individual could not be both masculine and feminine

(Biller & Borstelmann, 1967; Brown, 1956; Guilford & Zimmerman, 1956). In his early work on sex-roles, Kohlberg (1966) theorized that the development of a healthy sex-role identity was rooted in the importance the child placed on maintaining consistency with his or her gender identity (i.e., the self-categorization of "boy" or "girl"). This effort to maintain consistency with gender identity was assumed to lead to sex-appropriate imitation and the formation of sex-role concepts (Robinson & Green, 1981).

The limitations of conceptualizing a healthy sex-role identity as masculinity in males and femininity in females and the avoidance of cross-sexed behavior have been illustrated by Pleck (1975) who noted that rigid adherence to this definition is like viewing "conventional role conformity ... as the goal of moral development rather than a phase which ideally passes into a more humanistic and principled morality" (p. 173). Other theorists (Bem, 1974; Hefner, Rebecca, & Oleshansky, 1975) have argued that current social and political changes are not reflected in traditional sex-role theories. Furthermore, rigid adherence to traditional gender-appropriate behaviors, attitudes, and interests may be maladaptive in the long run (Bem, 1974; Gump, 1972; Pleck, 1975; Rebecca, Hefner, & Oleshansky, 1976).

In an attempt to redress some of the shortcomings of traditional sex-role theories Bem (1974) and Spence and Helmreich (1975) introduced the concept of androgyny; the combination of both masculine and feminine attributes within one personality.

Assessment of Sex-Role Identity/Attitudes. The Bem Sex-Role Inventory (BSRI) (Bem, 1974) was developed to

operationalize the construct of androgyny and to provide a method for differentiating androgynous from sex-typed individuals. The BSRI consists of 60 items composing three 20-point scales: a masculine, a feminine, and a social desirability scale. Individuals are asked to indicate on a 7-point scale how well each of the 60 personality characteristics (e.g., affectionate, ambitious) describe him or herself. The scale for each item ranges from 1 (never or almost never true) to 7 (always or almost always true).

Individuals receive a femininity and masculinity score based on the extent to which they endorsed masculine and feminine characteristics as self-descriptive. Depending on where these two scores fall in relation to the median, the individual is characterized as masculine (high masculine-low feminine), feminine (high feminine-low masculine), androgynous (high masculine-high feminine) or undifferentiated (low masculine-low feminine) (Bem, 1977).

The Personal Attributes Questionnaire (PAQ) (Spence, Helmreich, & Stapp, 1974, 1975) is a self-report instrument which consists of three independent scales: Masculinity, Femininity, and Masculinity-Femininity. The Masculinity scale contains items that are considered to be socially desirable characteristics for both sexes, but that males are stereotypically believed to possess in greater abundance (Spence & Helmreich, 1978). The converse is true of the Femininity scale. The Masculinity-Femininity scale consists of characteristics whose social desirability appears to vary for males and females (e.g., aggressiveness). The PAQ asks individuals to rate themselves on

55 bipolar items using a 5-point scale. Separate scores are then

computed for each individual on the three scales.

The same 55 bipolar items are used to comprise a Stereotype

scale. On this scale the respondent is asked to rate each

characteristic according to whether it is more characteristic of

the typical man or the typical woman. The 5-point rating scale

ranges from "much more characteristic of male" to "much more

characteristic of female". On the Stereotype scale, a high score

indicates more stereotypic perceptions.

The Attitudes Toward Women Scale, or AWS, (Spence &

Helmreich, 1972) was developed with the purpose of providing a

standardized instrument for measuring attitudes about appropriate

roles for women as defined by contemporary society. The AWS

consists of 55 statements which assess six theme areas: (1)

vocational, educational, and intellectual roles, (2)

independence, (3) dating and etiquette, (4) drinking, swearing,

and dirty jokes, (5) sexual behavior, and (6) marital relations

and responsibilities (Beere, 1979). Individuals are asked to

respond to each item via a 4-point scale ranging from (1) agree

strongly to (4) disagree strongly. Total scores can range from 0

(extremely conservative) to 165 (extremely liberal).

Sex-Roles and Self-Esteem. Wetter (1975) has reported that

females characterized as androgynous show higher self-esteem than

females characterized as feminine sex-typed or undifferentiated.

Support for this finding was provided by a study conducted with

college students which revealed that androgynous males and

females reported the highest levels of self-esteem, whereas

undifferentiated males and females reported the lowest levels of self-esteem (Spence, Helmreich, & Stapp, 1975). Several other researchers have found self-esteem and androygyny to be related (Allen-Kee, 1980; O'Conner, Mann, & Bardwick, 1978; Puglisi & Jackson, 1981).

However, a series of investigations conducted with a total of 1,404 college students (Jones, Chernovetz, & Hansson 1978) indicated that adaptiveness, flexibility, and competence occured most often among subjects who demonstrated masculine traits, irrespective of gender. Similarly, Yager and Baker (1979) in a review of the androgyny literature, reported that masculine characteristics were the primary correlates of self-esteem. Yager and Baker hypothesized that perhaps this finding was a reflection of the higher value placed on masculine characteristics in American society. A meta-analysis (Whitley, 1983) of sex-role orientation and self-esteem indicated that well-being is related to a masculine sex-role orientation, thus providing support for previous findings.

Sex-Role Stereotypes and Achievement. The extent to which women accept traditional sex-role stereotypes has been found to be related to scholastic achievement and educational aspirations (Safilios-Rothschild, 1979). In a group of college women matched for ability, Alper (1974) reported that the group of women who rejected sex-role stereotypes received higher grade averages at the end of the year in which they served as subjects than women who accepted sex-role stereotypes. In a study of 1012 women who had attended college, Lipman-Blumen (1972) found that, in general, women who held traditional views of women's roles did

not plan to go to graduate school, whereas women who rejected sex-role stereotypes did.

Other studies have concluded that women who reject sex-role stereotypes tend to choose nonstereotypic occupations (Safilios-Rothschild, 1979). For example, Karman (1973) found that women who chose nontraditional occupations held less stereotypic attitudes about women's roles in society. Rand (1968) found that freshman women who wanted careers scored higher on masculine characteristics related to interest potential, achievement, and competencies than did freshman women who wanted to be homemakers. Rand concluded that career oriented women have a sex-role definition which includes behaviors appropriate to both sexes.

In summary, given the results of studies indicating that sex-role is related to achievement (Alper, 1974), educational aspirations (Lipman-Blumen, 1972), and self-esteem (e.g., Allen-Kee, 1980; Puglisi & Jackson, 1981; Yager & Baker, 1979), it seems reasonable to conclude that sex-role may also be related to these variables for undergraduate women. However, studies examining how sex-role may influence how undergraduate women experience the campus environment are lacking. Evidence which suggests that women experience decreased self-esteem (e.g., Baird, 1974) and career aspirations (e.g., Astin, 1977) during their undergraduate years highlights the need for further understanding of how individual difference variables (i.e., sex-role attitudes) affect women's experience at college. Consequently, this study will examine how sex-role attitudes (i.e., women's identity attitudes) influence how undergraduate

women perceive, and are affected by, the campus environment.

Women's Identity Attitudes

The college environment clearly plays a role in furthering or limiting undergraduate womens' academic and career goals (Hall & Sandler, 1982). However, the influence of the campus environment may be mediated by womens' attitudes about, and identification with women and the socio-political issues unique to women.

Models of minority and racial identity development have provided a basis for a model for understanding the manner in which women value and identify with women. Cross (1971) has proposed a model of Black self-actualization in which five distinct stages are defined. Each of these five stages is characterized by specific racial identity attitudes. In Cross' model individuals move from a stage of racial consciousness characterized by devaluation of their Blackness to a stage characterized by an acceptance of race as a positive aspect of themselves and others.

Atkinson, Morten, and Sue (1979) proposed that many of the tenets of Black identity models can be applied to other oppressed minority groups. They have proposed a Minority Identity Development model in which five stages are defined. Each stage is associated with specific views about the self, others of the same minority, others of another minority, and majority individuals. The attitudes which correspond to each of the five stages are assumed to form the minority person's identity.

The first stage, Conformity, is characterized by a preference for dominant cultural values. The reference group is

likely to be White America and feelings of racial self-hatred are likely to be strong. In the second stage, Dissonance, new information and/or experiences begin to challenge the accepted beliefs of the conformity stage. The third stage, Resistance and Immersion, is characterized by active rejection of the dominant society and culture and idealization of minority-held attitudes and values. These attitudes are accompanied by a highly motivated attempt to explore one's history and culture. In the fourth stage, Introspection, concern with loyalty and responsibility to one's own group comes into conflict with concern for personal autonomy. The individual begins to question absolute rejection of dominant cultural values. The fifth stage, Synergetic Articulation and Awareness, is characterized by a sense of self-fulfillment and inner security with regard to cultural identity. Idealogical flexibility and a desire to eliminate all forms of oppression becomes an important motivator of the individual's behavior.

Downing and Roush (1985) have asserted that the developmental experiences of minority populations are shared by women. They have proposed a five stage Feminist identity development model which extends the basic tenets of the Black identity model (Cross, 1971) to apply to women.

The first stage, Passive Acceptance, is characterized by an acceptance of the perspective of the dominant, white male system. Traditional stereotypes of sex-roles are accepted and the individual believes that the traditional roles are advantageous. Men are considered to be superior to women. The end of this

stage is characterized by increased receptivity to new
conceptualizations about oneself and the role of women.
Stage two, Revelation, is set in motion by new information (e.g.,
reading about gender discrimination) or the experience of
contradictions or crisis (e.g., divorce). Feelings of anger and
guilt prevail during this stage. Women at this stage are also
likely to actively reject the views and culture of men and to
idealize women. Stage three, Embeddedness-Emanation, is
characterized by active involvement in activities in
organizations which allow expression of anger and provide an
affirmation of identity (e.g., women's studies classes, women's
centers). In the latter part of this stage, the individual
begins to question absolute rejection of male attitudes and
culture. In the fourth stage, Synthesis, women are able to
integrate their unique personal characteristics and a fuller
appreciation of the positive aspects of being female into their
self-concept. Choices are based on defined personal values and
women and men are evaluated according to their unique
characteristics, as opposed to those dictated by stereotypes.
Stage five, Active Commitment, is characterized by the
mobilization of the newly developed identity in order to effect
social change. Women at this stage strive to commit themselves
to issues which both effect societal change and provide personal
satisfaction.

The Feminist identity development model proposed by Downing
and Roush (1985) allows for the possibility that women may
recycle through stages or may get "stuck" at a particular stage.
Furthermore, crises may cause women to revert to earlier stages,

if coping skills for dealing with current stresses are lacking.

Downing and Roush (1985) have pointed to the importance of developing assessment methods to identify and distinguish these stages in order that research on the development of a positive feminist identity can be conducted. Helms' (personal communication, December 5,1984) Women's identity model is a close theoretical approximation of the Downing and Roush (1985) Feminist identity model. In Helms' Women's identity model five stages are defined, each of which is associated with specific women's identity attitudes. In the women's identity model, individuals move from a stage in which they hold sterotypical views about women and devalue their identity as a woman, to a stage characterized by idealogical flexibility and a feeling of inner security with regard to their identity as a woman. Helms' (personal communication, December 5, 1984) Women's Identity Attitudes Inventory (WIAS) is an instrument designed to measure the specific attitudes associated with each of the five stages of women's identity development. Thus, the Women's Identity Attitudes Inventory may be a useful tool for empirically investigating the attitudes associated with the developmental process of women's identity formation.

In summary, both the Women's identity model (Helms, personal communication, December 5, 1984) and the Feminist identity model (Downing & Roush, 1985) go beyond the theoretical construct of androgyny by proposing a developmental model in which each stage represents transformations of earlier stages. In these models, androgyny is not the endpoint, but an intermediate step in the

developmental process.

Identity and Self-Esteem

Flas and Walston (1983) investigated the differential

importance of male-referenced variables versus female-referenced

variables in predicting level of self-valuing (i.e., the extent

to which one values characteristics of the self) within a group

of women interested in pursuing science careers. Subjects

provided self-report information concerning self-esteem,

attitudes toward encouragement and valuing of men and women, size

of male and female networks, and perceived levels of emotional

support from both sexes. Results indicated that the female-

oriented variables (e.g, valuing and encouragement of women,

perceived emotional support from women, size of female network)

accounted for 68% of the variance associated with self-valuing,

whereas the male-oriented variables (e.g., valuing of men)

accounted for only 25% of the variance. Within both the female

and male analyses, the Valuing Inventory variable explained the

major portion of the variance, followed by the Encouragement

Self-Report rating, whose contribution exceeded that of the

Psychosocial Support Inventory Importance score. These results

support the hypothesis that an identity stage associated with

high levels of valuing and encouragement from women (e.g.,

Internalization) would be positively related to self-esteem,

whereas a stage associated with low levels of these variables

(e.g., Pre-encounter) would be negatively related to self-esteem.

Furthermore, the stages of women's identity may be directly

related to self-esteem. Prager (1982) investigated identity

status and self-esteem within a sample of 88 undergraduate
college women.   Identity was defined in terms of the presence of
crisis or commitment in four areas (occupation, religion,
politics, and sexual values).   Interviews were employed to
determine the identity status of each subject and each subject
was classified as belonging to one of the four status categories:
Achievement (the individual has been through a crisis and made
subsequent commitments), Moratorium (the person was actively
engaged in a crisis and had made vague commitments only),
Foreclosure (strong commitments had been made after having been
through a crisis period), and Diffusion (the person was neither
involved in a crisis nor making strong commitments).   Results
indicated that women at the Achievement stage scored
significantly higher on self-esteem than the other three groups
combined.   These findings support the hypothesis that highly
developed identity is enhancing to one's self-esteem.

Self-esteem has also been found to be related to racial
identity attitudes.   Parham and Helms (1985) investigated the
relationship between racial identity and self-esteem for 166
college students.   The Pre-encounter stage (characterized by a
Euro-American frame of reference and devaluation of Black
identity) and the Immersion stage (characterized by idealization
of Blackness and a tendency to disparage Whiteness) were found to
be negatively correlated with self-esteem.   The Encounter stage
(characterized by receptivity to a new interpretation of
identity, set in motion by a startling personal or social event)
and Internalization (individuals achieve a feeling of inner
security and satisfaction about being Black) were associated with

high self-esteem, although Internalization was not significantly related.

In summary, the results of studies indicating that self-esteem may be influenced by identity development (Parham & Helms, 1985; Prager, 1982) and levels of valuing and encouragement from women (Plas & Walston, 1983) suggest that these variables may also be related to self-esteem for undergraduate women. The relationship of sex-role identity to variables such as achievement (Alper, 1974; Lipman-Blumen, 1972) and self-esteem (e.g., Allen-Kee, 1980; O'Conner, Mann & Bardwick, 1978; Whitley, 1983) point to the importance of sex-role research. The Women's Identity Attitudes Inventory provides a vehicle for obtaining empirical descriptions of the developmental process outlined in Helms' (1984) Women's identity model and Downing and Roush's (1985) Feminist identity model. Empirical and theoretical analysis of women's identity development may be useful in understanding how individual levels of valuing of women and identification with women influence how a woman understands, and is affected by, the campus environment.

Chapter 3

Statement of Problem

Whereas several studies (e.g., Downing & Roush, 1985; Plas & Wlaston, 1983) provide evidence to suggest that a relationship exists between how a woman understands and is affected by the campus environment and women's identity attitudes, an empirical analysis of this relationship is needed. Of the studies which have investigated perceptions of the campus environment, most have not examined the role of individual difference variables (e.g., women's identity attitudes) on perceptions of the campus environment, nor have they considered the relationship between those perceptions and psychological variables (e.g., self-esteem).

One shortcoming of much of the research on college students is that gender is seldom considered a factor in how students experience college. Several studies which did investigate this relationship (e.g., Follett, Andberg, & Hendel, 1982; Hite, 1985; Leland; 1980) evaluated professional programs, private colleges, or select student populations (e.g., graduate students). Because of the variety of programs and research methodologies employed, it is difficult to interpret the results of these studies, or to assess their meaning for students at large, coeducational universities. Consequently, the present study was designed to assess undergraduate womens' perceptions of the campus environment, to what extent those perceptions are moderated by women's identity attitudes, and how the campus environment affects self-esteem.

Research Questions

This study will attempt to answer the following research

questions:

1) What is the relationship of women's identity attitudes to
   undergraduate women's perceptions of the campus environment
   when the effects of academic year are controlled?

2) What is the relationship of women's identity attitudes
   and undergraduate women's self-esteem when the effects of
   academic year are controlled?

3) What is the relationship between undergraduate women's
   self-esteem and perceptions of the campus environment
   when the effects of academic year are controlled?

4) What is the relationship between undergraduate women's
   perceptions of the campus environment and self-esteem
   when the effects of academic year and women's identity
   attitudes are successively controlled?

5) How does undergraduate women's self-esteem vary as a
   function of academic year?

Chapter 3

Method

Subjects

The sample consisted of 649 undergraduate female volunteers,
freshman through seniors, who were surveyed in classes at the
University of Maryland, College Park campus. The mean age of the
sample was 20.6 years (SD=3.46). The majority of the subjects
were White (76.5%); Blacks comprised 12.9% of the sample. All
educational class levels were represented by the subjects, with
the largest percentages in the freshman (31.4%) and sophomore
(29.6%) classes. For data analysis purposes, each academic year
was quantified (i.e., freshman=1, sophomore=2, junior=3,
senior=4). Each college division was represented by the subjects,
with the majority majoring in either the Behavioral and Social
Sciences (33.9%) or the Human and Community Resources (24.3%)
divisions. Further demographic characteristics of the sample are
shown in Table 1.

_____

Insert Table 1 about here

_____

Instruments

The instruments used for this study were: (a) the Women's
Identity Attitudes Inventory (WIAS) (Helms, personal communication,
December 5, 1984), (b) the Campus Environment Survey (Leonard,
personal communication, November 15, 1984), (c) the Rosenberg
Self-Esteem Scale (Rosenberg, 1965) and (d) a demographic data

Table 1

Demographic Characteristics of the Subjects

Race	n	%
Black	84	12.9
American Indian	5	.8
White	496	76.5
Hispanic	13	2.0
Asian American	50	7.7

Class		
Freshman	204	31.4
Sophomore	192	29.6
Junior	134	20.6
Senior	119	18.3

Major Division		
Agriculture and Life Sciences	48	7.4
Arts and Humanities	104	16.0
Behavioral and Social Sciences	220	33.9
Human and Community Resources	158	24.3
Math, Science, and Engineering	25	3.9
Allied Health	18	2.8
Undergraduate Studies	63	9.7
Not reported	13	2.0

sheet.

Women's Identity Attitudes Inventory. The Women's Identity

Attitudes Inventory is a 44-item scale that measures five stages

of women's identity development.   The five stages are parallel to

those described in Atkinson, Morten, and Sue's (1979) model of

Minority identity development though Helms (personal

communication, December 5, 1984) renamed them Pre-encounter,

Encounter, Immersion, Emersion, and Internalization to be

consistent with other measures of group identity. The scale was

designed to assess attitudes about, and identification with,

women and the socio-political issues unique to women via a five-

stage model.

Subjects used a 5-point scale, ranging from strongly

disagree (1) to strongly agree (5) to indicate the extent to

which each item was self-descriptive (e.g., "Women should learn

to think and act like men" or "I limit myself to activities

involving women").   The scale contains 44 items, each of which is

a measure of one of Helms' stages.   Eight of the scale items

measured Pre-encounter attitudes (stereotypical views about women

and devaluation of one's women's identity); eight items measured

Encounter attitudes (attitudes which reflect a heightened

awareness of those socio-political issues unique to women and a

re-examination of previously held male supremacist values);

eleven items measured Immersion attitudes (characterized by

active rejection of male supremacist attitudes and values); six

items measured Emersion attitudes (characterized by a questioning

of absolute rejection of male values); and eleven items measured

Internalization attitudes (acceptance and pride in one's women's

identity).

In a pilot study designed to obtain initial reliability and validity estimates for the Women's Identity Attitudes Inventory, the survey was administered to 78 volunteers by students in an upper-level testing and measurements course at the University of Maryland, College Park. Each student in the testing and measurements course solicited three female undergraduates at the University of Maryland to complete the Women's Identity Attitudes Inventory and the short form of the Attitudes Toward Feminism scale (FEM) (Smith, Fernee, & Miller, 1975). The FEM scale has been found to be correlated with activism in and subjective identification with the women's movement and is a reliable (α=.91) measure of acceptance of feminist beliefs (Smith, Fernee, & Miller, 1975).

A total of 78 completed surveys were collected in the pilot study. Internal consistency was computed for each subscale yielding the following results: Scale one (Pre-encounter)α=.44, Scale two (Encounter) α =.36, Scale three (Immersion)α=.74, Scale 4 (Emersion) α =.56, and Scale five (Internalization) α=.65. Thus, initial reliability estimates of three of the five scales exceeded the median reliability of .54 reported by Anastasi (1982) for other personality inventories, indicating that they were appropriate for use in further research.

Pearson Product Moment correlation coefficients were computed for each subscale of the WIAS with the FEM scale yielding the following results: Scale one (Pre-encounter) r=-.25 (p<.01), Scale two (Encounter) r=.18, Scale three (Emersion) r=-.04, Scale

four (Immersion) r=.08, Scale five (Internalization) r=.19,

(p .05).   These findings suggest that the WIAS is not a measure of

feminism, although the correlations obtained between the Pre-

encounter stage and the FEM scale and the Internalization stage

and the FEM scale were significant and in the expected direction.

Test Construction- WIAS. The psychometric properties of

the WIAS were further analyzed using the 649 completed surveys

collected in the present study.   Internal consistency was

computed for each subscale based on a analysis of these surveys

yielding the following results: Scale one (Pre-encounter) α=.51,

Scale two (Encounter) α=.39, Scale three (Immersion) α=.72, Scale

four (Emersion) α=.38, Scale five (Internalization) α=.65.   One

item (i.e., "I think women blame men too much for their

problems") was dropped from the Emersion scale based on its

negligible item-to-total correlation (r=.01).

Based on the high intercorrelation (.57) between the

Immersion and Emersion subscales and the low reliability of the

Emersion subscale, these two subscales were combined to yield a

16-item Immerson-Emersion subscale.   The 16 items yielded an

alpha of .77, with item-to-total correlations ranging from .24

to .49.   Thus, at the Immersion-Emersion stage of women's identity,

male supremacist values and attitudes are actively rejected and

the individual may hold an idealized view of women's values

(Helms, personal communication, June 25, 1985).

Campus Environment Survey. The Campus Environment Survey

(CES) was based on Hall and Sandler's (1982) monograph on gender

bias in the classroom, the Student Perception Questionnaire

(Pearce, 1979), the Institutional Self-Study Guide for

Postsecondary Education Institutions (Bogart, 1981), and The Brown Project (Leland, 1980). This 86-item inventory is designed to obtain an assessment of how students view and experience the campus environment with regard to gender discrimination. The CES surveys four areas: classroom climate, campus climate, career decision making, and personal assessment. Subjects used a 5-point scale, ranging from strongly disagree (1) to strongly agree (5) to indicate the extent to which each item was descriptive of them (e.g., "My advisor views me as a serious student" or "I have been invited by a professor to assist her/him in a class").

Content validity for the CES was established by a panel of judges with expertise in classroom and campus climate issues (Blankenship, 1985). Reliability estimates were obtained through analysis of surveys (Westbrook, personal communication, November 10, 1985) completed by 619 undergraduates at the University of Maryland, College Park. A coefficient alpha measure of internal consistency showed the CES to be highly reliable ($\alpha=.93$).

In order to obtain a shorter version of the CES, 20 items with item-total correlations of .35 or less were deleted, yielding a coefficient alpha of .92 for the shortened (66-item) version. The 66-item version of the CES was administered to the subjects in the present study.

Instrument Construction- CES. The psychometric properties of the CES were further analyzed using the 649 completed surveys collected in the present study. Reliability estimates based on an analysis of these surveys yielded a coefficient alpha of .77 for the shortened (66-item) version of the CES. In order to

obtain a more internally consistent version of the CES, twenty-four items with item-to-total correlations of .20 or less were deleted, yielding a coefficient alpha of .80 for the 41-item version. The 41-item version (see Appendix A) was used for the analyses conducted in the present study.

Rosenberg Self-Esteem Scale. The Rosenberg Self-Esteem Scale (RSE) is a 10-item scale that measures attitudes of approval or disapproval toward the self. Subjects used a 5-point scale ranging from strongly disagree (1) to strongly agree (5) to indicate the extent to which each item was self-descriptive (e.g., "On the whole, I am satisfied with myself").

Silber and Tippett (1965) reported the coefficient of reproducibility for the RSE to be .92 and test-retest reliability, based on administration to 28 college students with a two-week interval, to be .85. The RSE has been correlated with other measures of self-esteem, including self-ideal discrepancy scores (r=.67), scores on the Health Self-Image Questionnaire (r=.83), and interviewer ratings of self-esteem (r=.56), providing evidence of convergent validity (Silber & Tippett, 1965). Construct-related validity has been demonstrated by several studies which showed correlations in appropriate directions between RSE scores and several other variables (e.g., depression, anxiety) with which self-esteem may theoretically be expected to relate (Rosenberg, 1965).

Procedure

Subjects were obtained by sending written requests to a stratified random sample of 100 professors teaching courses during the Spring semester of 1985. The written requests

indicated that the research was being conducted under the auspices of the Chancellor's Commission on Women's Affairs at the University of Maryland and requested 45 minutes of class time in which to administer the surveys. The stratified random sampling technique was employed in an attempt to obtain a cross-section of students in each major division (e.g., Arts and Humanities, Agricultural and Life Sciences) and in each academic year (e.g., freshman, sophomore). Twenty-two professors consented to have their classes surveyed. Two professors requested to have two of their classes surveyed; yielding a total of 24 classes surveyed.

The researcher or researcher's assistant distributed a packet of surveys to each student in each class. The following instructions were read before administering the surveys:

"My name is (researcher's name) and I am doing some research on college students and how they perceive themselves and the environment at the University of Maryland. (Instructor's name) has give me permission to come in and ask you to participate in this study.

I have a survey packet with three questionnaires and an information sheet I would like you to complete. Each packet has a subject number on it, and all participants will remain anonymous. If you participate, please do not put your name on these surveys. In evaluating the results of the surveys I will be looking at group scores, not individual ones. For those people who are interested in obtaining a copy of the results of this study, I have brought along envelopes that you can self-address and I will gladly send a copy of the results to you."

"Are there any questions?"

After general questions were answered, the researcher stated: "I will now be passing out the surveys. Anyone choosing not to participate may leave at this time. (Pause) Please use the pencils we will hand out with the surveys to fill in your responses on the computer answer sheet. The surveys differ slightly for males and females, so please take a packet appropriate for your sex." (packets were clearly labled "male" or "female").

The surveys differed in the extent to which they obviously

measured gender issues. The instruments were ordered from least
to most obvious in an attempt to control for the possibility that
subject's reactions to gender issues might influence how they
responded to other issues. The first instrument in the survey
packet was the Rosenberg Self-Esteem scale, followed by the
Campus Environment Survey and the Women's Identity Attitudes
Inventory. All consenting students were surveyed, however, the
male students were administered the Men's Identity Attitudes
Inventory (Helms, personal communication, February 10, 1985) in
lieu of the Women's Identity Attitudes Inventory. The Men's
Identity Attitudes Inventory (MIAI) consists of the WIAS items
reworded to be suitable for male respondents. Only the data
obtained from the female subjects were analyzed in this study.

Chapter 4

Results

Preliminary Analyses

Pearson correlation coefficients for intercorrelations between all measures are shown in Table 2.

Insert Table 2 about here

Pre-encounter, Encounter, and Immersion-Emersion attitudes were significantly positively related to perceptions of gender bias in the campus environment, whereas the Internalization attitudes were significantly negatively related to perceptions of gender bias. Although these correlations were significant, their moderate magnitude suggests that the measure of women's identity attitudes and the measure of perceptions of the campus environment were assessing different constructs. Furthermore, these findings suggest that undergraduate women who expressed Internalization attitudes (i.e., acceptance and pride in one's women's identity) were less likely to perceive gender bias in the campus environment than were women expressing Pre-encounter (i.e., stereotypical views about women), Encounter (i.e., heightened awareness about those socio-political issues unique to women), or Immersion-Emersion (i.e., active rejection of male supremacist attitudes and values) attitudes.

Table 2

Simple Correlations Among All Measures

	(1)	(2)	(3)	(4)	(5)	(6)
Pre-encounter (1	1.00					
Encounter (2)	.215**	1.00				
Immersion- (3) Emersion	.319**	.506**	1.00			
Internalization (4)	-.413**	.021	-.236**	1.00		
Perceptions of (5) the Campus Environment	.291**	.221**	.365**	-.306**	1.00	
Self-Esteem (6)	-.291**	-.232**	-.315**	.320**	-.308**	1.00

* p < .05

** p < .01

Pre-encounter, Encounter, and Immersion-Emersion attitudes

were significantly negatively related to self-esteem, whereas

Internalization attitudes were significantly positively related

to self-esteem.   These findings are consistent with previous

literature (Prager, 1982) which suggested that achievement of

identity enhances self-esteem in college women.

In general, the correlations obtained between the four

women's identity attitudes and the dependent variables (i.e.,

self-esteem, perceptions of the campus environment) suggest that

there is a qualitative difference between the Internalization

stage and the other three stages (i.e., Pre-encounter, Encounter,

Immersion-Emersion) of women's identity, with regard to both

undergraduate women's self-esteem and perceptions of the campus

environment.   Intercorrelations among the women's identity

attitude subscales were moderate, providing support for the

theoretical asssumption that each subscale measures distinct

women's identity attitudes.

Overview of Analyses

Four hierarchical regression analyses and one ANOVA were

used to examine the five proposed research questions.   For each

hierarchical regression analysis the overall model was examined

first to determine whether the independent variables, entered in

the hypothesized order, were predictive of the dependent

variable.   Incremental F was computed to determine whether each

successive set of variables entered in the regression equation

added to the variance in the dependent variable already explained

by the variable(s) previously entered.   When the variance

explained at a given step was significant, the beta weights

produced by each hierarchical regression model were then examined to determine the degree and direction of the relationship between each independent variable and the dependent variable.

Research Question 1: What is the relationship of women's identity attitudes to undergraduate women's perceptions of the campus environment when the effects of academic year are controlled? Hierarchical regression analysis was employed to determine whether women's identity attitudes, as measured by Helms' (personal communication, December 5, 1984) Women's Identity Attitudes Inventory, were predictive of undergraduate women's perceptions of the campus environment, as measured by Leonard's (personal communication, November 15, 1984) Campus Environment Survey, when the effects of academic year were controlled. The independent variables in the hierarchical regression analysis were academic year, entered in the first step of the analysis and the four women's identity attitudes scale scores, entered in the second step; perceptions of the campus environment was the dependent variable. The means and standard deviations of the sample on all instruments are shown in Table 3.

Insert Table 3 about here

As can be seen in Table 4, the hierarchical regression

Insert Table 4 about here

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analysis revealed that academic year ($R[2]=.01$; $F(1,541)=6.36$,

Table 3

Means and Standard Deviations for Sample on All Measures

Variable	Group	Mean	Standard Deviation
Women's Identity Attitudes			
Pre-encounter	Freshmen	16.93	3.63
	Sophomores	16.51	3.58
	Juniors	16.69	3.53
	Seniors	15.98	3.99
Encounter	Freshmen	23.75	3.37
	Sophomores	23.62	3.33
	Juniors	24.64	3.76
	Seniors	23.49	3.53
Immersion-Emersion	Freshmen	38.76	6.49
	Sophomores	38.05	6.43
	Juniors	40.06	8.08
	Seniors	38.63	7.94
Internalization	Freshmen	44.28	4.24
	Sophomores	44.26	4.32
	Juniors	45.06	4.12
	Seniors	45.01	3.78
Perceptions of the Campus Environment	Freshmen	107.85	12.24
	Sophomores	108.33	11.94
	Juniors	107.39	14.10
	Seniors	105.04	12.38
Self-Esteem	Freshmen	38.93	6.14
	Sophomores	39.16	6.15
	Juniors	38.92	6.51
	Seniors	39.36	6.69

Table 4

Hierarchical Model 1:Predicting Perceptions of the Campus Environment

Independent variable	Step entered	R	R[2]	Adjusted R[2]	F
academic year	1	.108	.012	.012	6.355**
women's identity attitudes	2	.466	.217	.205	29.747**

* p < .05

** p < .01

p=.01) was significantly related to undergraduate women's perceptions of the campus environment, though the magnitude of the relationship was small. An examination of the beta weight for this variable indicated that academic year (beta=-.12; T(1,541)=.11, p=.01) was significantly negatively related to perceptions of the campus environment, suggesting that for undergraduate women, the more advanced one's educational class level, the less likely one was to perceive gender bias in the campus environment.

The combination of academic year and the set of women's identity attitudes resulted in an overall regression model (R[2]=.22; F(5,537)=29.75, p=.00) that was significantly different from zero. The incremental F (F[INC]=35.193; p=.000) obtained indicated that the addition of the set of women's identity attitudes significantly added to the variance in perceptions of the campus environment already explained by academic year. One percent of the variance in perceptions of the campus environment was explained by academic year. The set of women's identity attitudes explained an additional 21% of the variance in perceptions of the campus environment. An examination of the beta weights for individual variables comprising the regression model suggests that Pre-encounter (beta=.10; T(1,537)=2.2, p=.03), Encounter (beta=.10; T(1,537)=2.2, p=.03) and Immersion-Emersion (beta=.24; T15,537)=5.1, p=.00) attitudes were significantly positively related to undergraduate women's perceptions of gender bias in the campus environment. Thus, it appears that stereotypical views about women (Pre-encounter attitudes), heightened awareness about those socio-political

attitudes), heightened awareness about those socio-political issues unique to women (Encounter attitudes), and active rejection of male supremacist attitudes and values (Immersion-Emersion attitudes) were uniquely associated with perceptions of gender bias on campus. Internalization attitudes (beta=-.21; T(5,537)=4.9), p=.00) were significantly and uniquely negatively related to perceptions of the campus environment. Thus, for undergraduate women, it appears that the greater one's acceptance and pride in one's women's identity (Internalization attitudes), the less likely one was to perceive gender bias in the campus environment.

Research Question 2: What is the relationship of women's identity attitudes to undergraduate women's self-esteem when the effects of academic year are controlled? To explore the question of whether the women's identity attitudes were predictive of undergraduate women's self-esteem beyond the effects of academic year, hierarchical regression analysis was employed. The independent variables were academic year, entered in the first step of the analysis, and the four women's identity attitudes scale scores, entered in the second step; the dependent variable was undergraduate women's self-esteem, as measured by Rosenberg's (1965) Self-Esteem Scale.

As can be seen in Table 5, the hierarchical regression

Insert Table 5 about here

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analysis revealed that academic year (R[2]=.00; F(1,541)=1.88, p=.17) was not significantly related to undergraduate women's

Table 5

Hierarchical Model 2: Predicting Self-Esteem

Independent variable	Step entered	R	R[2]	Adjusted R[2]	F
academic year	1	.059	.004	.004	1.88
women's identity attitudes	2	.428	.183	.179	24.048**

* p < .05

**p < .01

self-esteem. The combination of academic year and the four

women's identity attitudes (R[2]=.18; F(5,537)=24.05, p=.00)

resulted in a model that was significantly different from zero.

The incremental F obtained (F[INC]=29.49, p=.000) revealed that

the addition of the set of women's identity attitudes

significantly added to the variance in self-esteem already

explained by academic year. The set of women's identity

attitudes explained an additional 18% of the variance in self-

esteem. An examination of the beta weights for individual

variables comprising the hierarchical regression model suggests

that Encounter (beta=-.14; T(1,537)=3.0, p=.003) and Immersion-

Emersion (beta=-.16; T(1,537)=3.4, p=.001) attitudes were

significantly and uniquely inversely related to undergraduate

women's self-esteem, whereas Pre-encouter (beta=-.06;

T(1,537)=1.4, p=.16) attitudes were not significantly related to

self-esteem. Internalization attitudes (beta=.26; T(5,537)=5.7,

p=.000) were significantly and uniquely positively related to

self-esteem. This suggests that, for undergraduate women, a

heightened awareness of those socio-political issues unique to

women (Encounter attitudes) and active rejection of male

supremacist attitudes and values (Immersion-Emersion attitudes)

were associated with negative self-evaluation, whereas acceptance

and pride in women's identity was associated with positive self-

evaluation.

   Research Question 3: What is the relationship between

undergraduate women's self-esteem and perceptions of the campus

environment when the effects of academic year are controlled? To

explore the question of whether undergraduate women's self-

explore the question of whether undergraduate women's self-esteem, controlling for the effects of academic year, was predictive of perceptions of the campus environment, hierarchical regression analysis was used to determine the relationship between the independent variables, academic year, and self-esteem, and the dependent variable, perceptions of the campus environment.

As was previously reported, the hierarchical regression analysis revealed that academic year was significantly negatively related to perceptions of the campus environment ($R[2]=.01$; $F(1,541=6.36$, $p=.01$) and explained 1% of the variance. The combination of academic year and undergraduate women's self-esteem ($R[2]=.095$; $F(2,540)=28.19$, $p=.000$) resulted in a model that differed significantly from zero. An examination of incremental F ($F[INC]=49.46$; $p=.000$) revealed that the addition of self-esteem significantly added to the variance in perceptions of the campus environment already explained by academic year. Self-esteem accounted for an additional 8% of the variance in perceptions of the campus environment. The results of the hierarchical regression analysis are presented in Table 6. An

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Insert Table 6 about here

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examination of the beta weight for self-esteem indicated that it ($beta=-.288$; $T(2,540)=-7.03$), $p=.000$) was significantly and uniquely negatively related to perceptions of the campus environment, suggesting that undergraduate women who viewed themselves positively were less likely to perceive microinequities reflecting gender bias in the campus environment,

Table 6

Hierarchical Model 3:Predicting Perceptions of the Campus Environment

Independent variable	Step entered	R	R[2]	Adjusted R[2]	F
academic year	1	.108	.012	.012	6.355**
self-esteem	2	.308	.095	.083	28.191**

*p < .05

**p < .01

or conversely that undergraduate women who viewed themselves negatively were more likely to perceive gender bias in the campus environment.

Research Question 4: What is the relationship between undergraduate women's perceptions of the campus environment and self-esteem when the effects of academic year and the women's identity attitudes are successively controlled? To explore the question of whether perceptions of the campus environment contributed significantly to undergraduate women's self-esteem beyond what was successively explained by academic year and the four women's identity attitudes, hierarchical regression analysis was employed. The independent variables were academic year, the four women's identity attitudes scale scores, and perceptions of the campus environment. The dependent variable was undergraduate women's self-esteem. Academic year was entered into the regression equation first, followed by the women's identity attitudes and then perceptions of the campus environment.

As was previously reported, the hierarchical regression analysis revealed that academic year was not significantly related to self-esteem (R^2=.003; $F(1,541)$=1.88, p=.17) and that the women's identity attitudes ($F[INC]$=29.49, p=.000) contributed significantly to the prediction of self-esteem beyond the effects of academic year, explaining an additional 18% of the variance. The combination of academic year, the set of women's identity attitudes, and perceptions of the campus environment (R^2=.195; $F(6,536)$=21.66, p=0.0) resulted in a model that differed significantly from zero. This hierarchical regression model illuminated the effects of perceptions of the campus environment

(F[INC]=8.14; p=.01) which were found to contribute significantly to the prediction of self-esteem beyond the effects of academic year and the set of women's identity attitudes, explaining an additional 1% of the variance. The results of the hierarchical regression analysis are presented in Table 7.

Insert Table 7 about here

Thus, it appears that women's identity attitudes and perceptions of gender bias on campus each contribute uniquely to the prediction of undergraduate women's self-esteem, with the women's identity attitudes being the most powerful predictor of this variable.

Research Question 5: How does undergraduate women's self-esteem vary as a function of academic year? A one-way ANOVA was used to examine whether undergraduate women's self-esteem varied according to academic year. The F ratio was not significant (F(3,638)=.15, p=.93). Contrary to previous findings (e.g., Churgin, 1978; Denny & Arnold, 1985), this result suggests that undergraduate women's self-esteem did not differ according to academic year.

Secondary Analyses

Further analyses were conducted to determine the relationship between several demographic variables and the dependent variables (i.e., perceptions of the campus environment, self-esteem). The demographic variables included: a) age, b) high school grade point average, and c) college grade point

Table 7

Hierarchical Model 4:   Predicting Self-Esteem

Independent variable	Step entered	R	R[2]	Adjusted R[2]	F
academic year	1	.059	.004	.004	1.878
women's identity attitudes	2	.428	.183	.179	24.049**
perceptions of the campus environment	3	.442	.195	.012	21.664**

*p < .05

**p < .01

average.

Pearson correlation coefficients for each demographic variable and the dependent variables are shown in Table 9.

Insert Table 8 about here

The significant negative correlation obtained between college grade point average and perceptions of the campus environment indicates that, for the undergraduate women in this sample, the higher one's college grade point average the less likely one was to perceive gender bias in the campus environment, or conversely that the lower one's college grade point average, the more likely one was to perceive environmental gender bias. These findings may be taken in support of previous literature (e.g., Churgin, 1978; El-Khawas, 1980) which has suggested that undergraduate women's academic achievement is dampened by the experience of gender bias in the campus environment.

Contrary to previous findings (e.g., Cotton, 1979; Gilman, 1969), which have suggested a positive relationship between academic achievement and self-esteem, the present results indicate negligible correlations between undergraduate women's grade point averages (both high school and college) and self-esteem. Furthermore, age did not prove to be significantly related to self-esteem or to perceptions of gender bias in the campus environment for the undergraduate women in this sample.

In summary, it appears that for undergraduate women Encounter (i.e., characterized by rejection of previously held stereotypical views about women and greater awareness about those

Table 8

Group Means and Standard Deviations for Dependent Variables

	CES	Self-Esteem	Age	High School G.P.A.	College G.P.A.
Perceptions of the Campus Environment (CES)	1.00				
Self-Esteem	-.308**	1.00			
Age	-.062	.040	1.00		
High School G.P.A.	-.032	.051	-.067*	1.00	
College G.P.A.	-.258**	.029	.227**	.304**	1.00

*p < .05

**p < .01

socio-political issues unique to women) and Immersion-Emersion (i.e., characterized by idealization of women and active rejection of male supremacist values and beliefs) attitudes were positively related to perceptions of gender bias in the campus environment and negatively related to self-esteem. Internalization attitudes (i.e., acceptance and pride in one's women's identity) were negatively related to perceptions of inequities reflecting gender bias in the campus environment and positively related to self-esteem. Perceptions of gender bias were inversely related to self-esteem, indicating that for the undergraduate women in this sample, the more negatively one viewed oneself the more likely one was to perceive gender bias in the campus environment, or conversely that the more positively one viewed oneself the less likely one was to perceive gender discrimination on campus.

Chapter 5

Discussion

Several researchers (e.g., El-Khawas, 1980; Hall & Sandler, 1982) have suggested that undergraduate women may not enjoy full equality of opportunity during their college years. Other studies have indicated that undergraduate women's experience of differential treatment may result in decreased academic and career aspirations (Astin, 1977; El-Khawas, 1980) and decreased self-esteem (Churgin, 1978; Denny & Arnold, 1985). However, previous research has not considered the possible influence of individual difference variables (e.g., attitudes about and identification with women) in how undergraduate women perceive and are affected by the campus environment. The present study was designed to empirically investigate undergraduate women's perceptions of the campus environment and how those perceptions may be related to individual difference variables (e.g., women's identity attitudes) and psychological variables (e.g., self-esteem).

One purpose of the present study was to explore the question of whether women's identity attitudes were predictive of undergraduate women's perceptions of the campus environment, when the effects of academic year were controlled. Theoretical models of feminist identity development (Downing & Roush, 1985) and women's identity development (Helms, personal communication, December 5, 1984) propose that each stage of identity development is associated with specific attitudes about women and the socio-political issues unique to women. In Helms' model, women's

identity development evolves from a stage characterized by devaluation of women's identity to a stage characterized by acceptance and security with regard to women's identity. On the basis of Helms' formulation of women's identity attitudes, it was thought that these attitudes might influence how the campus environment was perceived by undergraduate women. For example, it was expected that Pre-encounter (i.e., stereotypical views about women) attitudes might be associated with a relative lack of awareness of gender bias in the campus environment whereas Immersion-Emersion (active rejection of male supremacist beliefs and values) attitudes might be associated with increased sensitivity to environmental gender bias.

To investigate the research question which pertained to the relationship between women's identity attitudes and undergraduate women's perceptions of the campus environment, controlling for the effects of academic year, hierarchical regression analysis was performed. This analysis revealed a significant negative relationship between academic year and perceptions of gender bias, though the magnitude of this relationship was small. This finding was somewhat suprising in light of previous literature (Denny & Arnold, 1985; El-Khawas, 1980) which suggested that the experience and effects of differential treatment increase throughout women's college years. In the present study, the negative relationship between academic year and perceptions of gender bias in the campus environment may be interpreted in light of the type of gender bias the 41-item verison of the Campus Environment Survey (Leonard, personal communication, November 15,

1984) employed in the present study seemed to be tapping. Many
of the items in this version (e.g., "I find ample opportunities
for asking questions in most classes", "Faculty treat me as a
serious student") seem to be assessing the extent to which the
college environment provides undergraduates with support and
encouragement. Perhaps relative newcomers (e.g., freshmen) to
college were more sensitive to, and needy of, support and
encouragement from the campus environment. Furthermore, perhaps
those individuals who adjusted and assimilated into the campus
environment became less aware of environmental inequities as they
progressed through their college years. In addition, it is
possible that undergraduate women who perceive a great deal of
gender bias drop out without finishing their educations. The
small, negative relationship obtained between academic year and
perceptions of the campus environment possibly may be interpreted
as a combined effect of women who stay in college becoming less
aware of environmental inequities as their college years
progressed and women who perceive a great deal of bias (e.g.,
those who drop out) were not included in the present study.
Furthermore, it seems plausible that undergraduate women who
adjusted to the campus environment and stayed in college relied
increasingly on support and encouragement from sources (e.g.,
oneself, family) other than those provided by the campus, thus
becoming less attentive to this type of environmental gender
bias.

The results of the present study further revealed that the
four women's identity attitudes accounted for a significant and
unique portion of the variance in perceptions of the campus

environment, beyond that explained by academic year. Contrary to expectation, Pre-encounter attitudes were positively related to perceptions of gender bias, whereas Internalization attitudes were inversely related to perceptions of gender bias on campus. Based on the attitudes individuals at the Pre-encounter stage are theorized to express (i.e., sterotypical views about women), it was expected that individuals expressing these attitudes would be unlikely to perceive the campus environment as biased. Individuals expressing Internalization attitudes (i.e., acceptance and pride in one's women's identity and a high awareness of the socio-political issues unique to women) were expected to be more aware of inequities in the campus environment.

In interpreting these results, it seems important to keep in mind that whereas the Campus Environment Survey (Leonard, personal communication, November 15, 1984) measures perceptions of gender bias, it does not provide a measure of how individuals feel about those perceptions. For example, it is possible that individuals expressing Pre-encounter attitudes perceived gender bias as the accepted norm. Individuals expressing higher levels of Internalization attitudes might have perceived less gender bias, but felt more negatively about it. Furthermore, individuals expressing Internalization attitudes, who are hypothesized to be motivated to fight all forms of oppression, might have been more sensitive to broader issues of discrimination than those tapped by the Campus Environment Survey. Individuals expressing higher levels of Internalization

attitudes might also have had a more internalized identity and a more positive sense of self (as evidenced by the positive relationship between Internalization attitudes and self-esteem), thus needing, and being less attuned to support and encouragement from the campus environment. Furthermore, perhaps individuals expressing higher levels of Internalization attitudes had developed other support systems (e.g., political organizations) making gender bias in the campus environment less relevant for them.

As expected, Encounter (i.e., characterized by a heightened awareness of those socio-political issues unique to women) and Immersion-Emersion (i.e., characterized by active rejection of male supremacist values and beliefs) attitudes were associated with perceptions of gender bias in the campus environment. This finding suggests that individuals expressing higher levels of Encounter and Immersion-Emersion attitudes were especially sensitive to and aware of the socio-political issues unique to women, including issues of gender bias. It is also possible that individuals with high levels of attitudes reflecting these two stages of women's identity were actively seeking and sensitive to support and encouragement from the campus environment.

Another purpose of the present study was to explore the question of whether women's identity attitudes were predictive of self-esteem when the effects of academic year were controlled. Studies indicating that self-esteem is related to racial identity attitudes (Parham & Helms, 1985) and achievement of identity (i.e., the individual has been through a crisis and made subsequent commitments) in college women (Prager, 1982) led to

the speculation that a relationship might exist between women's identity attitudes and self-esteem.

Contrary to expectation, academic year was not significantly predictive of self-esteem, indicating that undergraduate women's self-esteem did not differ according to academic year. However, other studies (e.g., Denny & Arnold, 1985), which have reported decreased self-esteem for women during their college years, have employed a longitudinal design. Thus perhaps individuals change but cohorts self-select to match the environment. It is possible that a relationship between academic year and self-esteem would have emerged had the present study employed a longitudinal design instead of a cross-sectional one.

Furthermore, women's identity attitudes contributed significantly to the prediction of self-esteem, beyond the effects of academic year. Internalization attitudes were positively related to self-esteem, supporting other research which has shown that a highly developed identity is enhancing to one's self-esteem (Prager, 1982; Parham & Helms, 1985). Encounter and Immersion-Emersion attitudes were associated with low self-esteem. In general, the data suggest that increased self-esteem among undergraduate women was related to coming to terms with their women's identity and internalized positive feelings about being a woman.

An exploration of whether undergraduate women's self-esteem was predictive of perceptions of the campus environment when the effects of academic year were controlled was a further purpose of the present study. Previous literature (e.g., Baird, 1974;

Churgin, 1978; Denny & Arnold, 1985) suggested that undergraduate women's experience of differential treatment during their college years adversely affects their self-esteem. On the basis of this research, it was thought that a negative relationship might exist between perceptions of gender bias in the campus environment and self-esteem. Such a relationship would suggest that the more gender bias one perceived in the campus environment, the less likely one was to evaluate oneself positively, or conversely that the less gender bias one perceived the more likely one was to evaluate oneself positively.

A significant negative relationship between self-esteem and undergraduate women's perceptions of gender bias was found. This relationship may support previous research (e.g., Hall & Sandler, 1982; El-Khawas, 1980) which has suggested that undergraduate women's experience of differential treatment dampens their self-esteem. The present data indicate that, for the undergraduate women in this sample, the more negatively one viewed oneself the more likely one was to perceive the campus environment as biased, or conversely that the more positively one viewed oneself the less likely one was to perceive environmental gender bias. Possibly, individuals who viewed themselves positively elicited more favorable responses (e.g., support and encouragement) from the environment. It also seems possible that individuals who evaluated themselves positively had developed other support systems (e.g., political organizations, family, friends), making microinequities in the campus environment less relevant for them. Perhaps undergraduate women with negative self-evaluations were adversely affected by inequities in the campus environment.

However, another possible explanation for this finding is that undergraduate women with low self-esteem were more in need of, and sensitive to, support and encouragement provided by the campus environment, than were women with high self-esteem. However, the correlational design employed in the present study precludes causal inferences. Furthermore, it is not possible to determine on the basis of the present study whether undergraduate women's perceptions of gender bias reflect actual inequities in the campus environment.

An additional purpose of the present study was to explore whether undergraduate women's self-esteem differed according to academic year (i.e., freshman, sophomore, junior, senior). On the basis of several studies (e.g., Churgin, 1978; Denny & Arnold, 1985), which have indicated that women experience a decline in self-esteem during their college years, it was thought that academic year and self-esteem might be inversely related.

The analysis investigating the research question which pertained to whether undergraduate women's self-esteem differed according to academic year revealed, in contrast to previous studies (e.g., Baird, 1974; Denny & Arnold, 1985) which have indicated that undergraduate women's self-esteem decreases during their college years, that self-esteem did not differ according to academic year. One possible explanation for this finding is that the present study employed a cross-sectional design which precluded a determination of whether undergraduate women experienced a decline in self-esteem as they progressed through college. Furthermore, the data suggest that other factors (e.g.,

individual difference variables such as perceptions of the campus environment and women's identity attitudes) were more important (i.e., explained more variance) correlates of self-esteem than academic year.

In summary, the present study indicated that Encounter (i.e., characterized by a heightened awareness of those socio-political issues unique to women) and Immersion-Emersion (i.e., active rejection of male supremacist beliefs and values) attitudes were associated with perceptions of gender bias in the campus environment and low self-esteem, whereas Internalization (i.e., acceptance and pride in one's women's identity) attitudes were inversely related to perceptions of gender bias on campus and positively associated with self-esteem. These results suggest that undergraduate women who had internalized positive feelings about being a woman evaluated themselves more positively and were less likely to perceive gender bias on campus than were individuals expressing Encounter or Immersion-Emersion attitudes. Self-esteem was found to be negatively related to perceptions of gender bias on campus, suggesting that individuals who evaluated themselves negatively were more likely to perceive inequities in the campus environment than were individuals who evaluated themselves positively. Self-esteem did not vary according to academic year for the undergraduate women in this sample, suggesting that in cross-sectional studies personality characteristics may be more clearly related to self-esteem than presence in the environment.

Limitations and Implications for Future Research

Limitations were inherent in the present study which may have affected the results and thus must be considered in their interpretation. First, shared method variance may have influenced the relationships demonstrated among the four women's identity attitudes, perceptions of the campus environment, and self-esteem. In addition to trait content, measurement factors (i.e., dependence/independence of measurement procedures) may influence the systematic variance in test scores (Campbell & Fiske, 1959), and the present study employed a monomethod (i.e., all measures were self-report) strategy. Logistical considerations precluded using other assessment strategies, such as observer's ratings of gender bias in the campus environment, which could have provided a multimethod assessment technique. The use of a multimethod strategy in future investigations would illuminate the extent to which the relationships among the variables demonstrated in the present study were due to shared method variance.

The cross-sectional design of the present study is an additional limitation in that it limits kind of inferences that can be made based on the results. For example, it is impossible to determine whether undergraduate women experience a decline in self-esteem as they progress through their college years based on the present study. The observed differences (e.g., the negative relationship between academic year and perceptions of gender bias) may reflect idiosyncratic perceptions of the group of individuals in each academic year as opposed to

an actual decrease in perceived gender bias as one progressed

through college. A study employing a longitudinal design would

provide important information about the exent to which

undergraduate women's perceptions of gender bias and self-esteem

change as they progress through college. In addition, a

longitudinal design would allow for an assessment of the possible

factors contributing to an individual's decision to drop out of

college. Given the possiblity that environmental inequities may

be one of these factors, such an investigation would shed

valuable light on a population (i.e., those undergraduate women

who drop out) not considered by the present study.

Furthermore, the correlational design employed in the

present study precludes making causal inferences based on the

relationships observed among the four women's identity attitudes,

perceptions of the campus environment, and self-esteem. For

example, other researchers (e.g., Hall & Sandler, 1982) have

suggested that undergraduate women's experience of inequities in

the campus environment may have detrimental effects on their

self-esteem. The results of the present study indicated that

undergraduate women with low self-esteem perceived more gender

bias in the campus environment than did undergraduate women with

high self-esteem. However, the correlational design of the

present study precludes concluding that perceptions of gender

bias caused decreased self-esteem. Furthermore, the methodology

employed in the present study does not allow for a determination

of whether perceptions of gender bias reflected actual inequities

in the campus environment. Future research combining a

longitudinal design with an objective measure of environmental

gender bias would provide more cogent information about the existence of environmental inequities and their effects on undergraduate women's self-esteem.

Another potential limitation of the present study is the manner in which the constructs self-esteem, women's identity attitudes, and perceptions of the campus environment were operationalized. For example, in examining the relationship between perceptions of gender bias on campus and self-esteem, it might be more appropriate to use a measure of academic or intellectual self-concept as opposed to a measure of global self-esteem. A more specific measure of self-esteem might be more relevant to the study of the effects of classroom and campus inequities and thus might shed more light on how undergraduate women might potentially be affected by the experience of differential treatment during their college years. Furthermore, it is important to keep in mind that the measure employed to assess gender bias in the campus environment relied on undergraduate's perceptions of environmental inequities, which may or may not reflect an accurate assessment of actual gender bias on campus. Several researchers (e.g., Sternglanz & Lyberger-Ficek, 1977) have noted that undergraduate women may be adversely affected by environmental inquities even when they are not aware of them. Research highlighting the subtle nature of many environmental inequities (Hall & Sandler, 1982) points to the difficulties involved in using a perceptual measure to investigate the effects of gender bias on undergraduate women's self-esteem.

Finally, the relationships found among the four women's identity attitudes and the other two variables (i.e., self-esteem, perceptions of the campus environment) should be interpreted with caution given that the instrument (i.e., the Women's Identity Attitudes Inventory) used to assess women's identity attitudes is in the early stages of instrument development. The pilot study conducted in the present investigation to obtain initial reliability and validity estimates for the WIAS indicated that the WIAS is not a measure of feminism. However, further validity studies are needed in order to provide evidence for how accurately the WAIS operationalized the theoretical assumptions of Helms' (personal communication, December 5, 1984) Women's identity model. Furthermore, reliability estimates for two of the subscales (i.e., Pre-encounter, .51, Encounter, =.39) were below the median reliability of .54 reported by Anastasi (1982) for other personality inventories, suggesting that the relationships obtained in the present study between these two subscales and the other two variables (i.e., self-esteem, perceptions of the campus environment) may not be replicable. Further studies examining correlates of the four women's identity attitudes in other settings with a more diverse population of women would illuminate the psychometric properties of the Women's Identity Attitudes Inventory.

Implications for Counseling

The findings of the present study suggest that an understanding of women's identity development might assist counselors in better understanding, and designing appropriate

interventions for women clients who perceive the campus

environment as biased. For example, the results of the present

study indicate that individuals expressing Encounter (i.e., a

heightened awareness about those socio-political issues unique to

women) and Immersion-Emersion (i.e., active rejection of male

supremacist values and beliefs) attitudes are likely to perceive

the campus environment as biased and to be experiencing low self-

esteem.   Thus, for counselors working with clients expressing

these attitudes, self-esteem issues might be a focus of

counseling. Assessment of the attitudes expressed by individuals

at specific stages of women's identity could assist counselors in

designing or matching individuals to more effective

interventions. For example, individuals expressing Encounter or

Immersion-Emersion attitudes might benefit from Feminist therapy

and/or joining women's support groups. Furthermore, these

individuals might benefit from being able to discuss their

feelings (e.g., anger) about the gender bias they perceive in the

campus environment and from interventions designed to help them

cope with this perceived bias. These interventions might not be

appropriate for individuals expressing Pre-encounter attitudes

who are hypothesized to perceive stereotypes about women as the

accepted norm. However, individuals at all three stages might be

in need of more support and encouragement from the environment

and knowledge of this need may help counselors in assisting

clients with appropriate resources.

   It seems important to keep in mind that helping clients cope

with environmental inequities and/or working on self-esteem

issues does not address the environmental inequities which may be
the most important source of the client's distress. The scale
employed in the present study to assess environmental inequities
was designed to measure a construct (i.e., gender bias on campus)
rather than specific types of gender bias. Another way of
looking at the scale is as a behavioral measure. In order to use
the scale in this manner different types of scale construction
procedures would be required. One example of how the scale might
be used as a behavioral measure would be to determine whether a
significant percentage of women endorsed items indicating that
they felt ignored in their classes and/or that they were not
treated as serious students by faculty. An intervention based on
such a finding might be to design faculty development workshops
to assist professors in becoming more aware of how they treat
women students and sensitizing them to the importance of faculty
support and encouragement for many female undergraduates.
Similarly, if a significant percentage of women indicated that
contributions by women academicians were neglected in their
courses, interventions (e.g., grants, workshops) might be
designed to encourage faculty to incorporate material by women
into their course content. However, such recommendations are
speculative because an item analysis was not conducted in the
present study and information on specific types of behavioral
bias was not obtained.

In general, knowledge of the possible detrimental effects of
environmental gender bias, and an understanding of how women's
identity attitudes influence the manner in which undergraduate
women perceive the campus environment, may assist counselors in

identifying those individuals most likely to be experiencing

decreased self-esteem and in developing more appropriate

interventions for these clients.

Campus Environment Survey (41-item version)

1) Many classes have curriculum materials which reinforce
    traditional roles of women and men.

2) My instructors do <u>not</u> seem suprised when I do well on
    tests.

3) I have felt insecure in classroom discussions.

4) My professors have demanded high quality work from me.

5) My advisor views me as a serious student.

6) Faculty usually refer to all people as "he" even if some of
    the people are women.

7) In talking with faculty of the opposite sex I find they
    maintain eye contact with me.

8) I have <u>not</u> heard my classmates use humor at the expense of
    women.

9) I have found the atmosphere at this institution to be
    unfriendly.

10) My professors lecture about current contributions by and
    about women in my courses.

11) I do <u>not</u> speak up in class.

12) My papers are evaluated by the same standards as those of
    other students.

13) I have <u>never</u> been discouraged by anyone from majoring in math
    or science.

14) I have seen faculty ignore women in the classroom.

15) At least one professor has helped me feel confident of my
    abilities.

16) Undergraduate recruitment procedures need to be changed to
    attract older female students (26+).

17) I have had a professor offer me a good grade if I became sexually involved with him/her.

18) Faculty seem to ask me easier questions than they ask other students.

19) I have considered avoiding evening classes due to fear for my safety.

20) My professors have incorporated historical content by and about women in the course material.

21) I find ample opportunities for asking questions in most classes.

22) Since I have been in college my career aspirations have been dampened.

23) Some professors have poor reputations for their treatment of women students.

24) My instructors in my small classes call me by name.

25) Some faculty here have treated me in a manner stereotypical to my sex.

26) I feel less confident as a student now than I did in high school.

27) I have known women students who were threatened with poor grades if they did not become sexually involved with their professors.

28) Health services provided at the University are adequate.

29) Faculty listen to me when I speak up in class.

30) Faculty treat me as a serious student.

31) The readings/texts for my courses are predominently about the achievements of men in our culture.

32) I have seen women become the focus of faculty jokes in the classroom.

33) I have had professors encourage me to take an interest in her/his field.

34) Professors have described my contributions in class as valuable.

35) I am called on as often as other students.

36) If I had child care responsibilities I would <u>not</u> be able to attend some classes due to scheduling difficulties.

37) I have made contributions in a class discussion only to have them attributed to a different student sometime later.

38) Opportunities for athletic participations are available for all students.

39) My professors encourage me to use works by both women and men to complete assignments.

40) Professors have shown a special interest in my thinking.

41) Other students view me as a serious student.

Please record your answers to the following questions in the space provided on this sheet.

Age _____

Major _____

Occupational Preference _____

Your overall high school G.P.A. _____

Your overall college G.P.A. _____

Please choose one response for each of the following questions and record them in the appropriate space on your answer sheet.

1) Racial/Ethnic Group
   1) Afro-American/Black
   2) American Indian or Alaskan Native
   3) Caucasian/White
   4) Mexican-American, Puerto Rican, or Other Hispanic Origin
   5) Asian/American or Pacific Islander

2) Class Level
   1) Freshman (0-27 credits earned)
   2) Sophomore (28-55 credits earned)
   3) Junior (56-83 credits earned)
   4) Senior (84 or more credits earned)
   5) Graduate or Professional Student

3) Sex
   1) Female
   2) Male

4) Relationship Status
   1) Single
   2) Married
   3) Separated or Divorced
   4) Widowed
   5) In a non-traditional relationship

5) Do you have children?
   1) Yes
   2) No

6) Are you a Women's Studies Certificate student?
   1) Yes
   2) No

ATTITUDES TOWARD THE SELF

Below is a list of statements dealing with your general feelings about yourself. On your computer answer sheet, please fill in the number that best describes how you feel.

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

7) On the whole, I am satisfied with myself.

8) At times I think I am no good at all.

9) I feel that I have a number of good qualities.

10) I am able to do things as well as most other people.

11) I feel I do not have much to be proud of.

12) I certainly feel useless at times.

13) I feel that I am a person of worth, at least on an equal plane with others.

14) I wish I could have more respect for myself.

15) All in all, I am inclined to feel that I am a failure.

16) I take a positive attitude toward myself.

CAMPUS ENVIRONMENT SURVEY

This questionaire is designed to elicit information concerning your perception of your campus environment and the impact your experiences have on your education and career preparation. On your computer answer sheet, please fill in the number that best describes how you feel.

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

17) If I had a child (children) it would be important for the school to offer child care facilities.

18) Many classes have curriculum materials which reinforce traditional roles of women and men.

19) Students who receive annoying sexual attention have usually provoked it.

20) My instructors do not seem surprised when I do well on tests.

21) I have felt insecure in classroom discussions.

22) My professors have demanded high quality work from me.

23) My advisor views me as a serious student.

24) Faculty usually refer to all people as "he" even if some of the people are women.

25) In talking with faculty of the opposite sex I find they maintain eye contact with me.

26) I have not heard my classmates use humor at the expense of women.

27) I have found the atmosphere at this institution to be unfriendly.

28) I have never had a professor suggest I consider a more ambitious major.

29) My professors lecture about current contributions by and about women in my courses.

30) Students should not be so quick to take offense when a professor expresses sexual interest in them.

31) I do not speak up in class.

32) When faculty make derogatory remarks about women in fun, their remarks should be taken as humor.

33) My papers are evaluated by the same standards as those of other students.

34) I have never been discouraged by anyone from majoring in math or science.

35) I have seen faculty ignore women in the classroom.

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

36) At least one professor has helped me feel confident of my abilities.

37) Undergraduate recruitment procedures need to be changed to attract older female students (26+).

38) I have had a professor offer me a good grade if I became sexually involved with him/her.

39) Faculty seem to ask me easier questions than they ask other students.

40) I have considered avoiding evening classes due to fear for my safety.

41) My professors have incorporated historical content by and about women in the course material.

42) I find ample opportunities for asking questions in most classes.

43) If I had a steady girl/boy friend, she/he would have a positive influence on my grades.

44) Female students are called on more in class than male students.

45) Since I have been in college my career aspirations have been dampened.

46) Some professors have poor reputations for their treatment of women students.

47) My instructors in my small classes call me by name.

48) I have verbally disagreed with my teachers.

49) Some faculty here have treated me in a manner stereotypical to my sex.

50) I feel less confident as a student now than I did in high school.

51) I have known women students who were threatened with poor grades if they did not become sexually involved with their professors.

52) Health services provided at the University are adequate.

53) Faculty listen to me when I speak up in class.

54) My girl/boy friend/spouse has encouraged me to take my career plans seriously.

55) My classmates use humor at the expense of men.

56) During classroom discussion students should have a sense of humor about sexual comments concerning their appearance.

57) Faculty treat me as a serious student.

58) The readings/texts for my courses are predominently about the achievements of men in our culture.

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

59) I have changed my major to one that is almost too easy for me.

60) I have seen women become the focus of faculty jokes in the classroom.

61) I have had professors encourage me to take an interest in her/his field.

62) I have seen faculty ignore men in the classroom.

63) I would find it easier to talk to a female counselor than a male counselor.

64) Professors have described my contributions in the class as valuable.

65) I have found a female role model in my major.

66) I am called on as often as other students.

67) If I had child care responsibilities I would <u>not</u> be able to attend some classes due to scheduling difficulties.

68) I have made contributions in a class discussion only to have them attributed to a different student sometime later.

69) I have leadership ability.

70) I have <u>never</u> heard faculty use humor at the expense of men.

71) Opportunities for athletic participation are available for all students.

72) Sexual harassment of faculty toward students is usually a matter of insensitivity rather than exploitation.

73) My professors encourage me to use works by both women and men to complete assignments.

74) I have self confidence.

75) I have <u>not</u> been interrupted in class by other students.

76) I am afraid to walk on campus at night.

77) Professors have shown a special interest in my thinking.

78) I have had professors suggest that I go into a <u>less</u> sex-stereotyped career.

79) I have chosen a less demanding major that would make it possible for me to manage a career and a family.

80) Other students view me as a serious student.

81) I have received encouragement from my female friends to take my career plans seriously.

82) I do <u>not</u> have ability to do math.

SOCIAL ATTITUDES INVENTORY (FORM W)

This questionaire is designed to measure people's social and political attitudes. There are no right or wrong answers. On your computer answer sheet, please fill in the number that best describes how you feel.

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

83) In general, I believe that men are superior to women.

84) I think women blame men too much for their problems.

85) I believe that being a woman has caused me to have many strengths.

86) Women should not blame men for all of women's social problems.

87) I do not know whether being a woman is positive or negative.

88) I feel more comfortable being around men than I do being around women.

89) I feel unable to involve myself in men's experiences, and I am increasing my involvement in experiences involving women.

90) I am comfortable wherever I am.

91) Maybe I can learn something from women.

92) Sometimes I think men are superior and sometimes I think they are inferior to women.

93) In general, women have not contributed much to American society.

94) When I think about how men have treated women, I feel an overwhelming anger

95) People, regardless of their sexes, have strengths and limitations.

96) Sometimes I am proud of belonging to the female sex and sometimes I am asha of it.

97) Sometimes, I wish I had been born a man.

98) I am determined to find out more about the female sex.

99) Being a member of the female sex is a source of pride to me.

100) Thinking about my values and beliefs takes up a lot of my time.

101) I do not think I should feel positively about people just because they bel to the same sexual group as I do.

102) I would have accomplished more in this life if I had been born a man.

103) Most men are insensitive.

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

104) Women and men have much to learn from each other.

105) I am not sure how I feel about myself.

106) Sometimes I wonder how much of myself I should give up for the sake of helping other minorities.

107) Men are more attractive than women.

108) I reject all male values.

109) Men have some customs that I enjoy.

110) Men are difficult to understand.

111) I wonder if I should feel a kinship with all minority group people.

112) Women should learn to think and act like men.

113) My most important goal in life is to fight the oppression of women.

114) I enjoy being around people regardless of their sex.

115) I feel myself replacing old friends with new ones who share my beliefs about women.

116) The burden of living up to society's expectations of women is sometimes more than I can bear.

117) I limit myself to male activities.

118) Both sexual groups have some good people and some bad people.

119) I feel anxious about some of the things I feel about women.

120) I feel like I am betraying my sex when I take advantage of the opportunities available to me in the male world.

121) I want to know more about the female culture.

122) I think women and men differ from each other in some ways, but neither group is superior.

123) I find that I function better when I am able to view men as individuals.

124) I limit myself to activities involving women.

125) Most men are untrustworthy.

126) American society would be better off if it were based on the cultural values of women.

SOCIAL ATTITUDES INVENTORY (FORM M)

This questionaire is designed to measure people's social and political attitudes. There are no right or wrong answers. On your computer answer sheet, please fill in the number that best describes how you feel.

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

83) In general, I believe that women are superior to men.

84) I think men blame women too much for men's problems.

85) I believe that being a man has caused me to have many strengths.

86) Men should not blame women for all of men's social problems.

87) I do not know whether being a man is an asset or a deficit.

88) I feel more comfortable being around women than I do around men.

89) I feel unable to involve myself in women's experiences, and I am increasing my involvement in experiences involving men.

90) I am comfortable wherever I am.

91) Maybe I can learn something from men.

92) Sometimes I think women are superior and sometimes I think they are inferio to men.

93) In general, men have not contributed much to American society.

94) When I think about how women have treated men, I feel an overwhelming anger

95) People, regardless of their sex, have strengths and limitations.

96) Sometimes I am proud of belonging to the male sex and sometimes I am ashame of it.

97) Sometimes, I am embarrassed to be the sex I am.

98) I am determined to find out more about the male sex.

99) Being a member of the male sex is a source of pride to me.

100) Thinking about my values and beliefs takes up a lot of my time.

101) I do not think I should feel positively about people just because they bel to the same sexual group as I do.

102) I would have accomplished more in this life if I had been born a woman.

103) Most women are insensitive.

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

104) Women and men have much to learn from each other.

105) I am not sure how I feel about myself.

106) Sometimes I wonder how much of myself I should give up for the sake of helping other minorities.

107) Women are more attractive than men.

108) I reject all female values.

109) Women have some customs that I enjoy.

110) Women are difficult to understand.

111) I wonder if I should feel a kinship with all minority group people.

112) Men should learn to think and act like women.

113) My most important goal in life is to fight the oppression of men.

114) I enjoy being around people regardless of their sex.

115) I feel myself replacing old friends with new ones who share my beliefs about men.

116) The burden of living up to society's expectations of men is sometimes more than I can bear.

117) I limit myself to female activities.

118) Both sexual groups have some good people and some bad people.

119) I feel anxious about some of the things I feel about men.

120) I feel like I am betraying my sex when I take advantage of the opportunities available to me in the female world.

121) I want to know more about the male culture.

122) I think women and men differ from each other in some ways, but neither group is superior.

123) I find that I function better when I am able to view women as individuals.

124) I limit myself to activities involving men.

125) Most women are untrustworthy.

126) American society would be better off if it were based on the cultural values of men.

Appendix G

Consent Agreement

A.   If you are willing to complete this survey, please sign your
     informed consent below.

     1.   I have freely volunteered to participate in this survey.
     2.   I have been informed in advance as to what my tasks would
          be and what procedures would be followed.
     3.   I have been given the opportunity to ask questions, and
          have had my questions answered to my satisfaction.
     4.   I am aware that I have the right to withdraw consent and
          discontinue participation at any time, without prejudice.
     5.   My signature below may be taken as an affirmation of all
          of the above.

Signature_____

Print Name_____

B.   You may now begin. Use a #2 pencil only. When you have
     finished all items, take your questionnaire and answer sheet
     to the experimenter. Thank you for your participation.

UNIVERSITY OF MARYLAND
COLLEGE PARK. MD. 20742

CHANCELLOR'S COMMISSION
ON WOMEN'S AFFAIRS   Marcn 21, 1936

Dear Faculty:

The Chancellor's Commission on Women's Affairs is concerned with undergraduate
students' experiences at the College Park campus. We are embarking on a project
and need your help. Research on student retention, self-esteem and post college
career advancement suggest that students' perceptions of their environment are
correlated with academic achievement, applications to graduate school and success
in future careers.

With the full support of Chancellor Slaughter, the Women's Commission will be
measuring students' perceptions of the campus environment i.e., advising, classes,
relationships with faculty and students, and career preparation. Students will
not be asked to react to specific situations but rather to respond to the sum of
their experiences at College Park. We are trying to determine what aspects of
the campus are more and less supportive to student needs.

We need your help. We would greatly appreciate it if you would donate 45
minutes of your class time in order for us to administer a battery of instruments
to your class. Of course, it will be made clear that any student would be free to
decline participation. No individual student's responses will be reported.
Confidentiality will be maintained. Only group summaries of the results will be
reported. Both faculty and students who would like a summary of the results will
receive one. We will be surveying undergraduates from the five divisions from
freshmen to seniors between April 1 and May 16, 1986. By donating 45 minutes
of your class time you will be making an investment in students at College Park.

Enclosed is a post card. If you are interested in participating, please check
box #1 and give us the best date between April 1 and May 16 to come to your class.
A letter of confirmation will be sent to you. If you have any questions, please
check box #2 and you will be contacted by one of the researchers and we will try
to answer your questions. If you prefer to decline, we would appreciate knowing
if you received our letter, so please return your post card with box #3 checked.
Thank you for your cooperation.

                              Sincerely,

                              Diana Jackson
                              Chair-Chancellor's Commission on
                              Women's Affairs
                              Assistant Director, Campus Activities

                              Dr. Mary Leonard
                              Chair, Undergraduate Women's Education Proje
                              Associate Professor
                              Staff Psychologist

                              Shelly Ossana
                              Senior Researcher
                              Counseling Psychology

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