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MENTORING, NETWORKING, AND THE PROFESSIONAL DEVELOPMENT OF AFRICAN AMERICAN GRADUATE/PROFESSIONAL STUDENTS

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EMILIE PHILLIPS SMITH

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MENTORING, NETWORKING, AND THE PROFESSIONAL DEVELOPMENT OF AFRICAN AMERICAN GRADUATE/PROFESSIONAL STUDENTS

BY

Emilie Phillips Smith

A THESIS

Submitted to
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ABSTRACT

MENTORING, NETWORKING, AND THE PROFESSIONAL DEVELOPMENT OF AFRICAN AMERICAN GRADUATE/PROFESSIONAL STUDENTS

By

Emilie Phillips Smith

(Body of Abstract)

Though in the past twenty years the number of African Americans receiving undergraduate education has nearly tripled, this population is still grossly under-represented in graduate/professional education. Little research has examined the experience of African American graduate and professional students, particularly the faculty and peer support received by these students.

The research to be reported here was a survey of 182 African American graduate/professional students at a large state-supported university. This study examined the frequency and amount of support received by African American graduate/professional students. In regression analysis, mentoring was found to be a significant predictor of teaching, funding and publishing activities, while networking was a predictor of conference involvement. Further, the culturally committed student was examined and was found to have lower levels of satisfaction, but higher levels of teaching and research activities. This study has implications for enhancing the professional development of African American graduate/professional students.

"But, you are a chosen generation, a royal priesthood, a holy nation, a peculiar people; that you should should show forth the praises of Him who has called you out of darkness into His marvelous light..." (I Peter 2:9)

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know what I would have done without his help, editing, and patience.

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Emilie Phillips Smith
Michigan State University
1986

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Statement of the Problem

Education has long been perceived as an important prerequisite to financial and occupational success in the United States. Likewise, African Americans in this country especially have viewed education as an avenue for achieving higher occupational status (Harleston, 1983). However, the access of African Americans to educational opportunities historically has been severely restricted. Though in the past twenty years many of these restrictions have been lifted, the centuries of inequality have produced a dearth of African American graduate and professional students. This is evidenced by the small percentage of African Americans presently holding graduate/professional degrees in relation to the total number of persons holding graduate/professional degrees. The most current statistics available from the National Center for Educational Statistics, United States Department of Education (1985), indicate that for 1980-1981 African Americans received 3.9% (1,265 persons) of all doctorate degrees and 4.1% (2,929 persons) of all first professional degrees conferred in this country. It is questionable that this small proportion is adequate for serving the African American community which is in need of more well-prepared professionals.

In this statement of the problem, a brief historical perspective will be presented along with specification of the magnitude of the problem produced by historical inequities.

Historical Perspective

The 1896 Plessy vs. Ferguson decision began the institutionalization of de jure (by law) segregation in the United States. However, segregation had enjoyed de facto (actual) existence long before. As a result, African Americans were prohibited from attending colleges and universities established for the education of European Americans. Consequently, between 1892 and the early 1900's many institutions of higher learning were established for the exclusive education of African Americans, which presently are known as "historically black colleges and universities." (Blackwell, 1981; Mingle, 1978; National Advisory Committee of Black Higher Education and Black Colleges and Universities, 1979a).

A number of these historically black colleges and universities were and still remain well endowed by philanthropic individuals and/or organizations. Yet, too many suffered and continue to suffer from the multi-faceted problem of racism which has resulted in problems in the administration and development of these colleges and universities. Fleming (1984, p. 5) has pointed out that because the majority of black public colleges were hastily created to avoid admitting African Americans to existing white institutions, the facilities provided were accordingly inferior. An emphasis on industrial training further exacerbated the situation, limiting the type of curriculum available. Yet, in spite of these circumstances a cadre of private black colleges have emerged (schools such as Fisk,

Morehouse, and Spelman) which were and are committed to liberal arts education and found to be superior by usual national standards (Fleming, 1984, p. 6).

Given the state of historically black colleges and universities, it is not surprising that few of them offered any opportunities for graduate or professional education. By 1936, only six out of 56 private, historically black colleges offered some graduate training. None of the 21 public black colleges offered such training. A doctoral program was not instituted until after 1957 when Howard University awarded the first doctoral degrees from a historically black university (National Center for Education Statistics, 1985). Excellent training in dentistry, medicine, and law has been available as early as 1915. As late as 1968, 80% of all African American physicians and dentists were graduates of one of these two schools (Blackwell, 1981). However, prior to 1954, no historically black college offered a doctoral program. Such limited access to graduate education prompted seven important cases which led to substantial change.

Between the 1930's and the 1950's, African Americans began to sue for the right to enroll in predominantly white colleges and universities in graduate and/or professional programs. The five most significant cases which increased access to graduate/professional programs were: Maryland vs. Murray, 1935; Missouri ex rel Gaines vs. Canada, 1948; Sipuel vs. University of Oklahoma, 1948; Sweatt vs. Painter, 1950; and McLauren vs. Oklahoma, 1950 (Blackwell, 1981).

In all of the above cases African Americans were seeking to win admittance to a program in a predominantly white university--admission to which they were primarily denied. These cases led to the landmark Supreme Court decision in the 1954 Brown vs. Topeka, Kansas Board of Education, (1954) which opened the doorway for large amounts of African Americans to obtain equal educational opportunities. This case ruled in favor of desegregating public schools "with all deliberate speed."

Between the years of 1950 and 1975, the number of African American males completing four years of college increased 380% and the number of African American females completing four years of college increased 315% (Mingle, 1978). Needless to say, this represented a dramatic increase in the number of African Americans receiving the opportunity to enter higher education. Additionally, in this period of time, many programs were established to assist more African Americans in obtaining higher education; programs that were designed to provide financial as well as educational support for the increased pool of African American students.

It is necessary to critically examine the impact of the periods of affirmative action impetus upon African American access to graduate/professional education. Though by 1979 African Americans had grown to 11% of the national total of undergraduates, graduate/professional students from this same group never grew to more than 5% of graduate students or 6% of professional students (National Advisory Committee

of Black Higher Education and Black Colleges and Universities, 1979b).

The under-representation of African Americans in the population of graduate/professional students is a problem for a number of reasons. The first of these is an issue of equity. The under-representation of African Americans reflects the dearth of African Americans in professional careers which provide higher paying salaries, thus perpetuating inequality of income and the enormous income gaps between African and European American citizens (Blackwell, 1981). The second reason that this is a problem is a pragmatic one. Graduate and professional education is an initial step in acquiring leadership and development opportunities. Thus, under-representation is determined by the number of African American professionals in a state or region relative to the total population of African Americans in that state or region. With the advent of "white flight," it becomes increasingly important that the African American community is empowered to be able to supply the services needed for community development. Urban areas with a predominantly African American populace need professionals who can prevent deterioration and manage the cities effectively.

It has been argued that educated African Americans who use their talents to develop the community can be especially helpful. As early as 1910, DuBois identified "the first step toward lifting the submerged mass of black people in the South...[as being]...the training of the

talented few." He further noted the rampant segregation, and racial isolation and concluded:

> "What the Negro needs therefore of the world and civilization, he must largely teach himself; what he learns of social organization and efficiency he must learn from his own people. His conceptions of social uplift and philanthropy must come from within his own ranks, and he most above all make and set and follow his own ideals of life and character" (DuBois, 1910, p. 37).

There remains a need for well-prepared African American professionals holding advanced training in a diversity of areas to provide leadership, administrative skills, and values to bourgeoning African American communities.

Approach to the Problem

The importance and the need for African American professionals has been demonstrated. Increasing the number of African Americans who enroll in and complete graduate/ professional degree programs is prerequisite to increasing the number of professionals. This study is especially concerned with the achievement and professional development of African American students during their tenure in degree programs. Achievement here is used specifically to refer to the grade point average of the student. Professional development refers to co-curricular activities including research, publication, teaching, and grantsmanship activities.

Achievement is an essential factor in higher education which has been extensively examined, especially with African American undergraduates. A sizeable amount of research has been devoted to identifying predictors of academic achievement among African American students. Those particularly concerned with the admissions procedure have investigated the relationship of variables such as high school grade point average (G.P.A.) and standardized test scores to achievement (Perry, 1981). This approach has been critiqued, stating that standardized tests are culturally biased and lack predictive validity for forecasting the achievement of African American students (White, 1979).

Other studies have explored the relationship of other conceptual variables to achievement, such as self-esteem, self-concept, and expectancies. Assertions by this research often includes the conclusion that the lack of self-esteem, self-concept, or high expectancies is the cause of low achievement among African American students (Campbell, 1979; Parker, Schauble, and Altmaier, 1979). Others of these efforts have sought to make measures of these variables more relevant to African American respondents in hopes of attaining higher scores on self-concept (King and Price, 1979). However, the weakness of this method remains that such models are preoccupied with the individual to the omission of other types of variables. These approaches lead to the attempt to alter the individual with no intervention targeted at the systems or environment which impacts the aspirations as well as the learning of the student. Such a model neglects to recognize a crucial point recognized by Nobles (1976) and by Erickson (1968); that one's concept of oneself does not develop in a vacuum but as a result of group identification, culture, and values. Nobles has argued even further that African Americans particularly develop the concept of "extended self," which is a direct result of group identification (1976).

The importance of considering the influence of variables other than individual attributes can be seen. Individual level analyses of variables affecting student achievement are inadequate in that they do not consider other environmental variables such as the role of

administrators, teachers, other students, nor the goals and purposes of the educational institution for educating African Americans. There has been endless research of individual variables yet, little about environmental variables which affect the academic achievement of African American students. The exclusive focus on the individual level of analysis obfuscates other influences upon the achievement of students in the pursuit of education. At this stage of development in our understanding, it would be worthwhile to begin considering analyses at a higher level, e.g. at the organizational or system level of analysis, using the individual as the unit of measurement.

Heller and Monahan present a research framework in which they describe three different targets of analysis: the individual level, the organizational level, and the community level (Heller and Monahan, 1977, pp. 80-82). It is posited here that a model examining at least two levels of analysis could be potentially enlightening. Such a model would not neglect consideration of individuals, but would be especially concerned with the individual/environment fit. This model would be concerned with measuring characteristics of the individual and aspects of the individuals' environment in which he/she functions. This would be done in an effort to assess the possible interaction of the environment and individual in affecting achievement. Specifically, in investigating factors related to the achievement of African American students, an ecological model would examine environmental aspects such as

the students' network with other graduate and professional students and the students' mentoring or advising networks. Individual level variables which might interact with higher level variables such as demographic characteristics, the students' overall satisfaction with the environment in which the college or university is located, and cultural commitment, would also be included. At this point, this paper will examine the research investigating the relationship between these variables and the achievement and professional development of the African American graduate/professional student. Literature was examined for the past ten years located via the Educational and Social Science Index. The specific independent variables explored included environmental satisfaction, cultural commitment, faculty support, and peer support networks.

Review of the Pertinent Literature

The study of the African American student's learning environment is not an unexplored research area. It seems that a great deal of research on the African American student's perception of the college environment coincided with large increases of these students in predominantly white colleges and universities. Between the years of 1965 and 1970, African American enrollment in predominantly white southern colleges and universities tripled. In northern schools between 1967 and 1974, enrollment of these students increased 160%. Conversely, the enrollment of African American students in historically black colleges dropped from 80% to 60% between 1965 and 1970, and from 60% to 40% between 1970 and 1978 (Mingle, 1981). Thus, since 1975, 75% of the African American college student population has been enrolled in predominantly white colleges and universities (Mingle, 1981).

In light of the fact that such a large proportion of African American graduate students (and a smaller proportion of African American professional students) currently pursue their advanced degrees at predominantly white universities, this review will examine research concerning African American students' perception of this learning environment.

Environmental Satisfaction

A number of studies concerned with student perception of the learning environment have compared student populations on the degree of "satisfaction" with the university environment. Though the preponderance of general environmental satisfaction studies have been conducted using undergraduate African American students, that research will be presented here to give the reader some familiarity with the background of the concept.

Robertson (1980) sought to assess African American student satisfaction to determine if it was significantly different than that of European American students in a southern, predominantly white university. Robertson selected a sample of 56 African American and 395 European American students; each of whom was administered the College Student Satisfaction Questionnaire (CSSQ). The CSSQ was a 70 item questionnaire containing Likert-type statements designed to assess student satisfaction with five aspects: working conditions (cleanliness, comfort, and adequacy of facilities), compensation (the amount of effort needed for acceptable grades), quality of education (the competence and helpfulness of faculty/staff, reasonableness of requirements and effectiveness of teaching methods), social life (dating, campus events, informal activities), and recognition (the attitudes and behaviors of other people indicating acceptance as a worthwhile individual).

Separate mean scores were derived for the African American students and the European students which were

subjected to t-tests to determine if the two groups differed significantly. The data was analyzed to investigate racial differences either on total satisfaction or on one of the five sub-scales. Robertson found that African American student satisfaction was somewhat low, but not significantly. The only significant difference was found on the compensation scale which measured whether students thought the amount of their effort was being duly rewarded; African American satisfaction on this scale was significantly lower.

There were a number of methodological issues raised by this study which deserve some attention. Primarily, though the author stated that the proportion of black students in this study (12.4%) was similar to the actual proportion enrolled at the university (11.3%), representativeness of this sample was not addressed. The students interviewed were selected from various university classess and may have differed from the larger population of black students at the university. Secondly, no information was provided about the psychometric properties of the CSSQ. The reader is given no reports about the reliability of the questionnaire. Measurement instruments which lack reliability contribute to error variance, making differences between racial groups more difficult to detect. Without more data about the CSSQ, this possibility cannot be discounted. Thirdly, considering the small number of black students included in the study (n=56), the study may have lacked statistical power. Without power, significant racial differences were less

likely to surface on the subscales even if they did exist (Keppel, 1982, pp.70-72). Given the above problems, it is not surprising that Robertson found African American student satisfaction to be lower than that of European American students, but did not detect significant results.

Another study sought to compare the African American and the European American student's perception of the predominantly white college environment. Keller, Piotrowski, and Sherry (1982) sought to examine the homogeneity of two student populations. They utilized the College and University Environment Scale (CUES) and received completed questionnaires from a sample of 51 African American students and 42 other students (mostly European American). The CUES consisted of several dimensions in Likert-type format including satisfaction with: existence of and representativeness of student leaders, assistance from the university in social adjustment, favoritism (the degree to which attention from professors helped the respondents), course value, professor competency, communication, vocational training, the study environment, and the importance of setting high academic goals.

Significant differences by race were found on three dimensions, from which the authors concluded: 1)black students, particularly black females felt that campus leaders existed but were not representative of their concerns, 2)black students felt they were seldom the beneficiaries of faculty attention which would assist them in matriculating college, and 3)black students place greater

emphasis on setting high academic goals. In examining the results of this study with previous findings, the response of African American students on the favoritism scale was not surprising. Previous qualitative research has also cited black student alienation from faculty in predominantly white colleges (Willie and McCord, 1972). Nor was it inconsistent with past research which has noted that black students possess high aspirations. Gurin and Epps (1975) found that high aspirations are frequent among black students though not always positively related to grade point average. Often the converse is true, the students with achievable goals have higher grade point averages (Gurin and Epps, 1975; Hall, Mays, and Allen, 1983).

Keller, Piotrowski, and Sherry reported results consistent with the more prominent research in spite of methodological inadequacies. They did not address representativeness of the student samples. At least they reported that a stratified design was utilized in which various classes and secondly students were randomly selected. No reports were offered about the reliability of their instruments. Examining the two different studies by Robertson and by Keller et al., the reader might be left in a quandry as to whether significant racial differences in satisfaction exist. However, not to be ignored is the fact that a pattern of responses is evident---black students in both studies exhibit lower levels of satisfaction.

African Americans, Mexican Americans and Native Americans have been compared on indices of satisfaction with

extra-curricular activities, study habits, student contacts, faculty/administrative contacts. Madrazo-Peterson & Rodriquez (1978) report no significant differences between ethnic groups on the CSSQ or the Environmental Satisfaction Questionnaire (Madrazo-Peterson & Rodriquez, 1978). Though they did not find significant ethnic differences, they did find that women tend to be more stressed than men and seniors to be more isolated than freshmen.

It is difficult to interpret these results without further inquiry. A number of conclusions could be made, one of which could be that all of these ethnic groups are reasonably satisfied. An alternative hypothesis might state that the above groups are relatively dissatisfied and all experience a lack of support in their adjustment to the predominantly white college or university. Future study could investigate the experience of a number of ethnic groups to determine their level of satisfaction (relative to the larger population of students), the degree to which the groups differ (if at all) in their satisfaction with particular aspects of predominantly white colleges and universities, and most importantly how satisfaction effects outcome variables such as grade point average and persistence in achieving post-secondary education. At present, there is a lack of information as to how African Americans compare with other disenfranchised ethnic groups on satisfaction.

Fleming's cross-sectional study (1984) has contributed substantially to understanding the experiences of African

American students in predominantly white colleges and universities. The premise underlying much of the literature examining African American student satisfaction has been that these students are not the recipients of needed support in white institutions because of their racial/cultural background. This being the case, African American students at predominantly white colleges and universities should have different experiences than African American students at predominantly black colleges and universities. Further, African American student satisfaction with the predominantly white college or university should be lower than that of the European American student.

Fleming examined the "pattern of adjustment" of African American students in 15 colleges (seven predominantly black and eight predominantly white colleges and universities) located in Georgia, Texas, Mississippi, and Ohio. This resulted in a sample of 3,000 black and 500 white students who underwent four to eight hours of testing on the variables of socioeconomic status, aptitude (SAT and ACT scores), subjective perception of college experience, academic performance (grade point averages), aspirations, self-concept, cognitive development, and a number of personality scales. The data was subjected to analyses of variance and covariance, and treatment effects were calculated.

Fleming concluded from test results that black students in predominantly black schools exhibited better overall intellectual and psychosocial development (1984, p.183).

Higher scores on self-concept and increasing performance during college matriculation was typical of the students in predominantly black colleges and universities. This was an enlightening finding in the wake of criticisms of the role, usefulness, and effectiveness of historically black colleges in education.

To answer the question of whether the development of African Americans in predominantly white schools was similar to that of other students in these schools, Fleming compared black and white students in large white universities in Texas and Georgia. She noted that white students made larger gains in academic performance and social adjustment than black students in the same schools. Fleming further concluded via comparative analysis that the development of white students in white schools paralleled that of black students in black schools (Fleming, 1984, p.186).

One concern with Fleming's findings is that of generalizability. Fleming acknowledged that the sample of schools, and subsequently students was largely dictated by logistical concerns, such as locating geographic areas in which predominantly black and predominantly white colleges were available. Additionally, students were recruited and some were offered monetary incentives. It is possible that neither the colleges nor the students included were representative of their respective populations. For example, in Mississippi, a state deeply entrenched in southern tradition, there were no substantial differences in student achievement, aspirations, nor faculty support

between those in predominantly black colleges and those in predominantly white colleges. Regardless of racial composition of the institution, black students exhibited lower academic and social development in Mississippi. Contrastingly, in Georgia where the more highly rated black colleges are located, African American students scored substantially higher on indices of achievement, aspirations and faculty support than students from the same population in predominantly white colleges. Though the overall trend indicated a more supportive environment in predominantly black colleges, these colleges obviously differ in their environment, making representativeness of sample a salient issue.

It should be noted that Fleming does not use these results to argue for segregated schooling. Issues beside that of racial composition, such as geographic concerns, financial limitations and degrees available do and should influence the students' decision to enroll in a particular college. What this data does highlight is <u>the importance of environment</u> in the education and development of the African American student.

Cultural Commitment as a Moderator of African American Student Experiences

Research has suggested that African American students who are "culturally committed," are most interested in working in areas relevant to their ethnic group and culture. Allen defines collective commitment (a synonymous construct) as "the extent that they [African Americans] feel a personal responsibility and dedication to improving the lives of the masses of Black Americans, Blacks can be said to exhibit collective commitment. Collectively committed Blacks expect themselves and others to invest skills and resources in the uplift of the Black community." (Allen, 1984) However, often this group of students does not feel that their programs meet all of their needs. An example of this was illustrated by Willie & McCord (1972) from their interview with African American students. They cited the instance of a graduate student in literature whose professors did not feel that African American literature forms were viable and aesthetically acceptable. Other examples from their study includes students in the social sciences who are seeking to do research which is "relevant" and have become bored with theoretical pedagogy which they feel has little or no application to them or their community. Thus, qualitative studies suggest that African American students may differ in satisfaction. Cultural commitment may be a moderator of student satisfaction.

Gurin and Epps (1975) sought to further study the culturally committed student. They concluded that for many

of the students in their sample, individual goals and aspirations were not necessarily antithetical to collective commitment and dedication to improving the circumstances of African Americans as a group. Collective commitment bears much similarity to Nobles' concept of "extended self" in which the advancement of self is achieved via the advancement of the group (Nobles, 1976).

Yet, it has been pointed out that currently, culturally committed African American students may be experiencing some difficulties. It has been found that "race consciousness" or cultural commitment is negatively related to achievement as well as the perception that there is an opportunity for mentoring relationships (Allen, 1984; Hall & Allen, 1982). It would be very important to further assess the variable of cultural commitment to determine its actual impact upon the development, mentoring, networking, and satisfaction of African American students.

Mentoring

> "The mentor relationship is one of the most complex and developmentally important a man [Levinson's language] can have in early adulthood." (Levinson, 1978).

A number of studies examining the mentor relationship have followed Daniel Levinson et al.'s investigation of mentoring. Levinson's research, which was a longitudinal examination of the developmental process within 40 men illuminated the importance of mentoring to growth and progress. Thus, research has been generated examining the impact of mentoring on variables such as career advancement, career planning, satisfaction with career and progress in general, and upon the tendency to be a mentor.

At this point it would be helpful to attempt to posit a definition of mentoring. Phillips-Jones (1982) viewed mentors as "influential people who significantly help you reach your major life goals." Fagan and Walter (1982) simply described a mentor as "an experienced adult who befriends and guides a less experienced adult." The mentor may perform a number of functions for the protege. Levinson (1978) stated that some of the most important functions include: host and guide, exemplar that the protege can admire and seek to emulate, provider of counsel and moral support, and a person who facilitates the "realization of the [protege's] dream."

Shapiro, Haseltine, and Rowe (1978) have distinguished

a mentor relationship from some other types of professional relationships. A range of relationships are described that can take place between a mentor and protege, from peer pal to a mentor. Peers help each other to succeed; an exchange and reciprocity is emphasized here. A guide can point out the pitfalls. A sponsor is a strong patron and advocate yet, they do not strongly shape the career of the protege. The mentor relationship, however is an emotionally charged one in which the mentor to a great extent reproduces her/himself in the protege. Shapiro et al. (1978) stated that the mentor relationship facilitates the most opportunity for aid but has an "intense paternalistic" structure. At this point, the impact of mentoring will be examined in further detail.

Impact of Mentoring. There have been a number of studies affirming the positive effects of mentoring. Roche (1979) has investigated mentoring in the business sector. He studied a sample of 1,250 executives of major firms in the United States. Two thirds of his sample had one person whom they referred to as a mentor who assisted them. One third of the sample had two or more people who made a significant impact upon their career. In his study he found that most of them established this relationship within the first 5 years of their career. Additionally, he found that 75% of the executives who had mentors were under age 40. Roche pointed out that for this sample of business executives, the relationship occurred in their first job

position, not in the undergraduate or graduate academic setting. Of those who had a mentor, Roche reported that they: 1) earned more money at a younger age; 2) were better educated; 3) had more career planning; 4) and had greater career satisfaction. In looking at the relationship of these variables to mentoring it is difficult to determine the direction of the relationship: did the mentoring relationship cause these positive outcomes, or were people who were better educated, better career planners and more satisfied with their career, the people who received mentoring? Experimental research would be needed to resolve this issue. Yet, this research was valuable in pointing out some positive variables associated with mentoring.

Another study with more of a psychiatric emphasis has found mentoring to be related to good mental health. Burton (1977) studied 40 men between the ages of 30 and 40. Those who reported having a mentor were symptom free, and generally more content, and better able to accept success and failure. However, a mentor relationship is not entirely a positive experience. Haseltine (1977) saw some disadvantages to mentoring. She stated that female role models may actually inhibit women's advancement. She viewed the conditions and contexts under which many older professional women developed as very different from that facing women currently. This perspective could be used to make an argument that more females need to have mentors. Mentors often play a role in professional socialization, helping the protege "learn the ropes." Also, research seems

to show that those who have had mentors are more likely to be mentors. (Levinson, 1978; Roche, 1979). Therefore, one could infer that more women need to experience a mentoring relationship in order to increase mentoring among women.

There are additional reasons why a mentor relationship may not be entirely desirable. Once again given the "intense paternalistic" structure "with most strings attached" as described by Shapiro et al. (1978), one needs to carefully assess the desirability of a mentor relationship. Levinson (1978) pointed out that the mentor relationship is usually terminated with strong conflict and bad feelings on both sides. Thus, there are positive as well a negative aspects to the mentoring relationship.

Furthermore, Cameron and Blackburn (1981) questioned the relative importance of a mentor. In their research of 250 regular full time professors, they included a number of independent variables to examine their effect upon rate of publication, grants received, rate of collaboration and professional association (number of colleagues in various influential positions such as member of journal editorial board). They found that place of employment (defined by the Carnegie Commission's ranking of universities) and early collaboration seemed be more highly related to their outcome measures than the support of a mentor.

However, Cameron and Blackburn offered little explanation of their operationalization of the concept, mentor. Secondly, it appeared that they were surveying professors about current emotional support. There was no

indication as to whether a past mentoring relationship might have had a significant influence. Mentoring may be more important for the aspiring graduate student than for the professor who has already obtained their first job position.

Therefore, the majority of research discussed here up to this point seems to concur about the importance of mentoring, even given the disadvantages.

Who Receives Mentoring. From what we know at this point about mentoring, it seems to be a highly selective process in which the protege is chosen and the mentor agrees to perform the role (Blackwell, 1983). The mentor/protege relationship is a complex match of people on several ascriptive characteristics. Levinson (1978) reported that the men in his study all had male mentors and scarcely even had female friends. He states that women have less mentoring as a consequence of the scarcity of women in the world of work in general. Bogat and Redner (1984) acknowledged the paucity of direct evidence that women lack mentors. However, they concluded from the available research that "female graduate students are not being offered opportunities for professional development that would more than likely be theirs if they had a mentor." Thus, women are thought to be underrepresented in receiving the support of a mentor.

Age also seems to be a critical variable. In Roche's research the majority of people who received mentoring were under 40 years old. Presumably, after age 40, respondent's

had "outgrown the readiness to be the protege of any older person." (Roche, 1979).

According to Levinson (1978) the difference in age between mentor and protege averages 8 to 15 years. A larger difference is likely to be construed as a parent/child relationship, whereas less difference in age is likely to be seen as a peer relationship. Fagan and Walter (1982) examining mentoring in a sample of teachers, found a mean age difference of eleven years and mentors had an average of ten years more experience than their protege. They also reported that 59% of teachers viewed their mentor as a peer, 22% as an older sibling, and 19% as a parent. Because this study did not examine the statistical relationship between age difference and perception of mentor it is difficult to assess the degree to which Levinson's ideas are supported in this study. Also, one questions the meaning of perception of the mentor or protege; is a potential mentor less likely to select someone who would be more like a child to them than like a younger sibling? More information is needed concerning this aspect. Yet, age seems to be a salient factor in the mentoring formula.

African Americans and Mentoring. There is a dearth of information concerning race and mentoring. However, there is one piece of research investigating mentoring and African American people. James Blackwell's work (1983) has probably contributed most to the understanding of the mentoring experience for African American students. Blackwell's

sample consisted of 157 professionals who were asked to give retrospective insight into their graduate experiences. Firstly, he found that only 13% of the sample had a mentor in graduate/professional school, 45% had sponsors, and 42% had an advisor or peer who was the most important contributor to their professional development. These distinctions were based on the ideas of Shapiro et al. (1978) and were differentiated by the amount of support in different areas received from the helpful person. Also, Blackwell found that of those who had a mentor, a larger percentage of them attended predominantly white universities as opposed to predominantly black universities. However, this greater percentage was not statistically significant. Blackwell also found that mentoring was significantly related to occupational status as measure by the Blau-Duncan Index of Occupational Status.

The results of this study were interesting in that it found that African American respondents who attended predominantly white universities seemed to experience more mentoring. Contrastingly, respondents who attended predominantly black universities had a larger acquaintance volume. Granovetter (1976), who conceived the idea, defined acquaintance volume as the "average number of people known." (1976) Not only did Blackwell's research demonstrate that African American students at predominantly black universities had larger acquaintance volumes, but also that acquaintance volume was positively related with collaboration. Given the evidence presented in this

research it seems that both mentoring and networking are important to career advancement.

This study offered mixed support of Granovetter's "weak vs. strong ties" hypothesis (1973). Granovetter's "weak vs. strong ties" hypothesis states that it may be preferable to have several resource persons instead of a few intense ties. He theorized that this should lead to a larger network and thus more collaboration. However, given such strong evidence in favor of mentoring, one may question which is actually preferable?

Fagan and Walter (1982) have conducted a study which might also be called a test of the "weak vs. strong ties" hypothesis. The sample consisted of 107 teachers in public school districts in Kentucky and Illinois. (No response rate was reported.) One item in the survey sought to assess the presence of a definite mentor. The respondents might reply that: 1) they had a definite mentor 2) several experienced people were helpful and one of them was especially helpful; 3) several experienced people were helpful and no one was especially influential; and 4) no experienced persons were particularly helpful. From these items the authors assessed the existence of a definite mentor and the degree of "diffuse mentoring." Diffuse mentoring was operationalized by the third option.

The results of this study revealed that 81 teachers (76%) received some mentoring. Of these, 31 (29%) experienced diffuse mentoring, and 50 of them (47%) had definite mentors. They found that those with a definite

mentor were more satisfied with their work than those with diffuse mentors or no mentor.

Though this research reiterates the importance of a mentor, little indication is given describing the difference between mentoring and diffuse mentoring. The reader may wonder how much actual help or support, and what types of help and support were received by those with mentors that was not received by those with diffuse mentoring. The reader is left in a quandry about the actual type, nature, and quantity of help, influence, or support received from a definite mentor as compared to diffuse mentors.

Thus, one begins to ask: what is the actual impact of mentoring? Several pieces of research point out the importance of mentoring to career advancement, success, and satisfaction. Yet, given the intense ties and requirements of the protege, is it necessary to professional development? The student who has a number of helpful influential resource persons might fare equally as well. Also, given the complex match between the mentor and protege, can one always expect to be able to develop such a relationship? This is an issue especially for the African American graduate/professional student. If this student is highly culturally committed and desires to work in an area relevant to African American people, this black student might encounter even more impediments.

Some effort needs to be dedicated to further study of the importance of mentoring, investigating the possibilities for African American graduate and professional students to

advance and succeed professionally.

Conclusions and Implications for Research

In summary, there has been substantial research into factors affecting the achievement of African American students pursuing advanced degrees. A preponderance of the research has focused on individual level variables. The research which has utilized environmental variables has had often had major methodological flaws. The research done on specific aspects of the African American graduate/professional student's learning experience has been more informative, especially that which was concerned with the support available from faculty and peers.

It would be worthwhile to further pursue this area of research, to quantify the amount of contact with faculty and peers as well as to examine the area in which the contacts occur. Importantly, it would be important to assess if support is positively related to professional development for African American students. Though there has been assessment of the impact of faculty support, there has been little concern with peer support, not less consideration of whether they have similar effects. Additionally, there is a need to replicate studies evaluating if cultural commitment has any impact upon the satisfaction, networks, or professional development of African American students.

In lieu of formal hypotheses, the exploratory research to be proposed will seek to investigate the following questions:

1. What is the amount and type of contacts with faculty

among African American graduate/professional students?

2. What is the amount and type of contacts with other students (students at large as well as with other African American students)?

3. In what contexts do these contacts occur; social, academic, professional, others?

4. Can intensive peer contacts be as effective as faculty contacts in predicting professional development?

5. What is the relationship, if any, of cultural commitment to the faculty and peer networks? to professional development? to satisfaction?

The next section will detail the research methodology to be used to investigate these questions.

Method

Sample and Procedures

The sample consisted of the entire population of 298 black ("black" is the descriptor utilized by the university) graduate and professional students at Michigan State University. A list of the names and addresses of black graduate and professional students enrolled spring term of 1985 was obtained from the University. A copy of the instrument was mailed to each student at their home address with a stamped and addressed return envelope enclosed. Confidentiality was ensured by using code numbers instead of the respondents' names. The code number was utilized on the questionnaire to determine the respondents to whom follow-up letters would be mailed. Two follow-up letters were mailed; one was mailed one week after the initial mailing and another after three weeks. A replacement questionnaire was included in the second follow-up mailing.

A cover letter from the investigator, identified as a graduate student in the Psychology Department, accompanied the initial questionnaire. In the cover letter, respondents were asked to participate in a study examining the experiences of black graduate and professional students enrolled at Michigan State University. They were encouraged to complete the questionnaire and told that the information might ultimately be used to aid in determining policy and/or

programs which could assist black graduate and professional students in their matriculation. Another incentive was included to motivate the students to return their questionnaires. A gift certificate for 25 dollars at a popular restaurant was offered in a prize drawing. The students who returned their surveys by the designated deadline were entered in the prize drawing for the gift certificate. Using these procedures, a response rate of 61 percent, 182 students, was obtained.

A description of the sample on the demographic variables of gender, age, marital status, existence of children in the household, college in which student is enrolled, funding sources, and degree pursued is presented in Table 1, under the column labelled "Current Study." This sample was examined to determine its similarity or dissimilarity to the larger graduate student population at Michigan State University. The data for comparative purposes was obtained from a study by the University of graduate students (O'Kelley, 1986). This descriptive data is also illustrated in Table 1, under the column labelled "University Study." Black students were 6 percent of this sample and professional students (i.e., human, osteopathic, and veterinary medicine students) were not included.

Summarizing the two samples, the sample of black students was comprised of more women, predominantly single people, most of whom had no children. In the University sample (O'Kelley, 1986), of which black students comprised 6% of the sample, there were more men and more married

Table 1

Demographic Characteristics

	CURRENT STUDY+		UNIVERSITY STUDY	
Gender	**N**	**Percent**	**N**	**Percent**
Male	79	43.4	137	46.0
Female	103	56.6	121	52.0
MISSING	0	0	7	2.0
	182	100.0	265	100.0
Age	**N**	**Percent**	**N**	**Percent**
21-25	46	25.3		Similar
26-30	45	24.7		categories
31-35	56	30.8		not
36-40	20	11.0		available
41 and over	15	8.2		
	182	100.00		
Marital Status	**N**	**Percent**	**N**	**Percent**
Single	107	58.8	96	36.0
Previously Married	26	14.3	17	6.0
[separated	10	5.5]		
[divorced	14	7.7]		
[widowed	2	1.1]		
Married	49	26.9	142	54.0
MISSING	0	0	10	4.0
	182	100.00	265	100.0

+ In the CURRENT STUDY, missing values were recoded to the value of the mode. This resulted in the semblance of no missing data, but facilitated analysis of the entire data set.

Table 1

(cont'd)

	CURRENT STUDY		UNIVERSITY STUDY	
Children	N	Percent	N	Percent
Yes	71	39.0	85	32.0
No	111	61.0	134	51.0
MISSING	0	0	46	17.0
	182	100.00	265	100.0

College	N	Percent	N	Percent
Agriculture and and Nat. Res.	14	7.7	Similar categories not available	
Arts and Letters	13	7.1		
Business	13	7.1		
Communication Arts	9	4.9		
Education	49	26.9		
Engineering	5	2.7		
Human Ecology	5	2.7		
Human Medicine	25	13.7		
Natural Science	3	1.6		
Osteopathic Medicine	12	6.6		
Social Sciences	24	13.2		
Veterinary Medicine	6	3.3		
MISSING	4	2.2		
	182	100.0		

Table 1

(cont'd)

	CURRENT STUDY		UNIVERSITY STUDY	
Degree	N	Percent	N	Percent
Masters	71	39.0	146	55.0
Doctoral	68	37.4	80	30.0
Professional	42	23.1		N/A
Other	1	.5	35	13.0
MISSING	0	0	4	2.0
	182	100.00	265	100.0

Funding Sources++	N	Percent	N	Percent
Parents	18	4.8	34	17 0
Personal	82	21.8	91	44.0
Spouse	13	3.4	47	23.0
Federal/university Loans and Grants	103	27.4	44	21.0
[loans	73	19.4]		
[grants	30	8.0]		
Work study	4	1.1		
Academic fellowship	19	5.0	27	13.0
Assistantships	52	11.8	90	44.0
[teaching	15	4.0]		
[research	17	4.5]		
[other	20	3.3]		
Equal opportunity program (EOP)	61	16.2		N/A
Other	25	6.6	81	40.0
MISSING	0	0	5	2.0
		100.0		100.0

+++In both studies, respondents could indicate more than one source Thus, the total number of responses is greater than sample size because this was a multiple response item. The percentages shown are based upon proportion of responses.

students. The samples of exclusively black students and the University study were dissimilar on a few variables. (Noting that the University sample contained more married men with families suggests possible differences in levels of social support for these two samples.) The dissimilarities in the samples does not invalidate the representativeness of the black student sample. Information was unavailable on most of the above variables to facilitate comparing the sample to the population of black graduate and professional students at the university. Such information would have more adequately addressed the issue of representativeness of the sample.

Hall and Allen (1983) have provided descriptive data about a sample of black graduate and professional students interviewed at six state-supported schools from varying regions of the United States. The descriptive data they reported is very similar to this sample of black graduate/professional students. Hall and Allen's sample was also predominantly female (52 percent), most had never been married (58 percent), had no children (66 percent), and most were under 30 years of age (55 percent). This current sample of black graduate and professional students closely resembles that of Hall and Allen on the above variables. Though, information is insufficient to conclude whether it represents the black student population at Michigan State University, it is concluded that this sample is not dissimilar from the population of black graduate and professional students nationally based on these variables.

The Scales

The scales of the survey were designed to examine the variables of professional development, peer networks, level of mentoring experienced, satisfaction, and cultural commitment. These measures were subjected to multiple analyses prior to making final decisions about scale composition. Item-total correlations were examined as well as dimensionality of the measures using orthogonal, principal factor analyses. The following sections present descriptions of the scales; their items and internal consistencies are presented in Table 2.

Professional Development. Professional development was operationalized by measuring the frequency of certain types of professional activities during tenure at the university at which the study was being conducted. The 15 items of this scale formed five subscales: conference participation, research, teaching, funding activities, and publishing. The response categories were: never, 1 to 3 times, 4 to 6 times, and 7 times or more. Average scale scores were obtained by summing the responses and dividing them by the total number of items in this scale.

The professional development subscales were intercorrelated, yet their internal consistencies were higher than the correlations with other scales. Table 3 contains the intercorrelations and internal consistencies (in the diagonal) of these subscales as well as all of the scales utilized in this study.

Table 2

The Scales

CONFERENCE ACTIVITIES alpha=.950

1. attended professional meeting or conference
2. submitted paper to present at conference
3. actually presented paper at conference

RESEARCH alpha=.699

1. prepared proposal for research
2. carried out independent research
3. collaborated in research with another student
4. collaborated in research with faculty

PUBLISHING alpha=.950

1. submitted paper for publication
2. actually published paper
3. submitted paper for publication as primary author
4. actually published paper as primary author

FUNDING ACTIVITIES * =.797

1. submitted application for funding
2. been awarded funding for research or creative project

TEACHING *=.887

1. prepared and taught a course at post-secondary level
2. assisted in development and teaching of course at post-secondary level

NETWORKS alpha=.850

1. provided companionship
2. provided emotional support
3. facilitated informational exchange
4. facilitated intellectual discourse
5. helped guide through system
6. helped select courses
7. helped select advisor
8. gave advice on professors to avoid
9. introduced to other friends
10. introduced to influential professionals

*With only two item scales, the Pearson correlation coefficient was computed and corrected with the Spearman Brown formula.

Table 2

(cont'd)

MENTORING alpha=.905

1. is friend
2. is advocate
3. offers constructive criticism
4. helps in course selection
5. sharpens intellectual skills
6. offers moral support
7. respects intelligence
8. guides through bureaucracy
9. helps obtain financial aid
10. helps obtain assistantships
11. helps obtain travel funds
12. permitted research collaboration
13. permitted publication collaboration
14. helped obtain internship
15. helped obtain professional employment
16. wrote recommendations
17. socialized into profession
18. involved in network of friends
19. involved in professional network
20. has positive influence on career

SATISFACTION alpha=.663

1. extra-curricular activities
2. social/cultural environment
3. interactions with Black graduate/ professional students
4. interactions with graduate/professional students generally
5. interactions with faculty
6. course offerings

CULTURAL COMMITMENT alpha=.604

(These items were reversed in analysis to reflect high commitment)

1. overcome discrimination by individual Blacks being well-trained and qualified
2. Blacks should only blame selves for not doing better in life
3. Blacks who are educated and do what is proper will get ahead.

Table 3

*Intercorrelations of Measures

	Conference	Publish	Funding	Research	Teach	Network	Mentor	Satisfac	Commit
Conference	.727	.078	.204	.368	.226	.102	.169	.076	.045
Publish	.078	.950	.327	.134	.271	.110	.211	.129	.012
Funding	.204	.327	.797	.202	.192	.024	.209	.088	.061
Research	.368	.134	.202	.699	.388	.007	.164	.048	.200
Teach	.226	.271	.192	.388	.887	.028	.236	.059	.090
Network	.102	.110	.024	.007	.028	.850	.315	.246	.037
Mentor	.169	.211	.209	.164	.236	.315	.905	.193	-.033
Satisfac	.076	.129	.088	.048	.059	.246	.193	.663	-.242
Commit	.045	.012	.061	.200	.090	.037	-.033	-.242	.604

*Raw correlation matrix with internal consistencies in the diagonals.

Peer Networks. The index of peer networks was developed to look at the frequency of support from peers in varying areas. Examined in the 10 items of this scale was frequency of companionship, emotional support, and informational exchange. Also included were items measuring the frequency of instrumental support such as help in selecting courses, advice on professors, and collaboration on research. Respondents could indicate that they received help from their peer networks in each area frequently, sometimes, seldom, or never. Average scale scores were

obtained to indicate the helpfulness of peer networks.

Level of Mentoring. A major variable in this study was the level of faculty support, or level of mentoring received by the student. As stated earlier, Shapiro et al. (1978) posited that students may experience varying levels of faculty support. Thus, this section sought to ascertain if the student felt that he/she had a mentor (or other people who were helpful) as well as the amount of help received from these people.

Firstly, respondents were asked if there was one person "who has been the most significant contributor to your career development while in graduate/professional school whom you would call a 'mentor.'" This phrase provided the only definition of a "mentor." Subsequently, respondents were asked to give the number of people who have made "significant contributions to your development while in graduate/ professional school." Items were provided which facilitated description of these persons in terms of race, gender, and affiliation with the university. The affiliations included professors in their department, those in another department, administrators at the university, or professionals in the field training or internship program. An "other" category was also included whose identity could be specified by the student. The last section of the mentoring measure asked respondents to report the amount of support received from the person(s) mentioned earlier. This measure was comprised of 20 items which gave various areas in which the student might receive support. These included

moral support, respecting the student's intelligence, as well as instrumental support such as research collaboration, publication collaboration, and helping to obtain assistantships. Students were to indicate if the person(s) who helped them were of no help, of little help, of some help, or of great help in each area.

Satisfaction. The satisfaction scale focused on student satisfaction with varying aspects of the university environment: interaction with other graduate/professional student, interaction with black graduate/professional students, interaction with faculty, extra-curricular activities at the university environment, the social/cultural activities offered in the area, and the course offerings. The scale was composed of semantic differential items which allowed the respondent to rate their satisfaction with each area on a scale of one to ten, one representing low satisfaction and ten the highest level of satisfaction.

Cultural Commitment. The final scale, cultural commitment, was a 5 point, Likert-type scale. Responses could range from strongly disagree to strongly agree. It was composed of 3 items which offered statements (some of them negatively construed) to assess the importance of the student taking their skills and knowledge back to the black community. The measure also assessed the dimension of individual versus collective action in helping the black community to advance.

Results

Descriptive Results

In examining the professional development of the students, the majority had never been involved in a number of the activities listed. The activity highly endorsed by most students was conference attendance; 78 percent of the students had attended a conference at least once. However, only 28 percent had ever presented a paper at a conference. Additionally, 87 percent of the students had never submitted a paper for publication and nearly 92 percent had not published a paper. Submitting a application for funding had not been attempted by 84 percent of the students. More students had been involved in research activities; 47 percent had been involved in independent research, 36 percent had participated in research with another student, and 40 percent had been involved in research with a faculty member.

However, it did not appear that these students received a large amount of assistance from university faculty and staff. Only approximately one-third of the students (36%) reported having a mentor. When asked the number of people who had helped significantly in their career advancement, the average number of people reported was 2 (standard deviation of 1.91) and the mode was 0.00. This meant that nearly one third of the students (29%) reported that no one

has helped them significantly while in graduate/professional school.

More in-depth information was sought about the characteristics of those who had helped the students. Students were given categories of possible types of people and were asked to indicate all of those which had been helpful to them. Of those who did indicate that they had received some support, the source of help that students reported most frequently was white professors in the department (27%) and the majority were male (67%). A large amount of respondents specified that they received help from some "other" source, such as their spouse, acquaintances in the community, or role models outside of the university. Black administrators, black professors in the field, and black professors in the department were the respective third, fourth, and fifth most frequently cited responses from the categories given. Table 4 contains the possible sources and the proportion of responses that each type of help comprised.

A notable amount of students commented that no black faculty were employed by their department. This suggests that students exert extra effort to establish contact with black faculty and staff. Additionally, it seems logical to infer that black faculty sacrifice time from other activities to be available to black graduate and professional students. Black faculty have pointed out that they are in the tenuous position of advising black students,

Table 4

Types of People Reported as Helpful

Numbers and percents, respectively, based on responses

Type	Male	Female	TOTAL
Black professor in department	74 6.5	51 4.5	125 11.0
Black professor in field	93 8.2	37 3.2	130 11.4
Black professor in other department	49 4.3	39 3.4	88 7.7
White professor in department	241 21.1	64 5.6	305 26.7
White professor in field	57 5.0	31 2.7	88 7.7
White professor in other department	43 3.8	26 2.3	69 6.0
Black administrator	78 6.8	51 4.5	129 11.3
White administrator	34 3.0	9 .8	43 3.8
Other	103 9.0	61 5.3	164 14.4
TOTAL	772 67.7	369 32.3	1141 100.0

being involved in community affairs, as well as teaching and producing scholarly materials. Blackwell, Jackson, and Moore (1976) have stated that "everything Black" is directed toward the lone black faculty member, usurping time normally used for scholarly endeavors that are valued and rewarded in the academic community. Having had less time for such activities, this is often the basis for denial of tenure to black faculty.

Though black faculty and staff were not the exclusive source of help, they comprised a substantial proportion of it relative to their numbers. This lends support to the need for more black faculty to evenly distribute responsibilities and perform those functions which can influence black students' careers.

Relationship of Demographic Characteristics to Measures

The categorical variables of gender, marital status, and college in which the student was enrolled, were included to examine the mean scores of subgroups on the various measures. The SPSS Breakdown procedure was used which performs an analysis of variance to determine if the differences between means is larger than that due to chance. Gender differences on the scales of profesional development, mentoring, networking, satisfaction, and cultural commitment were examined. Females and males were not found to differ on amount of professional development activities in which they had been involved, nor did they differ on the level of mentoring and networking that they had received. There has

been some question as to whether women are less likely to receive the benefits of a mentoring relationship (Bogat and Redner, 1984). In this study, no difference was found between black women and men and the amount of mentoring they received. However, it would be more illuminating to categorize mentoring along Shapiro et al.'s (1978) continuum. This would allow comparison of males and females to investigate whether men and women differ in the intensity of the mentoring relationship received. Possibly one subgroup or the other may experience what may be better defined as a sponsor relationship and not the more intensive mentoring relationship. Additionally, it might be that differences may be found in gender and mentoring received, but equally as plausible is that black males and females may be similar in the level of mentoring they receive. Both may receive relatively low levels of faculty support. Thus, race may cause an interaction effect between gender and mentoring.

The incidence of same gender support was examined. Both men and women more frequently reported male faculty as being their source of help. This was not surprising in that there are probably more men than women employed by the students' academic programs. However, more women reported that they received support from other women. The actual proportions are presented in Table 5. Students could describe more than one person. The percentages in the table detail the proportion of responses that each gender comprised.

Table 5

Gender of Respondent by
Gender of Person Reported to be Helpful

Numbers and percentages, respectively, based upon responses

	Gender of Person Reported to be Helpful		
Gender of Respondent	Male	Female	TOTAL
Female	102	77	179
	29.1	21.9	51.1
Male	133	39	172
	37.9	11.1	49.0
TOTAL	235	116	351
	67.0	33.0	100.0

This data suggests that women are more amenable to and probably seek assistance from a female, more than men seek help from a woman. In an examination of key influencers on the careers of black professionals, June and Fooks (1980) report that those of the same gender often provide the most impactual role model. They also state that key influencers are most frequently of the same race. Thus, it is not surprising to find women receiving support from other women; this is consistent with the results provided by by June and Fooks. It is interesting that in this study of black graduate and professional students, women seem to receive

support from both sources while in the June and Fooks' study of black professors, administrators, and staff, it was men who indicated being more equally influenced by both genders. Replication is needed in this area to further examine the degree to which same gender role models are sought.

Further analysis investigating mentoring and demographic characteristics, found differences in marital status and incidence of mentoring. Significantly more single people ($p < .01$) experienced mentoring relationships than those who were married.

Another finding of interest is that on the measure of satisfaction, females were found to be significantly less satisfied than men ($p < .02$). This concurs with past research in this area (Madrazo-Peterson and Rodriquez, 1978). Future research exploring why black females are less satisfied with the environment of the predominatly white university than black males would be of interest especially in light of Fleming's finding (1984) that the academic performance of black women in predomintly white colleges exceeds that of black men in the same setting.

Regression of Professional Development

Stepwise multiple regression analysis was used to determine the most significant predictors ($p < .05$) of professional development. Each of the subscales of professional development was entered separately as a dependent variable. The independent variables were level of mentoring, networking, satisfaction, cultural commitment,

degree sought, and years completed in degree program. The raw correlation matrix was corrected for attenuation in the predictor and criterion variables and the corrected matrix was submitted into the multiple regression analysis. Correction for attenuation gives an estimate of the true correlations between variables if the measures could be made more reliable (Ghiselli, Campbell, and Zedeck, 1981).

In examining correlates of the professional development subscales, level of mentoring and years completed in degree program were the two most significant predictors of publishing, and funding activities. However, they were not accounting for a large amount of the variance evidenced by the R squares of .103 and .085 respectively. These variables, their contribution to R square, their beta weights, and significance are illustrated in Table 6.

Mentoring, years completed, along with cultural commitment were the most significant predictors of teaching, accounting for 16 percent of the variance in this variable. Conference activities were more related to networking and years completed than mentoring, although the variables of mentoring and networking were correlated. However, they were so highly correlated (Pearson correlation coefficient =.359) that adding mentoring to the equation added little predictive power. When mentoring was entered to the equation alone with years completed it counted for less variance than networking and years completed alone.

Table 6

Regression Of Professional Development

MODEL I CRITERION=CONFERENCE ACTIVITIES

Variable entered	R	RSQ	Beta	Intercorrelations		
Years completed	.3170	.1005	.3170	1.000		
NETWORK	.3520	.1239	.1533	-.072	1.000	
CONFERENCE (criterion)				.317	.130	1.000

MODEL II CRITERION=PUBLISHING

Variable entered	R	RSQ	Beta	Intercorrelations		
Years completed	.2743	.0753	.2743	1.000		
MENTOR	.3205	.1027	.1709	.245	1.000	
PUBLISHING (criterion)				.274	.228	1.000

MODEL III CRITERION=FUNDING

Variable entered	R	RSQ	Beta	Intercorrelations		
MENTORING	.2456	.0603	.2456	1.000		
Years completed	.2923	.0854	.1634	.245	1.000	
FUNDING (criterion)				.246	.214	1.000

MODEL IV CRITERION=RESEARCH

Variable entered	R	RSQ	Beta	Intercorrelations			
COMMITMENT	.3072	.0944	.3072	1.000			
Years completed	.4282	.1833	.2984	-.021	1.000		
SATISFACTION	.4572	.2090	.1755	-.382	.148	1.000	
RESEARCH (criterion)				.307	.292	.071	1.000

MODEL V CRITERION=TEACHING

Variable entered	R	RSQ	Beta	Intercorrelations			
Years completed	.3196	.1021	.3195	1.000			
MENTORING	.3719	.1383	.1964	.245	1.000		
COMMITMENT	.3965	.1572	.1375	-.021	-.045	1.000	
TEACHING (criterion)				.320	.263	.123	1.000

Interestingly, neither networking nor mentoring were significantly correlated with research. Cultural commitment, along with years completed and satisfaction, produced an R square of .209. Mentoring was also correlated to research, however it was not significant in combination with the other variables which already were explaining 21 percent of the variance in research.

Regression of Mentoring and Networking

Subsequently, predictors of mentoring and networking were examined. Table 7 contains the results of these models. Examining the table where mentoring is the criterion variable, it can be seen that the students who were likely to have received higher levels of mentoring were also higher on networking, and had been enrolled in their programs longer (R square =.203). Similarly, the most significant predictors of networking were mentoring, satisfaction, degree pursued, and cultural commitment. Three of these variables; mentoring, satisfaction, and degree sought, were positively related to networking. Years completed in degree program and cultural commitment were unrelated to this criterion variable. Years completed seemed to be functioning as a suppressor variable. A suppresor variable is evidenced by a predictor which is unrelated to the criterion, but correlated with another predictor variable. When it enters the equation, it has a negative beta weight, signaling the possibility that it is suppressing variance unrelated to the criterion.

Table 7

Regression Analysis Of Mentoring and Networking

MODEL VI CRITERION=MENTORING

Variable entered	R	RSQ	Beta	Intercorrelations		
NETWORKING	.3589	.1288	.3589	1.000		
Years completed	.4503	.2028	.2727	-.072	1.000	
MENTORING (criterion)				.359	.245	1.000

MODEL VII CRITERION=NETWORKING

Variable entered	R	RSQ	Beta	Intercorrelations				
MENTORING	.3589	.1288	.3589	1.000				
SATISFACTION	.4347	.1890	.2534	.250	1.000			
Years completed	.4738	.2245	-.1952	.245	.148	1.000		
COMMITMENT	.5070	.2571	.1957	-.045	-.382	-.021	1.000	
Degree sought	.5422	.2940	.1995	.195	-.078	.140	-.024	1.000

This actually improves prediction (Ghiselli, Campbell, and Zedeck, 1981). In this case, years completed was related to one of the predictors, mentoring, but was unrelated to networking.

Regression of Cultural Commitment

This research was also concerned with examining the experience of the culturally committed student. Thus, examination was made of variables that might predict cultural commitment. Satisfaction, grade point average, and networking accounted for 23 percent of the variance in this variable (Table 8).

Table 8

Regression of Cultural Commitment

MODEL VIII	CRITERION=CULTURAL COMMITMENT						
Variable entered	R	RSQ	Beta	Intercorrelations			
SATISFACTION	.3813	.1458	-.3818	1.000			
Gpa	.4359	.1900	.2121	.125	1.000		
NETWORK	.4776	.2281	.2067	.327	.004	1.000	
COMMITMENT (criterion)				-.382	.161	.052	1.000

Satisfaction, as stated before was negatively related to cultural commitment. Network had little relation to commitment, but was related to satisfaction. Additionally, it should be noted that grade point average was positively correlated to commitment, lending support to previous research that culturally committed students fare well in academic performance (Gurin and Epps, 1975).

Discussion and Implications

Years completed in program was related to all of the subscales of professional development. This suggests that students who had been enrolled in their program for some period of time were more involved in professional development activities as they were defined here. Level of mentoring also contributed substantially to involvement in a number of activities, namely publishing, funding activities, and teaching. This offered further support to previous research evidencing the positive impact of mentoring (Burton, 1977; Roche, 1979). However, peer networks seemed to be more important than faculty support to conference/ professional meeting involvement. Mentoring, and to a lesser degree networking, were important to certain types of professional development. Students with higher levels of mentoring were involved in more professional development activities.

Noting the relative importance of mentoring and networking to professional development, some examination was made of correlates of these variables. Years completed was important to mentoring; time is needed to develop effectual relationships with potential mentors. However, it appeared that development of students networks can be done more quickly. There may be further explanation for years completed not being related to networking. It was noted that degree sought was also positively related to

networking. At the higher end of the continuum for the degree variable was the professional degree which includes human and veterinary medicine students. Previous research has demonstrated that these students tend to have large "acquaintance volumes;" they know and interact with more students (Blackwell, 1983). This is due to the nature of professional school in which there are a number of classes in which all first and second-year students must enroll. Thus, these students interact more closely, enrolling in several classes with the same group of professional students. This differs from the experience of the graduate student who may seldom enroll in several classes with the same person(s). This exemplifies why networking was not related to years completed, while years completed was important to establishing mentoring relationships.

Yet, this study has illustrated an area needing much consideration. Given the relationship between mentoring and professional development, African American students seem to be experiencing a low level of faculty support. Past research which examined graduate students in psychology at the same university found that over half of the students had a mentor (Cronan-Hillix, Gensheimer, Cronan-Hillix, and Davidson, in press). In the study of African American students reported here, only 36 percent reported having a mentor and nearly one-third reported that no one had contributed significantly to their development. It is worth noting that the study of African American students was a multi-disciplinary sample and the normal level of mentoring

may vary by discipline or field.

Given the levels of mentoring reported, one might debate whether these students will receive the opportunities necessary to advance their career. As stated earlier, 78 percent have attended a conference or professional meeting but only 28 percent have ever presented a paper at one. Also, only 13 percent have ever submitted a paper for publication and less than 8 percent have published a paper while at this university. In reference to obtaining grant funding, about one-tenth of the students had ever been awarded a grant. Independent research had been undertaken by 47 percent of the sample and 39 percent of them had been involved in research with faculty. The ultimate question remains: Is this a level of professional development which will facilitate students obtaining gainful and influential employment at the completion of their programs?

At this point however, it should be conceded that the operationalization of professional development may lack relevance for a number of the respondents. Students with varying career aspirations more than likely require very different developmental activities. Thus, the content validity of this concept may be lacking for students who are not planning academic careers. Indeed, differences were found in mean level of professional development according to the discipline. Discipline relevant definitions of professional development are necessary. Yet, given that one-third of this sample is enrolled in doctoral programs, these activities defined in this study could certainly

enrich their career opportunities.

Attention was given in this study to the experience of the culturally comitted student by examining correlates of this variable. Cultural commitment was found to be positively related to research and teaching activities, as well as to achievement (grade point average). The relationship to research and teaching was unanticipated, however it is consistent with Gurin and Epps' (1975) description of the "committed achievers." They described this group of African American students as those who valued individual achievement. They considered individual achievement as preparatory for collective action and wanted to use their skills to benefit the African American community. Hall and Allen (1983) were concerned that the African American achiever of the 1980's might be "purchased at the cost of subordinating racial and cultural identity." However, the findings of this study differed from Hall and Allen's findings; culturally committed students were found to have higher levels of achievement and professional development. The reason for the contradiction in findings was not apparent. The samples seemed to resemble each other in demographic information. The respondents attended simlar size schools, both in the same state. The different findings may be attributable to each study's operationalization of cultural commitment. This author agrees with Hall and Allen that the study of cultural commitment deserves further replication, particularly with more reliable measures and diverse samples.

It should be noted that culturally committed students had significantly lower levels of satisfaction. Previous studies have not found significant differences when comparing African American students and students from other ethnic backgrounds on the dimension of satisfaction with the predominantly white university (Madrazo-Peterson & Rodriquez, 1978; Robertson, 1980). Yet, this study has evidenced lower levels of satisfaction for culturally committed African American students than other African American students with lower levels of commitment. Had this variable been assessed in previous research, culturally committed African American students may have been found to differ from European students as well as from other non-culturally committed African American students. Generalizing this idea, students of other ethnic backgrounds who are committed to helping their particularly ethnic community would probably score lower on satisfaction with predominantly white universities which do not provide these students the support they need. However, this would probably be most likely to hold true when satisfaction is operationalized in terms of students' interactions, their satisfaction with course offerings, and with the social-cultural environment. Thus, it is concluded that the culturally committed student is less satisfied with the university in helping the student prepare to be of service to that students' ethnic community; students with this goal in mind are less likely to receive support from the university in accomplishing these types of goals.

Implications

It was found that mentoring is an important contributor to professional development. However, the students in this sample experienced low levels of faculty support as well as professional development. Currently it was found that mentoring contributed more to professional development than networking. The obvious implication is that there needs to be increased faculty support to these students. Students need the guidance and involvement in career activities that faculty can offer. Additionally, more black faculty are needed to help relieve the load borne by small numbers of black faculty. Black faculty along with other faculty persons all represent possible sources of support for this student population.

In strengthening faculty support, this author does not think that this means abandonment of student networks. Networks already evidence impact on one type of professional development, and enhancing the students' networks might make a difference in other areas of career advancement. Further research of an experimental nature, especially that comparing students formally exposed to faculty, students exposed to other students, and those without similar types of exposure or contact would be more appropriate research from which to make a conclusion about the relative efficacy of mentoring and networking. Yet, from the available information, improving levels of mentoring and networking among these students should be helpful in improving

professional development.

Attention also needs to be given to the university environment for culturally committed students. Evidenced by reported satisfaction, the university is not supporting the students who want to work collectively with other African Americans in the development of their community. This signals an area in which intervention is needed. The question is: who responsibility is it to provide an environment conducive to supporting these goals? Can this student expect the university to provide such a environment? It might be preferable for the students and African American professionals, African American professional associations, and other aspects of the African American community to create solutions to this problem. To expect that this will be done by predominantly white universities would be erroneous. It is very unlikely that this would be done with the values of the community in mind. Though, the university is expected to provide some opportunities for the African American student populace, the African American community must also be involved in the development of its future professionals, its leadership.

This study was executed in order to provide more information about the experience of African American graduate and professional students. These students represent a valuable resource to their community. Faculty and peer support was examined as a possible intervention point which could positively affect their achievement and professional development. It does seem in fact that

enhancement in these two areas could increase professional development. African American students are in dire need of being involved in activities leading to advancement in their field. They need the opportunities to acquire these skills to qualify them for leadership positions as well as give them expertise in effectively handling such positions. Barriers to these students achieving necessary skills and experiences should be a priority for the pluralistic university and most of all for the African American community. Preparation of committed, innovative, and highly experience professionals is tantamount to the progress of contemporary urban areas and the African American community.

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