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Effect of racial identity attitudes and world view on African-American graduate and professional students' experience of the imposter phenomenon

Ewing, Kimberly Maureen, Ph.D.

The Ohio State University, 1990

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EFFECT OF RACIAL IDENTITY ATTITUDES AND WORLD VIEW ON AFRICAN AMERICAN GRADUATE AND PROFESSIONAL STUDENTS' EXPERIENCE OF THE IMPOSTER PHENOMENON

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of the Ohio State University

By

Kimberly Maureen Ewing, B.A., M.A.

* * * * *

The Ohio State University

1990

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1990
To My Parents and Brother
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# TABLE OF CONTENTS

ACKNOWLEDGEMENTS ........................................ ii

VITA ........................................................ iii

LIST OF TABLES ........................................ vii

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Objectives of the Investigation</td>
<td>5</td>
</tr>
<tr>
<td>Predictions</td>
<td>8</td>
</tr>
<tr>
<td>Implications</td>
<td>10</td>
</tr>
<tr>
<td>II. REVIEW OF THE LITERATURE</td>
<td>13</td>
</tr>
<tr>
<td>Imposter Phenomenon</td>
<td>13</td>
</tr>
<tr>
<td>Imposter Phenomenon and Academic Self-Concept</td>
<td>17</td>
</tr>
<tr>
<td>Cross Model of Psychological Nigrescence</td>
<td>20</td>
</tr>
<tr>
<td>Afrocentric World View</td>
<td>23</td>
</tr>
<tr>
<td>African American College Students: Academic Success and Satisfaction</td>
<td>26</td>
</tr>
<tr>
<td>III. METHODS</td>
<td>34</td>
</tr>
<tr>
<td>Overview</td>
<td>34</td>
</tr>
<tr>
<td>Participants</td>
<td>35</td>
</tr>
<tr>
<td>Instruments</td>
<td>36</td>
</tr>
<tr>
<td>Procedure</td>
<td>43</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>45</td>
</tr>
<tr>
<td>IV. RESULTS</td>
<td>46</td>
</tr>
<tr>
<td>Descriptive Data</td>
<td>46</td>
</tr>
<tr>
<td>Instruments</td>
<td>48</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>50</td>
</tr>
<tr>
<td>Exploratory Analyses</td>
<td>60</td>
</tr>
</tbody>
</table>
V. DISCUSSION ........................................ 74

Summary of Descriptive Data Analyses . . 74
Summary of the Hypotheses ................. 75
Summary of the Exploratory Analyses .... 79
Limitations ........................................ 81
Suggestions for Future Research .......... 87
Summary and Conclusions ................. 89

APPENDICES

A. Introductory and One-month Follow-up
   Letters to Students ....................... 91

B. Harvey IP Scale .......................... 96

C. Racial Identity Attitudes Scale ....... 99

D. Belief Systems Analysis Scale ........ 105

E. Academic Self-Concept Scale .......... 110

F. Student Information Survey ........... 114

LIST OF REFERENCES .......................... 119
LIST OF TABLES

TABLE  PAGE
1.  Comparison of Afrocentric and Eurocentric World View .................. 24
2.  Demographic Data (By Location) .............. 47
3.  Descriptive Analyses for Main Inventories .. 51
4.  Regression Analyses of IPS with ASC ...... 52
5.  Regression Analyses with IPS and Number of Years in Program .......... 53
6.  Hierarchical Regression Analysis with IPS and BSAS, RIAS Subscales and ASC, Demographic, and Environmental Variables .......... 56
7.  Regression Analysis with IPS and BSAS and RIAS Subscales ............. 57
8.  Multiple Regression Analyses with IPS and BSAS, ASC and Internalization (INT) ........ 59
9.  Correlational Analyses of IPS with Exploratory Independent Variables .......... 61
10. Regression Analyses on BSAS and RIAS Subscales ...................... 63
11. Regression Analyses with BSAS and Academic and Peer Groups .......... 64
13. Student-Newman-Keuls T-Tests for Pre-college and Current Groups and Racial Self-Identification Labels ........ 68
14. Multiple Regression Analyses of the IPS Subscales with BSAS and RIAS Subscales . . . 70
A recent issue of Black Issues in Higher Education (O'Brien, 1990) published a special report on the difficulties experienced by students of color attempting to complete graduate degrees. Along with the general difficulty of adjusting to the new role of graduate student, these students are often faced with a lack of adequate financial aid, a need to work to support themselves in school, and a lack of role models and mentors. Many are also the first in the family to consider a graduate education and may put off the decision to pursue an advanced degree for themselves. What is yet unclear is the existence of the psychological effects of the above experiences for African American graduate and professional students at predominately White institutions.

New role adjustments, achieving an unusually high level of education relative to one's family background, and being one-of-a-kind or atypical in your surroundings seem to have psychological implications (Harvey, 1982; Harvey & Katz, 1985; Harvey, Kidder & Sutherland, 1981). In
particular, these experiences have been linked to the impostor phenomenon, an inner experience of intellectual phoniness (Clance & Imes, 1978). The focus of this study was on African American graduate and professional students at predominately White universities. The purpose was to identify the existence of impostor feelings, as well as to identify what attitudes, beliefs and background experiences promote or defend against those feelings.

Harvey and Katz (1985) describe the impostor phenomenon sufferer as an individual who, despite objective evidence of competence, feels he or she has fooled everyone into thinking he or she is smarter or more capable than is the reality. Such a person feels undeserving of achieved success. He or she may attribute success to things like hard work, having a charming personality, physical attractiveness, or knowing how to please others—anything except intelligence and/or true ability. As a result, the person lives in constant fear of being "discovered" as a fraud. They fear that when they are "discovered", they will experience painful humiliation and lose their position or success forever. As the sufferers live in fear of being exposed, their thoughts, fears, and anxieties are kept secret, thereby preventing any real challenge to their beliefs. Instead, they often strive even harder to achieve more after each success, feeling they must work even harder to "keep up their charade of competence". Therefore, each
success only serves to fuel the phenomenon into a self-perpetuating syndrome.

In the original formulation of the imposter phenomenon, Clance and Imes (1978) used mostly White women as participants. Most subsequent studies used White participants; race was either omitted as a variable due to lack of enough participants of color, or was totally overlooked (eg. Edwards, Zeicher, Lawler, & Kowalski, 1987; Harvey, 1982; Topping & Kimmel, 1985). Parham and Helms (1985b) state that "...most previous attempts to identify personality characteristics and symptoms (of African Americans) either have been based on theories of White adjustment or have merely compared Black people's scores with Whites' scores on some standard personality inventories that have included few, if any, Blacks in the standardization samples..." (p. 431). These methods end up often negatively stereotyping African Americans, as well as not attending to how being Black in America influences one's development and adjustment. Therefore, before more imposter phenomenon research is done with African Americans or other people of color, it would seem necessary to place such research within a framework that is relevant to the people's cultural experience.

Stahl, Turner, Wheeler, and Elbert (1980) examined the potential existence of imposter feelings among African American female high school science majors. 55% of these
students did not attribute their academic achievements primarily to intelligence, according to their first response to two open-ended questions. Rather, these students attributed their success most often to hard work, perseverance, or determination. This was taken by the authors as suggestive of imposter feelings in these students. However, when later asked to rank several characteristics in the order that would help them in reaching career goals, 60% of the women ranked intelligence highest. As the key to the existence of the imposter phenomenon is denying one's intellectual ability as a reason for success (Harvey, personal communication, 1989), Stahl et al.'s results are inconclusive. Further research is needed to distinguish between students who do not negate or deny their intellectual ability from those who do. This is a particularly important distinction to make when considering graduate students of color. At this point of education, one's intellectual ability is often not so different from one's peers. Success and achievement for this population may, however, require one to put forth more effort and persevere through the kinds of obstacles discussed earlier.

Objectives of the Investigation

One of the main objectives of this study was to address concerns raised by other researchers about the use of racially inappropriate theories and measures to study the psychological experiences of African American people (e.g.
Akbar, 1989; Nobles, 1989; Parham & Helms, 1985b). This investigation used the Cross (1971) model of psychological Nigrescence, or Black identity development, and the Afrocentric world view described by several authors (e.g. Myers, 1988; Nobles, 1986) as the framework for interpreting the results. Though both perspectives focus on African American people as the founding population (which addresses one part of the above criticism) they have different initial assumptions about what healthy Black identity is and what triggers its growth and development.

The Cross (1971) model of psychological Nigrescence assumes that Black identity develops in response to and as a result of being in an oppressive environment. Nobles' (1972) description of the Afrocentric world view assumes that African (Black) identity is a natural, inherent way of being, "... not simply a reaction to White people or the results of societal oppression and exploitation" (Nobles, 1989, p. 254). The Racial Identity Attitudes Scale (Parham & Helms, 1981) was used to examine the degree to which Black identity attitudes might be linked to imposter feelings. The Belief Systems Analysis Scale (Fine, Schwebel, & Myers, 1985) was used to assess how the degree to which one holds Afrocentric beliefs might affect one's vulnerability to imposter feelings.

Drawing on the ideas outlined above, a second objective of this study was to re-examine the general issue behind
Stahl et al.'s (1980) study; that is, how does the imposter phenomenon manifest itself in African American students? This question was expanded to include African American males, as well as females, while focusing on a more academically-experienced population than the high school students that Stahl et al. employed. Also, this question was examined using each of the perspectives described above, which addresses the final part of the above stated criticism.

In the Stahl et al. (1980) investigation, as well as in other imposter phenomenon research (Imes, 1980; Topping & Kimmel, 1985), conclusions were drawn that seemed to be based on assumptions that had not been subjected to empirical research. As stated earlier, one such assumption implies that if a person believes that hard work or determination is critical to success, that individual is an imposter phenomenon sufferer. As the key to imposter feelings is the denial of intellectual ability, rather than the endorsement of non-intellectual characteristics for success attribution (Harvey, personal communication, 1989), results drawn from such assumptions are inconclusive.

The current investigation used the Harvey IP Scale (Harvey, 1982), designed specifically to measure the degree of imposter feelings. It also the Academic Self-Concept Scale (Reynolds, Ramirez, Magrina, & Allen 1981)—to assess the participant's perception of his or her academic ability.
This was done to isolate the "real" imposter phenomenon sufferers from the "fake" imposter phenomenon sufferers by comparing this additional information to Harvey IP Scale scores. This study also examined the impact of background and interpersonal factors on participants' intellectual self-confidence by exploring peer, family and academic environmental factors.

A final objective of this study was to examine how race may present special issues in academic environments. Freeman (1979) formulated the "Null Environment" hypothesis to describe a situation, particularly in academia, in which women experience an absence of both positive and negative attention. Freeman argues that because forces pre-existing in the environment are sexist and male-affirming, these women automatically suffer and fail to grow. Researchers also have pointed to the pre-existing racist and White-affirming forces that are present in academia (Harvey, 1984; Loo & Rolison, 1986). Therefore, it would seem important to examine the impact of supportiveness within academic environments on the intellectual self-confidence of African Americans, in general, and African American females in particular. Accordingly, this investigation examined how African American versus White undergraduate experiences might differentially affect the intellectual self-confidence of African American graduate and professional students in a predominately White setting.
Predictions

Based on existing literature on the imposter phenomenon, racial identity attitudes, and worldview, this investigation was designed to test the following general predictions. African American graduate and professional students were used as the focal group of the study. Specific hypotheses will be presented in Chapter 3. The predictions were as follows:

1) As the degree of reported imposter feelings increase, the degree of academic self-concept among participants will decrease.

This prediction focused on the characteristic tendency of imposter phenomenon sufferers to deny their intellectual ability as a reason for success, despite evidence of their high academic ability (Harvey & Katz, 1985; Tracey & Sedlacek, 1987).

2) The longer the participants have been in their graduate program, the lower will be their reported imposter feelings.

This prediction was based upon research suggesting a link between high imposter feelings and new role attainment (Harvey et al., 1981; Harvey & Katz, 1985; Topping & Kimmel, 1983).

3) Some participants with high academic self-concept scores will report experiencing higher degrees of imposter feelings than others with high academic self-concept. It is expected that this subgroup of high imposter participants will report having fewer role model experiences, less encouragement, and less support for academic success.
This prediction focused on the literature that stresses the importance of role modeling and support systems at home and at school as critical factors in African American students' academic achievement (Burlew, 1982; Griffith, 1985; Harvey & Katz, 1985; Wynn, 1989).

4) The strongest predictors of degree of imposter feelings will be the participants' stage of racial identity attitudes and degree of Afrocentrism. Participants with high levels of imposter feelings are predicted to have pre-encounter or immersion-emersion attitudes and a lower level of Afrocentricity; those with low levels of imposter feelings are expected to have encounter or internalization attitudes and a higher level of Afrocentricity.

5) Participants with the lowest levels of imposter feelings are predicted to have high academic self-concept, internalization attitudes and/or a high level of Afrocentricity.

Predictions #4 and #5 focused on racial identity research that suggests a link between racial identity attitudes and self-esteem, self actualization and affective states. Specifically, people with pre-encounter and immersion-emersion attitudes tend to have lower self-esteem (Parham & Helms, 1985a). These groups also tend to have weaker self-actualizing tendencies, and are more prone to feelings of insecurity, anxiety and hostility (Parham & Helms, 1985b).

These predictions also focused on world view research which suggests that self-esteem, anxiety, depression, dogmatism and general psychological distress is linked with the world view to which one subscribes. Specifically, Fine,
Schwebel and Myers (1985) found that mothers who held a more Afrocentric world view orientation had higher self-esteem, less anxiety and depression, and more satisfaction in being a mother than those who less strongly held Afrocentric beliefs. Montgomery, Fine, and Myers (1989) found that dogmatism and psychological distress symptoms increased as belief in Afrocentric values decreased. The tendency to value interpersonal characteristics over external characteristics increased as belief in Afrocentric principles increased.

Some literature has suggested that, for high academically capable African Americans, low self-esteem, insecurity and weaker self-actualizing resources are linked to fear of success (Fleming, 1982; Fordham & Ogbu, 1986). Relatedly, high levels of imposter feelings (Harvey & Katz, 1985) and difficulty maintaining high levels of achievement (Harvey, 1984) also seem to be linked to these factors.

**Implications**

This investigation used racially and culturally relevant frameworks to study the existence of a psychological phenomenon in a sample of African American people. The examination of the imposter phenomenon with the Cross (1971) model and the Afrocentric world view as different frameworks in itself, was expected to have several implications. If it seemed that these African American graduate and professional students experienced the imposter
phenomenon, this study was expected to shed some light on how it manifests itself, as well as who may be more prone to experiencing imposter feelings. Preliminary information was collected on what conditions may exacerbate its development, especially in the environment of academia.

A second potential implication comes from the fact that much of what has been written about African Americans deals with undergraduate college students (Helms, 1986; Parham, 1989). This investigation was expected to begin providing information on a somewhat older population's experiences, and whether or not they need specialized interventions to aide their matriculation process. Ideas then may be formulated on what can be done to create a less stressful, more growth-enhancing environment for African Americans who enter graduate and professional programs.

A third implication of this investigation is the addition of another dimension to the connection of psychological experiences with racial identity attitudes. Self-actualization, self-esteem choice of counselor race, and affective states already have been linked to racial identity attitudes (Parham & Helms, 1981; Parham & Helms, 1985a; Parham & Helms, 1985b). As Helms (1986) pointed out, the Cross (1971) model of racial identity development represents a description of a "world view" with respect to race. World views cover patterns of beliefs, attitudes, emotions, and behaviors. Therefore, to lend more support to
the model, more work needs to be done in each of these areas as way of uncovering more pertinent patterns that will complete the picture Cross has presented. This study might add another psychological dimension—intellectual self-confidence and the imposter phenomenon—to that picture.

A final potential implication develops out of this investigation's attempt to contrast the effects of Cross' model of a "world view with respect to race" (Helms, 1986) with that of the Afrocentric world view described by Nobles (1972). In 1989, Helms and Parham discussed at length the potential limitations of the Cross model in light of more careful analyses. Nobles (1989) and Akbar (1989) suggest that limitations that seem to be emerging from "... the epistemological dilemma of trying to psychologically understand African people with non-African-based models" (Nobles, 1989, p. 254).

Their point is that the Cross model's assumption that Black identity develops as a result of oppression is in error. They also suggest that the values inherent in internalization-commitment (the final stage) are not equivalent or consistent with the values inherent the Afrocentric world view. By using both perspectives, this study may begin to point out how they differentially operate in African American people with respect to imposter feelings.
CHAPTER II

REVIEW OF THE LITERATURE

The following literature review is divided into five main areas of research that were relevant to the formulation and investigation of this study. These five areas include the following: a) imposter phenomenon; b) imposter phenomenon and academic self-concept; c) Cross model of psychological Nigresence; d) Afrocentric world view; e) African American college students: Academic success and satisfaction.

Imposter Phenomenon

Clance and Imes (1978) formulated the theory of the imposter phenomenon. It is defined as a belief that one is not really capable of performing an activity that is being expected. An imposter phenomenon sufferer lives in constant fear of being "revealed" as a fake or incompetent. Clance and Imes originally assumed that only women suffered from this experience. They pointed to literature on women's fear of success (Krueger, 1984) and the belief that for women, success is equivalent to masculinity and a lack of femininity. For women who hold these beliefs, success brings with it the threat of social alienation for stepping outside of their "feminine role".
In addition to fear of success, Clance and Imes described how female socialization, which trains women to use charm and to perceive what others want, can generate the imposter experience. Women who are very capable, yet internally rely on their charm and perceptiveness may tend to discount their ability and believe their success was due only to their interpersonal skills and "feminine wiles". These women may tend to seek others to be mentors who will "discover their hidden talents", which allows them to succumb to the Cinderella and Snow White myths of how women achieve.

All of these tendencies can generate and maintain imposter feelings, as the woman fails to internalize her instrumentality and continuously looks outside herself to explain her achievements. The fear of being discovered as a fake, not really capable, may reinforce her use of charm, perceptiveness, and self-effacing behavior as she believes these things are the key to "maintaining her facade" of success, without risking social alienation.

Clance and Imes (1978) identified two groups of labels that the women they studied seemed to have grown up with: "you can achieve anything you want/ you do everything well" or any label except "the smart one" in a family where someone else was "the smart one". Having the "you do everything well" label caused the women to feel like
failures if they experienced any difficulty while attempting a task. They began to view anyone who praised them as untrustworthy and non-discriminating, while perceiving themselves as undeserving of their achievements. Having a label other than "the smart one" caused the women to perceive any success as attributable to anything except their intellectual ability.

Further research indicated that men may also suffer from the imposter phenomenon experience (Harvey, 1982; Harvey, Kidder & Sutherland, 1981; Imes, 1980), and sometimes more than women (Topping, 1983; Topping & Kimmel, 1985). Topping (1983) suggests that it is a lack of one's sense of gender ("undifferentiated") that is linked to experiencing the lack of self-confidence and achievement anxiety inherent in imposter feelings. Harvey et al. (1981) suggest that imposter sufferers perceive their career choice to be sex-atypical and/or have attained an unusually high level of education relative to their family's background.

Given the variety of findings, it is unclear whether or not there are sex differences inherent in experiencing imposter feelings; and if so, in what direction and under what circumstances would they occur.

Several researchers have examined the success attributions of imposter sufferers. Attributing one's success to hard work, diligence, luck, charm, and/or sensitivity to others expectations have been correlated with
the experience of imposter feelings (Clance & Imes, 1978; Imes, 1980; Stahl, et al., 1980; Topping, 1983). Harvey's (1982) findings suggest that one's experience of the imposter phenomenon is greatest upon entering a new role, such as a new honors student, a college freshman, a first-year graduate student. Other research supports this pattern with new professionals and new faculty members (Harvey & Katz, 1985; Topping, 1983; Topping & Kimmel, 1985). There seems to be a reduction in imposter feelings among those who have been in their role longer (Topping & Kimmel, 1985). Harvey and Katz (1985) suggests that the new role experience may create a temporary imposter experience, as compared to a more long-term, change-resistant experience.

Fleming (1982) examined fear of success, a closely related phenomenon (Clance & Imes, 1978; Harvey & Katz, 1985), in African American male and female graduate and professional students. Fleming found that, for both males and females, fear of success did not manifest itself in the form of success-avoidant behavior and anxiety, as expected, but it did emerge in less commonly identified patterns. Females with fear of success tended to value fulfilling both the traditional and the non-traditional aspects of female-stereotyped career goals ("superwoman syndrome"). More of them tended to be high achievers in the social sciences, a field which tends to have equivalent gender representation (Statistical Abstract of the United States, 1987) and
racially-proportionate representation (Astin, 1982). In males, fear of success correlated with racially-stereotypic beliefs about the unreliability of African American males and the reliability of White males.

Harvey et al. (1981) found no racial differences in participants' report of imposter feelings nor with experiences associated with the imposter phenomenon, such as new role difficulty or discomfort with racial atypicality on the job. However, no other published studies have been done comparing different race participants' experience of imposter feelings. The imposter phenomenon and the Harvey IP Scale were used as a theoretical basis and measure for this study.

Imposter Phenomenon and Academic Self-Concept

The imposter phenomenon has an important connection with self-concept, especially academic self-concept. One's denial of intellectual ability, in spite of real ability, fosters the imposter experience. In the Stahl et al. (1980) study, participants responded to two general open-ended questions about academic success attributions and personal characteristics that are indicative of potential to achieve career goals. Only the first response dealing with academic success attributions was analyzed. Most participants did not include "intellectual ability" as their first response, but did include "hard work", "perseverance", or "determination". It was concluded that these results
suggested the existence of imposter feelings. On the closed-ended question, most of the participants ranked "intelligence" highest when asked to rank several characteristics in the order they would help them most in reaching career goals. The authors concluded that the open-ended question was probably more sensitive than the closed-ended question and a more accurate representation of internal experiences.

Several methodological and conceptual problems seem to exist with the Stahl, et al. investigation. First, there is the questionable methodological procedure of only analyzing the first response to an open-ended question that did not ask for a rank order. Second, the discounting of the answers to the closed-ended question and attending only to the answers on the open-ended question seems to rest on the assumption that the participants' endorsement of non-intellectual characteristics is solely indicative of imposter feelings. In order to prevent this kind of conclusion in future research, it seems necessary to incorporate some measure of true academic or intellectual self-confidence along with measures of imposter feelings.

Recently, several researchers have examined the concepts of general and academic self-concept. Shavelson and Bolus (1982) maintain that self-concept is a multifaceted construct. Their results suggest that though academic self-concept is correlated with general self-
concept, it seems the two constructs are distinct. They further suggest that specific subject matter self-concept—that is, one's belief of how well one could perform in a particular subject—is also distinct from general and academic self-concept, though they do correlate. They found the relationship between students' grades and subject matter self-concept to be stronger than the relationship between grades and academic self-concept.

Byrne (1984) reaches similar conclusions when he states that general self-concept is a multi-dimensional construct, of which one dimension is academic self-concept. Reynolds (as cited in Byrne, 1984), found the relationship between general and academic self-concept to be good, but not as strong as the relationship between academic self-concept and academic achievement. General self-concept and academic achievement seem to have the weakest correlation of the three constructs.

Reynolds, Ramirez, Magrina and Allen (1980) developed the Academic Self-Concept Scale, one of the very few measures to assess academic self-concept at the college level. This scale has been shown to correlate significantly and positively with several other constructs, such as level of aspiration, academic interest and satisfaction, leadership and initiative, and identification versus alienation. In addition, it was significantly negatively correlated with anxiety. The Academic Self-Concept Scale
seems to be a valid and reliable uni-dimensional measure of college academic self-concept (Halote & Michael, 1984). The construct of academic self-concept and the corresponding scale were used as theoretical and operational bases for this study, and used in addition to measuring the degree of existing imposter feelings.

Cross Model of Psychological Nigrescence

Cross (1971) described a theory of psychological Nigrescence, or Black identity development. Cross maintained that despite the continued conditions of oppression, African Americans were undergoing a kind of psychological transformation towards a less oppressed state of being. This "Negro-to-Black Conversion" experience was described as a five-stage model. Stage one, pre-encounter, is a stage in which the person views the world as non- or anti-African American, a Euro-American world-view. The dominant values are a dependency on White leadership, assimilation, individual achievement, and negation or dilution of anything associated with Africanity.

Stage two, encounter stage, begins with an experience, verbal or visual, which causes the person to begin a reinterpretation of their world and assumptions. This stage is characterized by intense personal questioning leading to a sense of elation at being African American. This is followed by guilt over past beliefs, and increasing anger over realizing how s/he had been taught such self-negation
beliefs over time. Stage three, immersion-emersion, represents a two-part process. In the immersion phase the person immerses him/herself into a world of African Americanness. Everything that is Black-oriented is valued; everything that is White-oriented is de-valued. The person is energized by rage, guilt, and developing sense of pride. There is a tendency towards labelling, stereotyping and either/or thinking based mostly in a hatred and negation of White people, rather than an affirmation of a African American perspective. The emersion phase deals with an emergence from the previous perspective. The person's emotions begin to level off and s/he becomes more open to crucial analysis of African American people's condition.

Stage four, internalization, represents increased sense of security about one's Blackness. However, the world view remains American or Western. Though one is much more receptive to discussions about planned action, one is not committed to doing anything, yet. Some stagnate here, becoming arrogant and closed to further development and learning. Stage five, internalization-commitment, occurs when the person becomes committed to plan to change the community. The values of the stage five person are more positive, more Black-affirmative, less defensive, and the focus is on collective achievement.

Cross concludes by stating that "in liberating African American scholars, we should add a third requirement: exposure to non-Western thought" (p. 24). However, this
"third requirement" is not formally included as a part of his model of Nigrescence. The Racial Identity Attitudes Scale, or RIAS, (Parham & Helms, 1981) was developed using the Cross model to assess the degree to which one's attitudes reflect one's stage of identity development. Its subscales represent four of the five Cross stages: pre-encounter, encounter, immersion-emersion and internalization-commitment. The "internalization" subscale represents the internalization-commitment stage described in the Cross model.

Several studies done by Parham and Helms have suggested that these measured attitudes also can be linked to affective states, differing levels of self-esteem, and self-actualization, and choice of counselor race all corresponding to the directions suggested by the Cross model. Parham and Helms (1981) found that African Americans with pre-encounter attitudes tended to prefer White counselors over African American counselors. For all other attitude stages, participants preferred an African American counselor, but internalization participants showed no strong preference either way. Parham and Helms (1985a) found that immersion-emersion attitudes were most strongly linked to higher levels of anxiety and depression; internalization attitudes seemed to correlate positively with emotional stability. Parham and Helms (1985b) found that internalization attitudes most strongly linked with high levels of self-esteem and self-actualization; though
encounter attitudes were also indicative of high self-esteem and self-actualization tendencies. Conversely, pre-encounter and immersion-emersion attitudes were more indicative of lower self-esteem and tendencies towards self-actualization.

Parham (1989) has proposed an extension of the Cross model that attempts to re-conceptualize African American identity and its development as a life-long process with an African core, not simply the result of oppression. However, these extensions are not reflected in the RIAS construction, as it was modeled from the original Cross model. The original model and the corresponding RIAS were used as one of the theoretical bases and one of the measures in the current study.

Afrocentric World View

Afrocentric world view represents a way of conceptualizing the world that is consistent with the ancient African value system and philosophy. This philosophy contends that everything is connected and represents the manifestation of spirit, energy, God. Eurocentric world view is a way of conceptualizing the world that is consistent with the European value system and philosophy. This philosophy contends that everything is separate; matter is assumed to be different and separate from spirit, energy, God. See Table 1 for a detailed comparison of Afrocentricity and Eurocentricity.
<table>
<thead>
<tr>
<th>Nature of reality</th>
<th>Afrocentric</th>
<th>Eurocentric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature of knowledge</td>
<td>Self-knowledge, known through symbolic imagery and rhythm</td>
<td>External knowledge, known through counting and measuring</td>
</tr>
<tr>
<td>Nature of value</td>
<td>Highest value in interpersonal relationships</td>
<td>Highest value in objects or acquisition of objects</td>
</tr>
<tr>
<td>Reasoning</td>
<td>Di-unital-both/and</td>
<td>Dichotomous-either/or</td>
</tr>
<tr>
<td>Identity</td>
<td>Extended self</td>
<td>Individual self</td>
</tr>
<tr>
<td>Self-worth</td>
<td>Intrinsic in being</td>
<td>Based on external criteria</td>
</tr>
<tr>
<td>Values guiding behavior</td>
<td>Spiritualism and communalism</td>
<td>Materialism and individualism</td>
</tr>
<tr>
<td>Life space</td>
<td>Infinite and unlimited</td>
<td>Finite and limited</td>
</tr>
</tbody>
</table>

Afrocentric scholars (e.g. Akbar, 1989, Myers, 1988; Nobles, 1989) maintain that viewing the world from an Afrocentric perspective, with the underlying values and principles leads to a radically different experience, as contrasted with Eurocentricity. They further maintain that being grounded in an African-centered perspective is the most natural and self-actualized state for people of African descent.

Baldwin (1984) suggests that "non-Africentric" theories conceptualize the personality of African Americans in terms of oppression experiences. "Africentric" theories conceptualize their personality in terms of a natural condition with an African reality base. Healthiness is then seen as moving towards an African identity, with integrity and survival tendencies. He points to increases in crime, drug and alcohol abuse, emotional illness, as well as economic, political and intellectual dependency upon White American policies and values. Baldwin suggests that these occurrences result from African American people adopting a Eurocentric world view, which in turn denies and contradicts the African reality base.

Therefore, instead of viewing racial identity as a reaction to oppression at a particular point in time as Cross (1978) suggests, Akbar (1989) states that one's racial identity is a core, stable personality trait. Nobles (1989) argues that even Parham's (1989) proposed revision of the Cross model is problematic. Parham attempts to re-state
Cross' theory of Black identity development as a lifelong process with an African core, while retaining the bulk of the Cross stage definitions. Nobles makes the point that this revision still does not address the epistemological problem of trying to understand African people using European or Western-based models. He suggests that an Afrocentric model would deal with the question: How do African people reproduce themselves in a non-African reality?

The question of identity from an Afrocentric perspective concerns the extent to which one's definition of self is grounded in an African core identity. The degree to which one's world view and subsequent self-concept is Eurocentric in nature rather than Afrocentric, defines the degree of pathology the person is experiencing (Akbar, 1979; Baldwin, 1984). The Belief Systems Analysis Scale (Fine, Schwebel, & Myers, 1985) was designed to assess the degree of Afrocentricity reflected in one's beliefs. The Afrocentric perspective of identity and the BSAS were used as an alternative theoretical base and measure for this study.

African American College Students: Academic Success and Satisfaction

Determining what factors predict academic success has been a problem that has received a great deal of study over the years. Traditionally, standardized tests such as the
Scholastic Aptitude Test and the Graduate Record Examination have been used along with grade point averages to predict success at the undergraduate and graduate level. However, research has indicated that the use of these measurements results in elimination of many students of color and, for this population, may be an unfair and inaccurate predictor of future success (Wilson, 1988). Though rates of academic persistence are much lower for African Americans enrolled at predominately White institutions (Goodrich, 1978; Sedlacek & Webster, 1978), these differences have not been linked to traditional ability measures (Astin, 1982; Tracey & Sedlacek, 1984; Tracey & Sedlacek, 1985). It has been suggested that what it takes for African American students to succeed at predominately White institutions is different than what it takes for White students to succeed (Fleming, 1984; Loo & Rolison, 1986; Lyons, 1990).

Tracey and Sedlacek have found that certain non-cognitive variables are significant predictors of academic success, especially when dealing with college students of color. Sedlacek and Brooks (1976) proposed seven dimensions of non-cognitive variables that might relate to academic success. They are: positive self-image, realistic self-appraisal, understanding of and ability to deal with racism, ability to set long-term goals and delay gratification, access to a strong support person, success at leadership, and demonstrated community service. Tracey and Sedlacek
(1984) found that the non-cognitive variables alone had greater than or equal predictive validity for college grades when compared to SAT scores and greater predictive validity for college persistence after the first year for all students.

Tracey and Sedlacek (1984, 1985) have found that these non-cognitive variables tend to be even better predictors for African American students' early and later persistence, over SAT scores. It seems that having a positive self-image, realistic self-appraisal, ability to set long-term goals, and having a strong support person are most important during the first year. After the second and third years, understanding of and ability to deal with racism and demonstrated community service seem to be better predictors of persistence. They conclude that "...to perform as well as White students, minority students must demonstrate a greater variety of characteristics, not just academic ability" (p.409).

To graduate, five to six years later, Tracey and Sedlacek (1987) found that SAT scores did not relate to graduation, but non-cognitive variables did relate. The ability to work hard over an extended period of time, and not just measured academic ability, was cited as the reason for this finding. Currently, about 70% of African American college students at all levels are enrolled in predominately White institutions, while the overall numbers of African
American college students entering and graduating from undergraduate programs is declining (Harvey, 1984; Wilson, 1988). The number of African American college students pursuing graduate and professional degrees still hovers around 6% after more than ten years since the peak in 1976 (Wilson, 1988). It therefore seems quite important to examine the perceptions and experiences of African American students on these campuses with regards to academic success and satisfaction.

Harvey (1984) suggests that African American college students face a difficult dilemma when attending predominately White institutions. The need to accept the values and prescribed behaviors and interests of these institutions (despite experiences of alienation and disaffirmation), resulting in dissatisfying and unfulfilling educational experiences for African Americans (Lyons, 1990). Further, when only 4% of faculty on predominately White campuses are African American, role models and mentors are hard to find who have had a background and experiences that may be similar to that of African American college students. Harvey maintains that seeing mostly Whites dispensing the knowledge in these places of higher learning leaves a poor impression on the African American student.

Smith (1981) maintains that attending a predominately White institution may have a negative influence on African American females' physical self-concept and on their
feelings of acceptance by professors and students. Thompson, Neville, Weathers, Poston, and Atkinson (1990) echo this in their work on the "racism reaction". They found that African American students experience more uncertainty and mistrust of White students, professors and the administration than White students do of their African American counterparts. They suggest that this mistrust and uncertainty comes from African American people's well-documented history with racism and oppression when relating with Whites.

Smith (1981) also notes that educational and occupational aspirations of African American females appear to decline in college with most choosing sex-role stereotyped options; African American females have not escaped gender and racial discrimination. In 1982, Burlew examined the differences in background, attitudes and career-related expectations of African American college females who were pursuing traditional and non-traditional careers for women. The best predictors of major and career choice were mother's level of education, mother's employment in non-traditional work, student's work experience and sex-role orientation, and confidence in her ability to compete at the graduate level. From this it seems that parental role models, personal confidence, and positive experiences can have a definite effect on African American females' future choices.
Wilson (1988) maintains that, for African Americans, academic and professional leadership now result from graduate or professional academic training. The fact that the numbers of African Americans in all levels of higher education has declined since 1976, may have a significant effect on the existence of African Americans in leadership roles in the coming years. The National Advisory Committee on African American Higher Education and African American Colleges and Universities states that "...the failure to attain equity in graduate and professional education is a direct result of the decline in Civil Rights incentives. Systematic and institutional barriers persist because there is little direction from the Federal government on equal opportunity" (Lehner, 1980, p. 19).

It already has been shown that the initial barriers to graduate education lie in the area of admission requirements based on standardized tests, such as the Graduate Record Examination. Despite evidence that these measures do not do well at predicting African American student performance, institutions reliance on them results in many African American students being denied access. Once the student is admitted, the increasing amount of difficulty finding financial aid, a lack of mentoring and supportive relationships, and less than adequate prior educational experience (not to be confused with ability), become barriers many African American graduate and professional
students must overcome (O'Brien, 1990; Wilson, 1988).

Lack of financial aid often cause African American students to forgo graduate education or pursue it on a part-time basis (O'Brien, 1990). According to the National Research Council, in 1988, 59.7% of African Americans relied on personal resources to fund their doctoral education, as compared with 49.1% of Whites. This results in longer time to complete the degree; while the average time needed to complete a doctorate was 6.9 years in 1988, for African Americans 8.1 years were required. Increasing responsibilities--family, car, home--may begin to affect the student's ability and motivation to persist. Also, being a part-time student often reduces the quality of support from faculty that is necessary to complete the degree (O'Brien, 1990).

When entering graduate school with a less adequate prior educational background, as compared to what is required at the graduate level, students may start out with a lack of confidence in their ability to compete academically. Whereas mentoring and support could greatly help these students increase their academic self-confidence, it seems that most faculty members report making no special efforts to respond to African American students in terms of time allowances, style of teaching, and curriculum (Nettles, 1982 as cited in Wilson, 1988). The combination of faculty indifference, lack of adequate financial support, and
marginal prior educational experiences leave African American graduate and professional students in a position that is set up for failure. The presence of institutional racism at all levels of academia work together to create significant barriers to African American student achievement at this highest level. This research was used as a theoretical basis for the current study.
CHAPTER III
METHODS

Overview

The imposter phenomenon is a syndrome in which high achieving people experience a lingering fear of being "discovered as a fake" and undeserving of their success (Clance & Imes, 1978). They may attribute their success to various characteristics, while denying their true ability (Harvey & Katz, 1985; Imes, 1980; Topping, 1983). Research indicates that imposter feelings are strongest when one enters a new role, when one is atypical for the environment (e.g., in terms of race or gender), or when one has achieved a higher level of success than one's family (e.g., Harvey, 1982; Topping & Kimmel, 1985). Other research suggests that, for African American people, the more integrated one's racial identity and the more Afrocentric one's world view becomes, susceptibility to depression and anxiety decreases and self-esteem increases (e.g., Parham & Helms, 1981; Fine, Schwebel & Myers, 1985). This study was designed to investigate the relationship between imposter phenomenon, racial identity attitudes, and world view with respect to African American graduate and professional students.
Participants

The participants in this study were 107 African American students enrolled in graduate or professional academic programs at The Ohio State University, University of Delaware, and Boston University. Contacts were made with the Office of Minority Affairs at The Ohio State University and University of Delaware to ensure a complete listing of African American students. Students were solicited in person for participation when possible; all received an introductory letter and a 1-month follow-up letter formally requesting their participation (see Appendix A). Participation was on a voluntary basis. There were 334 students contacted at The Ohio State University; 70 students returned the completed questionnaires, which is a 20.9% return rate. Seventy-one students were contacted at the University of Delaware, and 33 returned completed questionnaires, resulting in a return rate of 46.5%. The 4 students that were contacted at Boston University returned completed questionnaires, resulting in a 100% return rate.

Participants at The Ohio State University ranged in age from 22-50 years (M=28.22 years); of the 70 students, there were 50 females and 20 males. At University of Delaware, ages ranged from 22-45 (M=29.97); of the 33 students, 23 were female and 10 were male. Participants at Boston University ranged in age from 27-42 (M=34.50); of the 4 students, there were 2 males and 2 females.
Instruments

The instruments used in this study included: a) the Harvey IP Scale, b) the Racial Identity Attitudes Scale, c) the Belief Systems Analysis Scale, d) the Academic Self-Concept Scale, and e) a student information survey.

Harvey IP Scale. The Harvey IP Scale is a 14-item instrument developed by Harvey (1982) to assess the degree to which the imposter feelings exist within an individual. The scale consists of 14 descriptive statements from which the participant chooses an answer along a 7-point Likert scale, ranging from "A—Not at all true" to "G—Very true". Each point on the item scales is assigned a point value (0-6), with possible total scores ranging from 0 to 84. The higher the score, the stronger the imposter feelings are believed to exist in that person.

Harvey (1982) reports a test-retest reliability estimate of .85 and a Cronbach alpha of .74 for the cross-validation sample. Harvey, Kidder and Sutherland (1981) report an alpha of .85. Topping and Kimmel (1985) report a Cronbach alpha of .75. Although Harvey seems to have designed the instrument as a uni-dimensional assessment of imposter feelings, there is preliminary data (Edwards, Zeichner, Lawler, & Kowalski, 1987) to suggest that the IP scale actually consists of 3 factor-analyzed subscales. The "imposter subscale" items pertain to feelings of being discovered, being phony and achieving success through luck.
or accident. The "unworthiness subscale" items pertain to feeling undeserving of honors and rewards, difficulty accepting compliments, and belief that current success is not due to true ability. The "inadequacy subscale" items pertain to impression management, inadequacy of accomplishments and lack of confidence in future success. Though these findings have not been examined by other researchers, they do offer some tentative explanations for why the imposter phenomenon is related to, but not the same as measures of self-monitoring, self-esteem, and internal/external success attribution (Harvey & Katz, 1985; Imes, 1980; Topping & Kimmel, 1985).

Edwards et al. report a Cronbach alpha of .34 for the full scale; however, the internal consistencies of the three factors were much higher—the imposter factor alpha was .81, the unworthiness factor alpha was .71, and the inadequacy factor alpha was .65. As the total scale alpha reported by Edwards, et al. was much lower than those reported by most other researchers (Harvey, 1982; Harvey et al., 1981; Topping & Kimmel, 1985), the full scale internal consistency of the IP Scale is as yet uncertain. Further analyses will need to be done, as strongly urged by Edwards et al. Despite these uncertainties, the Harvey IP Scale has received support for measuring the construct it was designed to assess (Edwards et al., 1987; Topping & Kimmel, 1985). A copy of the Harvey IP Scale is included in Appendix B.
Racial Identity Attitudes Scale (RIAS). The RIAS (Parham & Helms, 1981) is a 30-item scale developed to measure attitudes associated with Cross's (1971) model of Black identity development, or psychological Nigrescence. Hall, Cross, and Freedle (1972) developed Q-sort items to assess behaviors and attitudes representing stages of identity development; the RIAS was adapted from these items. Each RIAS item consists of a statement to which a participant answers along a 5-point Likert scale (1—strongly disagree to 5—strongly agree), according to how much that statement describes him or her. There are four subscales, corresponding to the four stages of Black identity development (pre-encounter, encounter, immersion-emersion, and internalization). Scale scores are obtained by totalling the responses to a subscale's keyed items, then dividing by the number of keyed items in the subscale. Scale scores can range from 1 to 5, with 5 indicating the highest level of the attitude.

Parham and Helms (1981) reported internal consistency reliability coefficients for the four subscales as follows: Pre-encounter—.67, Encounter—.72, Immersion-Emersion—.66, and Internalization—.71. Ponterotto and Wise (1987) examined the reliability of the RIAS and found that internal consistencies had been reported that ranged .67 to .69 for Pre-encounter, .45 to .72 for Encounter, .66 to .67 for Immersion-Emersion, and .35 to .79 for Internalization.
They reported alpha coefficients of .63, .37, .72, .37, respectively. Some of the subscale intercorrelations were also high enough for them to question the independence of the scale constructs. Ponterotto and Wise concluded that overall, the RIAS yielded partial support for the constructs described in Cross's (1971) model. However, there seemed to be little statistical support for the encounter stage construct as measured by the RIAS. The difficulty in measuring and conceptualization this construct has been discussed by Helms (1986). The very nature of this stage is one of attitudinal instability, uncertainty, and transition; therefore, the statistical results received may be mirroring this phenomenon, more than pointing out a flaw in the RIAS.

Despite these potential difficulties with the RIAS' structure, there is consistent evidence for the validity of the scale. Racial identity attitudes as measured by the RIAS have been predictive of choice of counselor race (Parham & Helms, 1981). Parham and Helms (1985a) found support for the emotional states that Cross's (1971) model suggested would be associated with the different stages. In particular, participants in the pre-encounter and immersion-emersion stages experienced less emotional well-being and emotional stability than participants in the encounter and internalization stages. Parham and Helms (1985b) found that pre-encounter and immersion-emersion stages seem to be linked to low self-esteem, as compared to the encounter and
internalization stages. Each of these results lend support
to the characteristics of the stages described by Cross in
his original model of racial identity development. See
Appendix C for a copy of the RIAS.

Belief Systems Analysis Scale (BSAS). The BSAS is a
31-item questionnaire, with a 5-point Likert scale ranging
from completely disagree to completely agree. It assesses
where one's beliefs fall along the Afrocentric-Eurocentric
world view continuum. High scores indicate a high degree of
belief in Afrocentric values (belief in the connectedness of
all that exists, spiritual-material unity). Low scores
indicate a low degree of belief in Afrocentric values, or,
conversely, high Eurocentricity (belief in the separateness
of all that exists; separation of spirit and matter).

The BSAS was developed from a pilot study
questionnaire (Fine, Schwebel, & Myers, 1985). The purpose
of that preliminary investigation was to assess the degree
to which African American and White, single and married
mothers held Afrocentric beliefs, and how their beliefs
affected their psychological well-being. The pilot
questionnaire consisted of 20 statements reflecting
Afrocentric beliefs which were broken down into five factors
representing 48.9% of the variance.

African American, married mothers reported
significantly higher degree of Afrocentric beliefs than all
other mothers. White, married mothers reported the lowest
degree of Afrocentricity. It was also concluded that adopting a more Afrocentric world view was linked to having a more positive perception of being a mother, single or married. Some tentative analyses were done to assess the degree of overlap between the pilot questionnaire and measures of depression, anxiety, self-esteem, and satisfaction with motherhood. For six of the 20 items, there was a significant amount of overlap with most of the criterion measures. For the remaining 14 items, there was little or no overlap.

In order to improve on the pilot questionnaire, Montgomery, Fine, and Myers (1989) generated 55 new items based on the concepts reflected in the original 20 items. These items consist of behaviors, thoughts, and general reactions to hypothetical situations which illustrate certain underlying beliefs. A validation study was then performed using 140 college undergraduates. Participants completed the 55-item questionnaire, the Social Interest Scale, the Dogmatism Scale, and the Symptom Checklist-90-R. From this study, 24 of the 55 items in the BSAS were eliminated as they failed to meet statistical requirements set by the researchers.

The final 31-item BSAS has a Cronbach alpha of .80 and test-retest reliability coefficient of .63. It consists of five factors which account for 38.9% of the variance. The factors are identified as: 1) Interpersonal valuing, 2)
De-emphasis on appearance, 3) Integration of opposites, 4) Non-material-based satisfaction, and 5) Optimism. The BSAS seems to have good predictive validity. It correlated significantly and positively with the Social Interest Scale and significantly and negatively with the Symptom Checklist-90-R and the Dogmatism Scale as hypothesized. It also seems to have adequate discriminant validity; only 10 of the possible 96 correlations with the 3 criterion measures exceeded .30. Though more research is certainly needed using this instrument, overall, these initial results suggest the BSAS is a sound tool for assessing the degree of Afrocentric values contained in one's world view. A copy of the BSAS can be found in Appendix D.

Academic Self-Concept Scale (ASCS). The ASCS was developed by Reynolds, Ramirez, Magrina, and Allen (1980) to assess how positively one feels about his/her academic ability. The ASCS consists of 40 statements with a 4-point Likert scale ranging from strongly disagree to strongly agree, with no neutral point. Scores can range from 40 to 160; the higher the score, the stronger the level of academic self-concept. Reynolds, et al. (1980) found internal consistency of .91. Reynolds (1981) found internal consistency of .92.

The ASCS has been correlated with grade point average, SAT scores, and the Rosenberg Self-Esteem Scale with \( r = 0.40-0.52, r = 0.12-0.22, \) and \( r = 0.45, \) respectively (Reynolds, et al.,
1980). Halote and Michael (1984) examined the ASCS and the Dimensions of Self-Concept Scale, Form H (DOSC), another academic self-concept measure consistency of 80 items. Though both scales measure academic self-concept, the ASCS seems to be a uni-dimensional measure, whereas the DOSC has 5 distinct scales (level of aspiration, anxiety, academic interest and satisfaction, leadership and initiative, and identification versus alienation), making it a multidimensional measure. Halote and Michael found the ASCS to be significantly and positively related to four of the DOSC scales; the anxiety scale was significantly and negatively related to the ASCS. A copy of the ASCS is included in Appendix E.

Student Information Survey (SIS). This survey is a 32-item questionnaire developed by the experimenter for use in this study. The purpose of the SIS was to gather demographic and environmental background data from the participants. This data was used to identify the affect each characteristic might have, if any, on imposter feelings, racial identity attitudes and /or world view. See Appendix F for a copy of the SIS.

Procedure

Given the small number and the varied course schedules of African American graduate and professional students, identified students received a brief letter stating the purpose and a description of the investigation and
requesting their participation in the study. Direct contacts with students were made in person, where possible. Along with the letter, all students received a packet containing the five questionnaires and a return envelope. The students were asked in the letter to return the packet by mail, whether or not they chose to participate. Those who chose to participate were asked to complete all questionnaires, and to place questionnaires in the envelope provided. The Ohio State University participants were asked to place the last 4 digits of their social security number on each questionnaire. All other participants received questionnaires with a pre-determined 4 digit number on each questionnaire. This final step was used to ensure anonymity, while providing a way to check each student's packet for completion of all questionnaires; incomplete packets were not included in the final analysis of results.

As no personally identifiable information was requested of the participants, no further procedures for ensuring confidentiality were performed. Since students were asked to return the materials in the envelopes whether or not they chose to participate and use only numbers for identification, there was no way of knowing the identity of those students who chose to participate.
Hypotheses

The following hypotheses were examined as a result of this study:

H1: Level of imposter phenomenon scores will be significantly and negatively related to academic self-concept scores.

H2: Year(s) in program will be negatively and significantly related to level of IP.

H3: The strongest moderators of IP will be stage of racial identity attitude and degree of Afrocentricity, as compared to academic self-concept, environmental items, or demographic characteristics.

H4: High levels of IP will be significantly related to pre-encounter, immersion-emersion attitudes, and Eurocentricity; low levels of IP will be significantly related to encounter, internalization attitudes, and Afrocentricity.

H5: Lowest levels of IP will be significantly related to high academic self-concept, internalization attitudes, and a high degree of Afrocentricity.

H6: For participants with high academic self-concept scores and high IP scores, the Student Information Survey results will show lower overall peer and family role modeling, encouragement and support for academic success.
CHAPTER IV
RESULTS

The purpose of this chapter is to present the results of the analyses that were performed on the data. The results are presented under headings: (a) descriptive data, pertaining to the participants and the instruments; (b) hypotheses; and (c) exploratory analyses.

Descriptive Data

Participants. The total number of participants was 107; 70 from The Ohio State University, 33 from University of Delaware, and 4 from Boston University. Of the 107 participants, 32 were males and 75 were females. One-way analyses of variance were conducted on the variables of location and gender to determine if significant differences existed for any of the scales, and none were found. Therefore, for the remainder of the analyses, all 107 participants were used as one sample.

Descriptive information regarding the data gathered in the Student Information Survey (SIS) is included in Table 2. As indicated in Table 2, most participants were single, full-time, second-year students. Their ages ranged from 22-50 years (M=29.0 years), and their G.P.A.'s ranged from 2.00-4.00 (M=3.32). Though more reported attending
Table 2

Demographic Data (By Location)

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<th></th>
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<th>UD (n=33)</th>
<th>BU (n=4)</th>
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<td>(M=29.97)</td>
<td>(M=34.50)</td>
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<td>22 ft, 11 pt</td>
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<td>predom. Black</td>
<td>28</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>mixed races</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
predominately White undergraduate institutions (60.75%), 38% did have predominately African American undergraduate experiences. The majority of participants described their hometown as being an urban environment (89.6%).

On average, spiritual beliefs tended to play a neutral role in the participants' experiential perceptions and their academic goal-making (M=3.48 and 3.23, respectively). In general, participants had achieved a higher level of education than that of either their mothers or fathers; 60.8% of mothers and 61.6% of fathers had earned no more than a Bachelor's degree. Despite this, participants reported the degree of encouragement for their academic goals given by family and peers was high (M=4.44 and 4.1, respectively).

**Instruments.** Scores on the Belief Systems Analysis Scale (BSAS) ranged from 82 to 141 (N= 103, M= 114.5, SD= 10.3). For comparative purposes, Montgomery, et al. (1989) reported a somewhat lower mean score of 104.71. Scores on the Academic Self-Concept Scale (ASC) ranged from 91 to 157 (N= 93, M= 120.6, SD= 15.3), as compared to the 105.82 mean reported by Reynolds, et al. (1980). Harvey IP Scale scores (IPS) ranged from 6 to 58 (N= 105, M=30.4, SD= 12.2). Harvey (1982) reported means ranging from 30.82 to 42.17 for first through fourth year graduate students. Topping and Kimmel's (1985) university faculty yielded a mean of 25.86 on the IPS. Concerning the proposed IPS subscales (Edwards,
Zeichner, Lawler & Kowalski, 1987), the imposter subscale yielded a range of 0 to 31 (M=13.3, SD= 7.4). The unworthiness subscale showed a range of 0 to 21 (M= 8.8, SD= 4.3). The inadequacy subscale yielded a range of 4 to 23 (M= 12.1, SD= 4.1).

Of the four RIAS subscales, only 2 participants received highest scores in the pre-encounter and the immersion-emersion stages; there were 34 participants with encounter high scores and 68 participants with internalization high scores. Other published research rarely reports the number of participants for each stage who scored highest, therefore, these results cannot be compared. The range of the sample for pre-encounter scores was 1 to 3.875 (M= 1.6, SD= 0.47), while the range of encounter scores was 1.67 to 4.3 (M=3.5, SD= 0.48). The immersion-emersion scores ranged from 1.4 to 4.4 (M= 2.8, SD= 0.63). The range of internalization scores was 2.17 to 5 (M=3.7, SD= 0.6). Parham and Helms (1985b) report subscale means of 1.96, 4.2, 3.07, and 3.7, respectively, for an undergraduate sample.

Correlational analyses were performed on the four RIAS subscales to obtain the subscale intercorrelation coefficients. The intercorrelations were as follows: pre-encounter and encounter (r= -.28, p< .004), pre-encounter and immersion-emersion (r= -.52, p< .0001), pre-encounter and internalization (r= -.01, p< .88), encounter and
immersion-emersion ($r = .67, \ p < .0001$), encounter and internalization ($r = -.16, \ p < .096$), immersion-emersion and internalization ($r = -.11, \ p < .26$). See Table 3 for a summary of the descriptive data on the BSAS, ASC, IPS, and the RIAS subscales.

**Hypotheses**

The first two hypotheses concerned characteristics of the imposter phenomenon described or implied in the literature. Hypothesis #1 predicted that imposter scores and academic self-concept scores would be negatively related. Using a regression analysis, the results supported this hypothesis—imposter scores were significantly and negatively related to academic self-concept scores [$F(1, 90) = 43.97, \ p < .0001$] (see Table 4). Academic self-concept accounted for 33% of the variance in imposter scores.

Hypothesis #2 predicted that imposter scores would be negatively related to the number of years spent in one's academic program. The regression analysis for this hypothesis is shown in Table 5 and indicates that imposter scores were not significantly related to the number of years spent in one's program, although the direction of the relationship was in the predicted direction [$F(1, 103) = 1.1, \ R^2 = .01, \ p < 0.3$]. Therefore, hypothesis #2 was not supported.

The next three hypotheses examined the relationship between the imposter phenomenon, racial identity attitudes and world view. Hypothesis #3 predicted that the strongest
Table 3

**Descriptive Analyses for Main Inventories**

<table>
<thead>
<tr>
<th>Inventory</th>
<th>N</th>
<th>Range</th>
<th>M</th>
<th>SD</th>
<th>Cronbach</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAS</td>
<td>103</td>
<td>82-141</td>
<td>114.5</td>
<td>10.3</td>
<td>.60</td>
</tr>
<tr>
<td>ASC</td>
<td>93</td>
<td>91-157</td>
<td>120.6</td>
<td>15.3</td>
<td>.93</td>
</tr>
<tr>
<td>IPS</td>
<td>105</td>
<td>6-58</td>
<td>30.4</td>
<td>12.2</td>
<td>.80</td>
</tr>
<tr>
<td>IPS subscales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>imposter</td>
<td>106</td>
<td>0-31</td>
<td>13.3</td>
<td>7.4</td>
<td>.77</td>
</tr>
<tr>
<td>unworthiness</td>
<td>107</td>
<td>0-21</td>
<td>8.8</td>
<td>4.3</td>
<td>.59</td>
</tr>
<tr>
<td>inadequacy</td>
<td>105</td>
<td>0-21</td>
<td>12.1</td>
<td>4.1</td>
<td>.31</td>
</tr>
<tr>
<td>RIAS subscales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-encounter</td>
<td>106</td>
<td>1-3.8</td>
<td>1.6</td>
<td>.47</td>
<td>.57</td>
</tr>
<tr>
<td>Encounter</td>
<td>105</td>
<td>1.7-4.3</td>
<td>3.5</td>
<td>.48</td>
<td>.39</td>
</tr>
<tr>
<td>Immersion-emersion</td>
<td>103</td>
<td>1.4-4.4</td>
<td>2.8</td>
<td>.63</td>
<td>.78</td>
</tr>
<tr>
<td>Internalization</td>
<td>107</td>
<td>2.2-5</td>
<td>3.7</td>
<td>.60</td>
<td>.58</td>
</tr>
</tbody>
</table>
Table 4

Regression Analysis of IPS with ASC

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>1</td>
<td>4705.79</td>
<td>4705.79</td>
<td>43.97</td>
<td>.33</td>
<td>.0001**</td>
</tr>
<tr>
<td>Error</td>
<td>90</td>
<td>9632.94</td>
<td>107.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
<td>14338.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parameter | Estimate | p       |
----------|----------|---------|
ASC       | -0.47    | .0001** |

**p< .001
Table 5

Regression Analysis with IPS and Number of Years in Program

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>$R^2$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>1</td>
<td>163.46</td>
<td>163.46</td>
<td>1.10</td>
<td>.01</td>
<td>.30</td>
</tr>
<tr>
<td>Error</td>
<td>103</td>
<td>15351.53</td>
<td>149.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>104</td>
<td>15514.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parameter Estimate $p$

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program years</td>
<td>-0.07</td>
<td>.30</td>
</tr>
</tbody>
</table>
moderators of imposter scores would be racial identity attitudes and world view, as compared to academic self-concept scores or SIS questions about specific demographic or environmental characteristics. The demographic variables examined were as follows: age, marital status, full- or part-time status, G.P.A., number of years in the academic program, highest degree received, racial make-up of undergraduate institution, degree of spirituality, parents' level of education, and family and peer encouragement. The environmental variables examined were as follows: percentage of African Americans in current academic program, level of program supportiveness, advisor's supportiveness of progress through the program, of personal well-being, of professional development, of research, and of thesis or dissertation work.

A hierarchical regression analysis indicated that the regression model was significant before \([F(23,47)=2.43, R^2=.54, p<.005]\) and after entering BSAS scores and RIAS subscale scores into the model \([F(5,42)=2.1, R^2=.58, p<.01]\). However, BSAS and RIAS subscale scores did not contribute to a significant proportion of the variance in IP scores over ASC scores, demographic or environmental variables \((R^2\text{change}=.04, p<.54)\). Therefore, hypothesis #3 was not supported. A stepwise regression analysis revealed that: 1) ASC scores 2) age; and 3) attending a Black undergraduate institution represented the best three
variable model for predicting IP. These three variables maintained significant partial correlation coefficients, and accounted for a significant proportion of the variance in IP scores. See Table 6 for a summary of these results.

Hypothesis #4 predicted that high imposter scores would be related to pre-encounter, immersion-emersion attitudes and Eurocentricity, or low BSAS scores, while low imposter scores were predicted to be related to encounter, internalization attitudes and high BSAS scores. As Table 7 shows, multiple regression analysis results indicated that though BSAS scores, and the RIAS subscales did contribute to a significant proportion of the variance in IP scores \[F(5,93)=3.18, R^2=.15, p<.01\], the remainder of the results were mixed. BSAS scores and internalization were negatively related to IP scores, as predicted. However, pre-encounter and immersion-emersion scores also were negatively related to IP scores, while encounter scores were positively related to IPS; the opposite were the predicted directions. Therefore, Hypothesis #4 receives partial support. A stepwise regression analysis revealed that the BSAS was the only variable whose partial correlation coefficient was significant \(pr^2=.0988, p<.002\), and is a better predictor of IP scores, over the RIAS subscales.

Hypothesis #5 predicted that the lowest imposter phenomenon scores would be related to high academic self concept, internalization attitudes, and high BSAS scores.
### Table 6

**Hierarchical Regression Analysis with IPS and BSAS, RIAS Subscales and ASC, Demographic, and Environmental Variables**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
<th>p change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>5</td>
<td>450.54</td>
<td>2.1</td>
<td>.58</td>
<td>.005**</td>
<td>.54</td>
</tr>
<tr>
<td>Regression</td>
<td>28</td>
<td>6419.21</td>
<td>2.43</td>
<td>.54</td>
<td>.01**</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>42</td>
<td>4576.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>10995.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Source F F change $R^2$ $\Delta R^2$ p p change

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>F change</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>p</th>
<th>p change</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASC</td>
<td>33.76</td>
<td></td>
<td>.33</td>
<td>.33</td>
<td>.0001**</td>
<td>-</td>
</tr>
<tr>
<td>Age</td>
<td>21.34</td>
<td>6.30</td>
<td>.39</td>
<td>.06</td>
<td>.0001**</td>
<td>.014*</td>
</tr>
<tr>
<td>Black UG</td>
<td>16.22</td>
<td>4.06</td>
<td>.42</td>
<td>.04</td>
<td>.0001**</td>
<td>.048*</td>
</tr>
</tbody>
</table>

Parameter B value p

<table>
<thead>
<tr>
<th>Parameter</th>
<th>B value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASC</td>
<td>-0.49</td>
<td>.0001**</td>
</tr>
<tr>
<td>Age</td>
<td>-0.59</td>
<td>.0042**</td>
</tr>
<tr>
<td>Black UG</td>
<td>-4.97</td>
<td>.048*</td>
</tr>
</tbody>
</table>

**Note.** Model = BSAS and RIAS subscales, Regression = ASC, demographic and environmental variables, and BSAS and RIAS subscales. Black UG = Black undergraduate institution.

*p < .05, **p < .01.
Table 7

Regression Analysis with IPS and BSAS and RIAS Subscales

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>5</td>
<td>2103.57</td>
<td>420.71</td>
<td>3.18</td>
<td>.15</td>
<td>.01**</td>
</tr>
<tr>
<td>Error</td>
<td>93</td>
<td>12321.60</td>
<td>132.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>14425.17</td>
<td></td>
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</tbody>
</table>

Parameter Estimate p

<table>
<thead>
<tr>
<th>Parameter</th>
<th>BSAS</th>
<th>PRE</th>
<th>ENC</th>
<th>IMM</th>
<th>INT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-0.38</td>
<td>-4.85</td>
<td>5.22</td>
<td>-5.34</td>
<td>-0.27</td>
</tr>
<tr>
<td></td>
<td>.002**</td>
<td>.10</td>
<td>.11</td>
<td>.06</td>
<td>.89</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>R²</th>
<th>pr²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAS</td>
<td>1</td>
<td>10.64</td>
<td>.099</td>
<td>.099</td>
<td>.002**</td>
</tr>
<tr>
<td>PRE</td>
<td>2</td>
<td>5.88</td>
<td>.11</td>
<td>.01</td>
<td>.29</td>
</tr>
<tr>
<td>ENC</td>
<td>3</td>
<td>4.39</td>
<td>.12</td>
<td>.01</td>
<td>.25</td>
</tr>
<tr>
<td>IMM</td>
<td>4</td>
<td>4.01</td>
<td>.15</td>
<td>.02</td>
<td>.11</td>
</tr>
<tr>
<td>INT</td>
<td>5</td>
<td>3.18</td>
<td>.15</td>
<td>.0002</td>
<td>.89</td>
</tr>
</tbody>
</table>

Note. PRE=Pre-encounter, ENC=Encounter, IMM=Immersion-emersion, INT=Internalization.

**p< or = .01.
Multiple regression analysis results, shown in Table 8, indicated that BSAS, ASC, and internalization scores accounted for a significant amount of the variance in IP scores \[ F(3,87) = 14.15, R^2 = .33, p < .0001 \]. Furthermore, each variable was related to IP in the predicted direction, supporting the fifth hypothesis. A stepwise regression analysis revealed that ASC yielded the only significant partial correlation coefficient, accounting for 33% of the variance in IP scores.

The final hypothesis examined the relationship between people who scored high on both the ASC and the IPS, versus other participants, and the levels of family and peer encouragement received and role modeling. Parents' education level and the percentage of African Americans in current academic program were the variables used to represent role modeling. Hypothesis #6 predicted that participants with high ASC and IPS scores would have lower family and peer encouragement ratings, fewer African Americans in their program, and their parents would have less education, as compared to all other participants.

The top one-third of scores on the ASC and IPS were used as the cut-off for designating high ASC and IPS; accordingly, high ASC were scores greater than 126 and high IP were scores greater than 42. When these cut-offs were established, it was found that there was only one participant with both high ASC and high IP, therefore,
Table 8

Multiple Regression Analysis with IPS and BSAS, ASC and Internalization (INT).

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>3</td>
<td>4663.20</td>
<td>1554.40</td>
<td>14.15</td>
<td>.33</td>
<td>.0001**</td>
</tr>
<tr>
<td>Error</td>
<td>87</td>
<td>9554.41</td>
<td>109.82</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>14217.60</td>
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</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAS</td>
<td>-0.08</td>
<td>.49</td>
</tr>
<tr>
<td>INT</td>
<td>-0.70</td>
<td>.72</td>
</tr>
<tr>
<td>ASC</td>
<td>-0.44</td>
<td>.0001**</td>
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</table>

<table>
<thead>
<tr>
<th>Source</th>
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<th>F</th>
<th>R²</th>
<th>pr²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASC</td>
<td>1</td>
<td>42.36</td>
<td>.32</td>
<td>.32</td>
<td>.0001**</td>
</tr>
<tr>
<td>BSAS</td>
<td>2</td>
<td>21.37</td>
<td>.33</td>
<td>.005</td>
<td>.45</td>
</tr>
<tr>
<td>INT</td>
<td>3</td>
<td>14.15</td>
<td>.33</td>
<td>.001</td>
<td>.72</td>
</tr>
</tbody>
</table>

**p < .001
hypothesis #6 could not be tested.

Exploratory analyses

Several analyses were done to explore potential relationships between concepts that were not included in the formal hypotheses. Some questions on the SIS were designed to access information that could relate to the "Null Environment" hypothesis described by Freeman (1979). On average, participants reported that about 10% or fewer students in their academic program were also African American, as compared to the 30% in their pre-college academic group. Overall, participants seemed to perceive their program as being neutral in supportiveness (M=2.89, on a 5-point scale). Advisors were also seen as being mostly neutral in the degree of support given in the areas of making progress in the program, personal satisfaction, professional development, research, and thesis or dissertation work (M=3.67, 3.24, 3.44, 3.05 and 2.96, respectively). Participants viewed their fellow student's degree of comraderie as generally little more than neutral (M=3.75).

Correlational analyses were performed on IP scores and several variables of interest (see Table 9). It was found that although the relationship between IP scores and G.P.A. was not significant (r= -.13, p< .19), ASC scores were significantly and negatively related to G.P.A. (r= -.44, p<.0001). IP also had a non-significant relationship with
Table 9

Correlational Analyses of IPS with Exploratory Independent Variables

<table>
<thead>
<tr>
<th></th>
<th>r</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>G.P.A.</td>
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<td>.19</td>
</tr>
<tr>
<td>Age</td>
<td>.15</td>
<td>.13</td>
</tr>
<tr>
<td>BSAS</td>
<td>-.32</td>
<td>.0009**</td>
</tr>
<tr>
<td>RIAS subscales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-encounter</td>
<td>-.04</td>
<td>.67</td>
</tr>
<tr>
<td>Encounter</td>
<td>.08</td>
<td>.40</td>
</tr>
<tr>
<td>Immersion-emersion</td>
<td>-.06</td>
<td>.57</td>
</tr>
<tr>
<td>Internalization</td>
<td>-.10</td>
<td>.29</td>
</tr>
</tbody>
</table>

**p<.001
age (r = .15, p < .13). IP was significantly and negatively correlated with BSAS scores (r = -.32, p < .0009), however, it was not significantly related to any of the RIAS subscales.

Multiple regression analyses were performed on BSAS scores and several variables of interest. As shown in Table 10, the RIAS subscales accounted for a significant amount of the variance in the BSAS scores [F(4, 95) = 2.62, R² = .099, p < .04]. Pre-encounter and encounter scores were negatively related to BSAS and immersion-emersion and internalization scores were positively related to BSAS. A stepwise regression analysis revealed that only internalization scores yielded a significant partial correlation coefficient (pr² = .06, p < .01).

The percentage of African Americans in the pre-college peer and academic groups and current peer and academic groups did not account for a significant proportion of BSAS variance [F(4, 98) = 1.62, R² = .06, p < .18]. However, stepwise analysis revealed that the percentage of African Americans in the pre-college academic group did contribute to a significant amount of BSAS variance, holding the effects of the other groups constant (pr² = .05, p < .02). The higher the percentage of African Americans in the pre-college academic group, the higher were the BSAS scores, see Table 11.

Analyses of variance were done using the question that asked participants to identify themselves with a racial label and several variables of interest. The results shown
Table 10

Regression Analyses on BSAS and RIAS Subscales

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R^2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>4</td>
<td>1067.49</td>
<td>266.87</td>
<td>2.62</td>
<td>.1</td>
<td>.04*</td>
</tr>
<tr>
<td>Error</td>
<td>95</td>
<td>9662.87</td>
<td>101.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>10730.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parameter Estimate

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE</td>
<td>-4.09</td>
<td>.11</td>
</tr>
<tr>
<td>ENC</td>
<td>-1.87</td>
<td>.51</td>
</tr>
<tr>
<td>IMM</td>
<td>0.68</td>
<td>.78</td>
</tr>
<tr>
<td>INT</td>
<td>3.93</td>
<td>.02*</td>
</tr>
</tbody>
</table>

Source df F R^2 p

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>R^2</th>
<th>p R^2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT</td>
<td>1</td>
<td>6.40</td>
<td>.06</td>
<td>.06</td>
<td>.01**</td>
</tr>
<tr>
<td>PRE</td>
<td>2</td>
<td>5.09</td>
<td>.09</td>
<td>.03</td>
<td>.06</td>
</tr>
<tr>
<td>ENC</td>
<td>3</td>
<td>3.51</td>
<td>.099</td>
<td>.099</td>
<td>.53</td>
</tr>
<tr>
<td>IMM</td>
<td>4</td>
<td>2.62</td>
<td>.099</td>
<td>.099</td>
<td>.78</td>
</tr>
</tbody>
</table>

Note. PRE=Pre-encounter, ENC=Encounter, IMM=Immersion-emersion, INT=Internalization

* p<.05, **p<.01
Table 11

Regression Analyses with BSAS and Academic and Peer Groups

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>4</td>
<td>671.13</td>
<td>167.78</td>
<td>1.62</td>
<td>.06</td>
<td>.18</td>
</tr>
<tr>
<td>Error</td>
<td>98</td>
<td>10164.50</td>
<td>103.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>102</td>
<td>10835.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parameter Estimate  p
Pre acad  1.57  .02*
Pre peer  -.54  .55
Cur acad  .55  .63
Cur peer  -.31  .69

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>R²</th>
<th>pr²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre acad</td>
<td>1</td>
<td>5.53</td>
<td>.05</td>
<td>.05</td>
<td>.02*</td>
</tr>
<tr>
<td>Pre peer</td>
<td>2</td>
<td>3.12</td>
<td>.06</td>
<td>.007</td>
<td>.40</td>
</tr>
<tr>
<td>Cur acad</td>
<td>3</td>
<td>2.12</td>
<td>.06</td>
<td>.002</td>
<td>.68</td>
</tr>
<tr>
<td>Cur peer</td>
<td>4</td>
<td>1.62</td>
<td>.06</td>
<td>.002</td>
<td>.69</td>
</tr>
</tbody>
</table>

Note. Pre acad=Pre-college academic, Pre peer=Pre-college peer, Cur acad=Current academic, Cur peer=Current peer.
*p<.05
in Table 12 indicate that choice of racial identification label was not significantly accounted for by BSAS or ASC scores, or by the percentage of African Americans in the pre-college and current academic groups. However, the percentage of African Americans in the pre-college and current peer groups each accounted for a significant amount of the variance \([F(6,86)=3.66, R^2=.20, p<.003; F(6,86)=5.1, R^2=.26, p<.0002, \text{ respectively}]\).

The results of the Student-Newman-Keuls t-tests, shown in Table 13, reveal that the fewer African Americans there were in the participants' pre-college peer group, the more they were apt to identify themselves as "Negro". The more African Americans in their group, the more they were apt to use "African", "African-American", or "Black". The fewer African Americans there were in the participants' current peer group, the more they were apt to identify themselves as "Negro", also; the more African Americans in their group, the more they were apt to use "African" or "African-American".

Each hypothesis was tested using the IP subscales—imposter, unworthiness, and inadequacy—identified by Edwards, et al. (1987). There were no differences in the outcome of these analyses using the IP subscales versus the total IPS for all hypotheses, except hypothesis #4 (see Table 14). The unworthiness subscale yielded a non-significant relationship between IP scores and the BSAS.
Table 12

**Analyses of Variance with Racial Self-Identification Labels**

and BSAS, ASC, and Academic and Peer Groups

Dependent Variable: BSAS

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>6</td>
<td>40.64</td>
<td>6.77</td>
<td>.06</td>
<td>.005</td>
<td>1</td>
</tr>
<tr>
<td>Error</td>
<td>83</td>
<td>8712.26</td>
<td>104.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>8752.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent Variable: ASC

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>6</td>
<td>1457.88</td>
<td>242.98</td>
<td>.99</td>
<td>.08</td>
<td>.44</td>
</tr>
<tr>
<td>Error</td>
<td>73</td>
<td>17979.67</td>
<td>246.30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>19437.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 12 (continued)

**Analyses of Variance with Racial Self-Identification Labels**

**BSAS, ASC and Academic and Peer Groups**

**Dependent Variable: Pre-college peer group**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>6</td>
<td>38.20</td>
<td>6.37</td>
<td>3.66</td>
<td>.20</td>
<td>.003**</td>
</tr>
<tr>
<td>Error</td>
<td>86</td>
<td>149.69</td>
<td>1.74</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>187.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dependent Variable: Pre-college academic group**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>6</td>
<td>26.97</td>
<td>4.50</td>
<td>1.43</td>
<td>.09</td>
<td>.21</td>
</tr>
<tr>
<td>Error</td>
<td>86</td>
<td>270.34</td>
<td>3.14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>297.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dependent Variable: Current peer group**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>6</td>
<td>52.36</td>
<td>8.73</td>
<td>5.10</td>
<td>.26</td>
<td>.0002**</td>
</tr>
<tr>
<td>Error</td>
<td>86</td>
<td>147.26</td>
<td>1.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>199.61</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dependent Variable: Current academic group**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
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<td>7.78</td>
<td>1.30</td>
<td>1.55</td>
<td>.097</td>
<td>.17</td>
</tr>
<tr>
<td>Error</td>
<td>86</td>
<td>72.05</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
<td>92</td>
<td>79.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p<.01**
Table 13

**Student-Newman-Keuls Tests for Pre-college and Current Groups and Racial Self-Identification Labels**

**Dependent Variable: Pre-college peer group**

<table>
<thead>
<tr>
<th>Self label</th>
<th>n</th>
<th>M</th>
<th>Grouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>40</td>
<td>4.6</td>
<td>A</td>
</tr>
<tr>
<td>African</td>
<td>6</td>
<td>4.3</td>
<td>A</td>
</tr>
<tr>
<td>Black</td>
<td>34</td>
<td>4.2</td>
<td>A</td>
</tr>
<tr>
<td>Afro-American</td>
<td>4</td>
<td>3.5</td>
<td>A, B</td>
</tr>
<tr>
<td>American</td>
<td>5</td>
<td>2.8</td>
<td>A, B</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2.3</td>
<td>A, B</td>
</tr>
<tr>
<td>Negro</td>
<td>1</td>
<td>1.0</td>
<td>B</td>
</tr>
</tbody>
</table>

**Dependent Variable: Pre-college academic group**

<table>
<thead>
<tr>
<th>Self label</th>
<th>n</th>
<th>M</th>
<th>Grouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>African</td>
<td>6</td>
<td>4.3</td>
<td>A</td>
</tr>
<tr>
<td>African-American</td>
<td>40</td>
<td>3.4</td>
<td>A</td>
</tr>
<tr>
<td>Black</td>
<td>34</td>
<td>2.8</td>
<td>A</td>
</tr>
<tr>
<td>Afro-American</td>
<td>4</td>
<td>2.5</td>
<td>A</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2.3</td>
<td>A</td>
</tr>
<tr>
<td>American</td>
<td>5</td>
<td>2.2</td>
<td>A</td>
</tr>
<tr>
<td>Negro</td>
<td>1</td>
<td>1.0</td>
<td>A</td>
</tr>
</tbody>
</table>

**Note.** Means with same letter are not significantly different at p< .05. Scale for groups: 1= less than 10% Blacks in pre-college group to 5= greater than 40% Blacks in pre-college group.
Table 13 (continued)

Student-Newman-Keuls Tests for Pre-college and Current Groups and Racial Self-Identification Labels

Dependent Variable: Current peer group

<table>
<thead>
<tr>
<th>Self label</th>
<th>n</th>
<th>M</th>
<th>Grouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>African</td>
<td>6</td>
<td>5.0</td>
<td>A</td>
</tr>
<tr>
<td>African-American</td>
<td>40</td>
<td>4.4</td>
<td>A</td>
</tr>
<tr>
<td>American</td>
<td>5</td>
<td>3.8</td>
<td>A, B</td>
</tr>
<tr>
<td>Black</td>
<td>34</td>
<td>3.7</td>
<td>A, B</td>
</tr>
<tr>
<td>Afro-American</td>
<td>4</td>
<td>2.8</td>
<td>A, B, C</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>1.3</td>
<td>B, C</td>
</tr>
<tr>
<td>Negro</td>
<td>1</td>
<td>1.0</td>
<td>C</td>
</tr>
</tbody>
</table>

Dependent Variable: Current academic group

<table>
<thead>
<tr>
<th>Self label</th>
<th>n</th>
<th>M</th>
<th>Grouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afro-American</td>
<td>4</td>
<td>2.5</td>
<td>A</td>
</tr>
<tr>
<td>African</td>
<td>6</td>
<td>1.8</td>
<td>A</td>
</tr>
<tr>
<td>African-American</td>
<td>40</td>
<td>1.3</td>
<td>A</td>
</tr>
<tr>
<td>Black</td>
<td>34</td>
<td>1.3</td>
<td>A</td>
</tr>
<tr>
<td>American</td>
<td>5</td>
<td>1.0</td>
<td>A</td>
</tr>
<tr>
<td>Negro</td>
<td>1</td>
<td>1.0</td>
<td>A</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>1.0</td>
<td>A</td>
</tr>
</tbody>
</table>

Note. Means with same letter are not significantly different at p< .05. Scale for groups: 1= less than 10% Blacks in current group to 5= greater than 40% Blacks in current group.
### Table 14

**Multiple Regression Analyses of the IPS Subscales with BSAS and RIAS Subscales**

Dependent Variable: Imposter subscale

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>5</td>
<td>434.21</td>
<td>86.84</td>
<td>2.36</td>
<td>.11</td>
<td>.05*</td>
</tr>
<tr>
<td>Error</td>
<td>93</td>
<td>3418.52</td>
<td>36.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>3852.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Parameter Estimate p**

- BSAS: \(-0.17\) \(p = .006\)**
- PRE: \(-2.07\) \(p = .18\)
- ENC: \(2.88\) \(p = .09\)
- IMM: \(-1.69\) \(p = .25\)
- INT: \(0.56\) \(p = .60\)

**Variable F R² p**

- BSAS: \(8.57\) \(R² = .08\) \(p = .004\)**
Table 14 (continued)

Multiple Regression Analyses of the IPS Subscales with BSAS and RIAS Subscales

Dependent Variable: Unworthiness subscale

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R^2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>5</td>
<td>117.14</td>
<td>23.43</td>
<td>1.25</td>
<td>.06</td>
<td>.29</td>
</tr>
<tr>
<td>Error</td>
<td>94</td>
<td>1765.45</td>
<td>18.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>1882.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parameter Estimate p

| BSAS    | -0.09 | .04*   |
| PRE     | -0.54 | .62    |
| ENC     | 1.03  | .40    |
| IMM     | -1.30 | .21    |
| INT     | 0.15  | .84    |

<table>
<thead>
<tr>
<th>Variable</th>
<th>F</th>
<th>R^2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSAS</td>
<td>6.39</td>
<td>.06</td>
<td>.01**</td>
</tr>
</tbody>
</table>
Table 14 (continued)

Multiple Regression Analyses of the IPS Subscales with BSAS and RIAS Subscales

Dependent Variable: Inadequacy subscale

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>5</td>
<td>317.31</td>
<td>63.46</td>
<td>4.32</td>
<td>.19</td>
<td>.001**</td>
</tr>
<tr>
<td>Error</td>
<td>93</td>
<td>1367.24</td>
<td>14.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>1684.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parameter Estimate     p
BSAS -0.11 .005**
PRE -1.99 .04*
ENC -0.36 .74
IMM -2.06 .03*
INT -1.03 .12

Variable F F change R² pr² p p change
BSAS 9.20 - .09 .09 .003** -
IMM 7.33 5.07 .13 .05 .001** .03*

Note. PRE=Pre-encounter, ENC=Encounter, IMM=Immersion-emersion, INT=Internalization.
*p< .05, **p< .01
and RIAS subscale scores, whereas the imposter and inadequacy subscales yielded significant relationships.
CHAPTER IV
DISCUSSION

The main purpose of this study was to examine whether or not the imposter phenomenon exists in African American graduate and professional students, and if it does exist, the extent to which it relates to their feelings about race, world view, their background, and current environment. This chapter contains: (a) a discussion of the results of this study, as well as conclusions regarding these results; (b) limitations of the study; and (c) implications for future research.

Summary of the Descriptive Data Analyses

No gender differences have been reported for the Belief Systems Analysis Scale or for the Academic Self-Concept Scale in the published literature (Montgomery, et al., 1989; Reynolds, et al., 1980). This is consistent with the lack of gender differences found in this study. With respect to the Harvey IP Scale, findings on gender differences have been mixed. Clance and Imes (1978) originally assumed that the imposter phenomenon was experienced primarily by women. In subsequent research, males were found to score significantly higher than females (Topping, 1983; Topping & Kimmel, 1985). However, others maintain that imposter feelings are
experienced by males and females, equally (Harvey, 1982; Harvey & Katz, 1985). The results of this study support the latter finding of no gender differences on the IP scale.

In comparing the means found for the variables used in this study with those reported in previous research, the results are mixed. For the Belief Systems Analysis Scale, the mean in this study was higher than that reported by Montgomery, et al. (1989) (e.g., 114.5 vs. 104.71). The current Academic Self-Concept Scale mean was also higher than that reported in the literature (Reynolds, et al., 1980) (e.g., 120.6 vs. 105.82). The mean found in this study falls within the range of means that have been reported for the Harvey IP Scale (Edwards, et al., 1987; Harvey, 1982; Topping & Kimmel, 1985). Means reported for the Racial Identity Attitude subscales have been the same or very close to those found in this study (Parham & Helms, 1985b). Unfortunately, the lack of representation on the pre-encounter and immersion-emersion subscales as high scores on that scale cannot be compared, given the lack of subscale n reporting in previous research.

Summary of the Hypotheses

The first hypothesis predicting that imposter feelings would significantly increase as academic self-concept decreased was supported. No previous formal analysis had been done to verify the often made statement that the imposter phenomenon was a denial of ability (Clance & Imes,
The results of this analysis allow that statement to be made with stronger support. In fact, the high degree of correlation between imposter feelings and academic self-concept ($r = .57$) suggests that, for a graduate student population, the Harvey IP scale may be measuring the same construct as represented by Academic Self-Concept Scale.

The second hypothesis predicting that imposter feelings would decrease as the number of years in the academic program increases was not supported; while the direction of the relationship was as predicted, it was not significant. This finding does not support the majority of research suggesting a significant negative relationship between the number of years spent in a role and the imposter phenomenon (Harvey, 1982; Harvey & Katz, 1985; Topping & Kimmel, 1983). These findings suggest that, for this sample, the number of years in the program did not have a strong effect on altering the existence of imposter feelings.

The third hypothesis predicted that world view and racial identity attitudes would predict imposter feelings better than academic self-concept, demographic, or environmental variables. This hypothesis was not supported. No previous research has directly addressed the potential relationship between the imposter phenomenon, world view and racial identity attitudes. However, the literature that does exist seems to suggest that, for African Americans,
degree of Afrocentricity (Fine, Schwebel, & Myers, 1985; Montgomery, Fine, & Myers, 1989) and racial identity attitudes (Parham & Helms, 1985a; Parham & Helms, 1985b) would be the best predictors of imposter feelings, since the imposter phenomenon is related to issues of self-esteem and emotional well-being. Contrary to prediction, the results of this study suggest that variables not specific to racial identity or ethnicity (e.g. academic self-concept, age, spirituality) are better predictors of African American graduate and professional students' level of imposter feelings.

The fourth hypothesis predicted that imposter feelings would increase with Eurocentricity, pre-encounter and immersion-emersion attitudes, and decrease with Afrocentricity, encounter and internalization attitudes. This hypothesis received only partial support. Like hypothesis #3, this prediction was based on research on racial identity attitudes and world view and their relationship to psychological and emotional distress (Fine, et al., 1985; Montgomery, et al., 1989; Parham & Helms, 1985a). The supportive findings concerning the Belief Systems Analysis Scale lend further support to research linking the Eurocentric world view with dimensions of psychological and emotional distress, like the imposter phenomenon. However, for the racial identity attitude stages, the non-significant (in the case of internalization)
and non-supportive (in the case of the other stages) do not support or expand previous research. It seems that imposter feelings may not be related to one's stage of racial identity, as are other psychological and emotional dimensions.

The fifth hypothesis predicted that a low level of imposter feelings would be related to the Afrocentric world view, high academic self-concept, and internalization attitudes. This hypothesis was supported, although the internalization attitudes did not contribute a significant amount to lowered imposter feelings. Once again, research which suggests that Afrocentricity and, to a lesser extent, internalization attitudes, are more psychologically healthy and emotionally stable states for African Americans receives further support with respect to the imposter phenomenon. These findings suggest that a combination of high academic self-concept, an Afrocentric world view, and internalization attitudes may significantly insulate African American graduate and professional students from experiencing the imposter phenomenon.

Concerning the sixth hypothesis, the fact that there were no participants in this sample with high academic self-concept and high imposter feelings lends even more support to previous statements about the imposter phenomenon being a denial of ability (Clance & Imes, 1978; Harvey & Katz, 1985). However, the results do not support the underlying
prediction that the Harvey IP Scale might erroneously classify people as having the imposter phenomenon, because they attribute their success to more non-intellectual variables than other people. This does suggest that the Harvey IP Scale is a valid measure of imposter feelings.

Summary of the Exploratory Analyses

The Student Information Survey questions concerning the "Null Environment" hypothesis characteristics (Freeman, 1979) revealed that, on average, participants experience their academic environment as neutral. Previously, the "null environment" hypothesis was only discussed in relationship to women. The results of this investigation suggest that African American graduate and professional students, both males and females, may be experiencing this phenomenon. Research indicates that this population tend to take longer to graduate than White students (O'Brien, 1989). This finding was linked to inadequate financial resources and the possibility of reduced access to programmatic support due to attending school part-time while maintaining a career. Wilson (1988) notes that faculty have admitted to making no more of an effort to respond to African American graduate or professional students in terms of time spent with them, the curriculum, or in their style of teaching. Wilson concludes that mentoring and support at the graduate level could help these students overcome any other barriers they face. Given the results of this study, this sample of
students seem to be experiencing the "less than positive" profile of graduate education described by Freeman (1979) and Wilson (1988).

The results indicated that, while academic self-concept was significantly linked to G.P.A., a measure of academic aptitude, the imposter phenomenon did not share that link. This result supports statements that the imposter phenomenon represents a denial of ability (Harvey & Katz, 1985). The significant negative link between the imposter phenomenon and the Eurocentric world view supports research suggesting that Eurocentricity is not an optimal world view for African American people to adopt (Akbar, 1981; Baldwin, 1984; Myers, 1988).

No published research has examined the existence of a connection between a complete world view model (i.e. Afrocentricity) and a model of world view with respect to race (i.e. Racial identity development). The results of this study suggest that there is indeed a link, and that the link is in a direction consistent with each theory's assumptions. That is, as one's racial identity attitudes become more self-actualized, one's degree of Afrocentric beliefs increases. The significance of the relationship between internalization attitudes and Afrocentricity lends further support to these theoretical assumptions. The lack of connection between the percentage of African Americans in the pre-college and current peer or academic groups and
degree of Afrocentricity suggest that the development of this world view involves more than the type of peer group interactions one experiences.

The finding that choice of a racial identification label was not related to academic self-concept is not surprising; however, the lack of a relationship between racial identification labels and one's degree of Afrocentricity does seem inconsistent with the research (Baldwin, 1984; Myers, 1988). In light of the findings described above on peer groups, the significant relationship between the racial make-up of one's peer group suggests that the choice of racial labels is more affected by one's social group than by world view. It could be that subscribing to a world view requires stronger influences than the peer group alone, and a deeper commitment than the choice of racial labels requires.

Limitations

An initial limitation of this study concerns the Harvey IP Scale. As the assessment of the imposter phenomenon relied on the Harvey IP Scale's measurement capabilities, any inadequacy in the scale would significantly affect the results of the study. This sample yielded a mean score that was very close to, but still less than all other reported means for White graduate-level student samples (i.e. 30.4 versus 30.82 to 42.17). One explanation is that the imposter phenomenon does not occur in the African American
population to the degree that it does for Whites.

Another explanation is that the imposter phenomenon occurs in all races of people to the same degree, but the Harvey IP Scale is not able to assess it for African Americans as well as it does for Whites. It is possible that there are different indicators of the imposter phenomenon for African Americans than for Whites which are not captured adequately by the scale's items. This may account for the lower mean score for this sample and is a possible limitation of the study.

Other limitations concern the conceptualization and assessment of racial identity development. Helms (1989) argues that racial identity development research can be very complex due to the varying effects of the racial climate in the past and present socio-historical era, as well as the climate the participants immediate environment. Helms suggests that not only may the racial climate effect the person's development, but one may chose an immediate environment based on the racial climate it seems to foster. For example, a person with higher immersion-emersion attitudes may shy away from a pre-dominantly White environment or event, which may, in turn, result in a dearth of people with these attitudes being found in that environment. This phenomenon may also affect the assessed reliability of the RIAS because when people who have not yet reached the immersion-emersion stage respond to those items,
their response pattern will be inconsistent, which lowers the apparent reliability of the subscale.

Helms also suggests that each of the racial identity stages are actually bimodal and can be described as follows: (a) pre-encounter and Negro (assimilationist); (b) encounter experience and encounter reaction; (c) immersion and emersion; and (d) internalization and internalization/commitment. Focusing on one mode within a stage or across stages may oversimplify the nature of the individual change process. It seems that the RIAS measures active but not passive pre-encounter, encounter reaction not experience, immersion not emersion, and internalization not internalization/commitment.

Given this discussion, Helms suggests several possible solutions to improving racial identity development research and its findings. Two suggestions seem relevant to the current study. The first suggestion is to connect such research to a larger agency project to increase the amount of participation. Also, the method of presenting the research should be manipulated to highlight the racial nature of the study to attract racially-identified participants. Conversely, de-emphasizing the racial nature of the study could avoid offending racially un-identified participants. Helms' second suggestion was to use samples from different environments and then to describe the nature of these environments in the study.
Both of the issues raised by Helms could be seen as limitations of the present study. First, this investigation was identified and presented to potential participants as a dissertation, being done by a African American graduate student, and concerning issues faced by other African American graduate or professional students. Given the above discussion, students with high levels of pre-encounter attitudes may have chosen not to participate, which could be one explanation for finding only two participants with high pre-encounter scores. Second, although samples were drawn from two environments that were very different in some ways (with respect to region of the country, size of university, and size, racial make-up and cultural sophistication of the surrounding community) each sample was selected from a predominately White university. This could be an explanation for finding only two participants with high immersion-emersion scores. Helms (1989) predicted that there would be few people with strong immersion-emersion attitudes on a predominately White campus.

Helms (1986) strongly recommends using correlational analyses and using all four subscale scores to examine results with this scale, instead of identifying the high scores and analyzing the results only in terms of the individual stages. This investigation used this suggestion for all analyses; however, it is still noteworthy that only two participants received high scores on the pre-encounter
subscale, while 34 and 68 received high scores on the encounter and internalization subscales, respectively. Upon reading the items representing each subscale, it seems possible that the pre-encounter items seem somewhat socially un-desirable, especially given the recent social movement towards a reclamation of African Americans' African heritage. Conversely, it seems that the encounter and internalization items seem socially desirable. These potential issues could have significantly affected the high score distribution for the current investigation and its results. Therefore, a fourth limitation of this investigation might be that this study only used the RIAS to assess racial identity development and without assessing social desirability.

A fifth limitation might concern the low return rate for The Ohio State University sample. It is possible that the participants who responded did not represent the total population in terms of the constructs being investigated. This is important to note, especially given the non-significant differences between the two populations on each of the major constructs and various demographic characteristics. The University of Delaware return rate was much higher, using the same recruitment procedure as at Ohio State. The reasons for this difference in response is unclear, however, more personal contact or phone calls may have helped to increase the return rate.
The sixth limitation of the study concerns the Student Information Survey questions. It is possible that significant results were not obtained on hypothesis #2's prediction about imposter phenomenon and number of years in the program because of the inaccuracy of the question about the number of years. It might have been better to separate participants who were in terminal two-year Masters' degree programs from those in three-year law programs from those in programs whose expected term is longer. It is very possible that being in the first or second year of a two-year program is a different experience from being a first- or second-year student in a doctoral or medical degree program. Also, the imposter feelings may greatly differ in these different circumstances. Not separating these types of experiences may have confounded the data and resulted in the non-significant results that were received.

Also, questions such as those referring to role models and mentors might have been stated more directly. As it was worded, the information about the existence of mentors had to be implied from the way the participants answered the questions. The information about the existence of role models was inferred from questions about parents' education and the percentage of African Americans in the current program. Finally, the questions about the year in which one graduated, whether or not one was pursuing a degree in the same academic field, and the type of hometown ended up being
were unnecessary and could have been eliminated.

**Suggestions for Future Research**

Given the conflicting findings about gender differences and the imposter phenomenon, the first suggestion for future research would be to systematically examine under what circumstances can gender differences be expected to occur. Another suggestion would be to replicate this study with more participants to see if the range and mean of scores on the Harvey IP Scale remains low. However, this finding might have been a function of the pool of participants. If subsequent replications revealed similarly low mean scores, a different version of the scale may need to be developed for use with African Americans. It is also possible that African American graduate and professional students may not experience the imposter phenomenon as strongly as White undergraduate and graduate students. Further research could shed some light on this issue.

Some of the suggestions for future research come out of the limitations identified in this study and discussed above, concerning racial identity development research. As Helms (1989) has suggested, it would be helpful to replicate this study by linking it to a larger university project to reach more students, and potentially increase its credibility for some. This replication could be presented by a White researcher to some participants and by a African American researcher to others. Also, using students in
graduate programs at predominately Black institutions could provide a more diverse pool of participants and enrich the nature of the findings.

Future research might explore the RIAS in terms of the social desirability of its items and how this might affect the pattern of responses and conclusions drawn from the scale's results. Another direction would be to develop and use other measures of racial identity development, as Helms (1989) also suggested. This study could then be replicated using several measures of this concept, allowing for a fuller and more accurate representation of the theory of racial identity development. Along these same lines, it could be valuable to use another measure of Afrocentricity, like the African Self-Consciousness Scale (Baldwin, 1984), to examine how different scales measure the concept of Afrocentricity.

The exploratory analyses yielded interesting results with respect to what variables do and do not contribute to Afrocentric world view development. Another suggestion for future research could involve the systematic examination of what experiences and influences in one's life affect the development of an Afrocentric world view. Although this might be done as a large empirical study, a one or two subject case study may prove more interesting and may yield more information that could then be used in further study.
In light of the findings concerning the "Null Environment" hypothesis (Freeman, 1979), a more focused examination of this phenomenon as it specifically effects African American students might prove quite fruitful. Though these findings suggest that conditions for such an environment do seem to exist, the pervasiveness of this experience is unclear. It remains unclear what specifically can be done to change such conditions, or at least to help these students overcome obstacles in spite of those conditions. Given the current emphasis on recruitment of African American graduate and professional students, determining how to create an environment that retains and facilitates, instead of hinders, their success would seem a priority. This study seems to indicate that, for those students currently in such an environment, developing a strong sense of academic self-confidence and an Afrocentric world view may be valuable buffers against an internal barrier to experiencing success, such as the imposter phenomenon.

Summary and Conclusions

The current investigation sought to examine whether or not the imposter phenomenon exists in African American graduate and professional students, and if so, to what extent does it relate to their feelings about their race, their world view, their background, and current environment. It was hypothesized that as imposter feelings decreased,
academic self-concept and the number of years spent in the academic program would increase. It also was hypothesized that Afrocentric world view and racial identity attitudes would predict the level imposter feelings better than any other variables. Finally, it was predicted that decreases in imposter feelings would be related to Afrocentric world view and more self-actualized racial identity attitudes.

Though the hypotheses concerning the link between imposter feelings and the number of years in the program and the variables that best predicted imposter feelings were not supported, all other hypotheses received full or partial support. One possible limitation and reason for the non-supportive outcomes involved the method of obtaining participants, which could have resulted in a somewhat biased or unrepresentative sample. Another involved the method of assessing and analyzing the number of years in the program, which may have confounded the data. Other limitations concerned the use of only one method of assessing racial identity development, potential effects of social desirability, and the inclusion of unnecessary Student Information Survey questions, which may have limited the potential effectiveness of the study. Finally, suggestions were made for future research directions, many of which drew on the limitations of this study or from the exploratory findings.
APPENDIX A

Introductory and One-Month Follow-up Letters to Students
January 26, 1990

Dear Black Graduate and Professional Students:

My name is Kim Ewing. I am a Black graduate student here at The Ohio State University. I'm in the process of completing The Ohio State University's Counseling Psychology doctoral program. To accomplish this, I need to complete my doctoral dissertation and would like to ask for your assistance. I'm examining how beliefs and attitudes of Black graduate and professional students affect your susceptibility to feelings of academic adequacy or inadequacy. I also want to see how your current environment and/or your background affects these feelings, for better or for worse. I hope the information I collect can be used to identify what insulates you from feeling self-doubt, in the hopes that the experiences of all Black graduate and professional students may be improved.

I have enclosed the five questionnaires for my study. They should each take between 15-25 minutes to complete. They don't have to be done all at once; do them when you have free time.

If you think you can help me, all you need to do is:

1) Fill out all 5 questionnaires. DO NOT PUT YOUR NAME ON ANY OF THE QUESTIONNAIRES.

2) Place all the questionnaires in the envelope provided and place in a campus mailbox.

If you cannot participate, please place this packet in the envelope provided and mail it back to me.

Participation in this study is entirely voluntary. You are free to withdraw at any time. Just place all questionnaires, complete and incomplete, in the envelope and mail it. ALL RESPONSES WILL BE KEPT CONFIDENTIAL.

I think that's it!! Thank you for your consideration, and if you choose to participate, THANK YOU for your cooperation!

Sincerely,

Kim Ewing
261 Perkins Student Center
Center for Counseling and Student Development
University of Delaware
Newark, DE 19716
January 26, 1990

Dear Black Graduate or Professional Student:

My name is Kimberly Ewing. I am a Black graduate student in the Counseling Psychology doctoral program here at OSU. I recently sent out a packet of surveys that pertain to my doctoral dissertation. You should have received one of these by now. I am sending this letter as a follow-up to the packet.

As I stated in the cover letter to the packet, participation in this study is entirely voluntary; you are free to decline or withdraw from participation at any time. All I ask is that you return the packet using the campus mail envelope provided. If you choose to participate, your responses will be anonymous and confidential; all I need is the last 4 digits of your social security number to keep all the surveys in the packet together.

If you have already responded—THANK YOU VERY MUCH!!!! If you have responded, or plan to respond and would like to receive a copy of the results, please contact me by using the following address:

Kim Ewing
Psychology Dept./ Counseling Area
142 Townshend Hall.

Just leave your name and address; I will send you the results when the study is complete.

Thanks, again! And I wish you well in your endeavors!

Sincerely,

Kim Ewing
January 26, 1990

Dear Black Graduate and Professional Students:

My name is Kim Ewing. I am a new staff person at the Center for Counseling and Student Development here at University of Delaware. I'm in the process of completing The Ohio State University's Counseling Psychology doctoral program. To accomplish this, I need to complete my doctoral dissertation and would like to ask for your assistance. I'm examining how beliefs and attitudes of Black graduate and professional students affect your susceptibility to feelings of academic adequacy or inadequacy. I also want to see how your current environment and/or your background affects these feelings, for better or for worse. I hope the information I collect can be used to identify what insulates you from feeling self-doubt, in the hopes that the experiences of all Black graduate and professional students may be improved.

I have enclosed the five questionnaires for my study. They should each take between 15-25 minutes to complete. They don't have to be done all at once; do them when you have free time.

If you think you can help me, all you need to do is:

1) Fill out all 5 questionnaires. DO NOT PUT YOUR NAME ON ANY OF THE QUESTIONNAIRES.

2) Place all the questionnaires in the envelope provided and place in a campus mailbox.

If you cannot participate, please place this packet in the envelope provided and mail it back to me.

Participation in this study is entirely voluntary. You are free to withdraw at any time. Just place all questionnaires, complete and incomplete, in the envelope and mail it. ALL RESPONSES WILL BE KEPT CONFIDENTIAL.

I think that's it!! Thank you for your consideration, and if you choose to participate, THANK YOU for your cooperation!

Sincerely,

Kim Ewing
261 Perkins Student Center
Center for Counseling and Student Development
University of Delaware
Newark, DE 19716
March 1, 1990

Dear Black Graduate or Professional Student:

My name is Kimberly Ewing. I am a new staff person at the Center for Counseling and Student Development here at University of Delaware. I'm also in the process of completing The Ohio State University's Counseling Psychology doctoral program. I recently sent out a packet of surveys that pertain to my doctoral dissertation. You should have received one of these by now; it should have come to your home or department address. I am sending this letter as a follow-up to the packet.

As I stated in the cover letter to the packet, participation in this study is entirely voluntary; you are free to decline or withdraw from participation at any time. All I ask is that you return the packet using the envelope provided. If you choose to participate, your responses will be anonymous and confidential; do not put your name anywhere on the surveys.

If you have already responded—THANK YOU VERY MUCH!!!! If you have responded, or plan to respond and would like to receive a copy of the results, please contact me by using the following address:

Kim Ewing  
Center for Counseling and Student Development  
261 Perkins Student Center  
University of Delaware  
Newark, DE 19716.

Just leave your name and address; I will send you the results when the study is complete.

Thanks, again! And I wish you well in your endeavors!

Sincerely,

Kim Ewing
APPENDIX B

Harvey IP Scale
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97-98
100-104

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APPENDIX C

Racial Identity Attitudes Scale
APPENDIX D

Belief Systems Analysis Scale
Please read each of the following items carefully, and on the answer sheet indicate whether you agree or disagree with them. If you disagree strongly, mark an A in the given space; if you agree strongly, mark an E. The following table explains the meaning of the letters. Please refer to it as many times as you need to:

A=Strongly disagree
B=Moderately disagree
C=Uncertain
D=Moderately agree
E=Strongly agree

Your answers are anonymous. There are no right or wrong responses; we ask only that you answer each question in an honest fashion. Thank you very much for your cooperation.

Race: 
___Black
___Caucasian
___Asian
___Hispanic
___Other

Sex M___ F___

Age ___

Subject no. ___
1. The more important consideration when looking for a job is not the money offered, but the people I would be working with.

2. Sometimes when I am good and do my best, I still suffer; this is an indication that good does not necessarily triumph over evil.

3. When I meet acquaintances on the street, I note the type of clothes they are wearing and compare them to mine.

4. It is easy for me to see how the entire human race is really part of my extended family.

5. Race or nationality reveals more about an individual than he/she may realize.

6. More than anything else, I am most convinced by another's opinion if he/she has the statistics to back it up.

7. Although I have a favorite kind of music I listen to, I can usually get into and enjoy most kinds of music.

8. When I encounter new acquaintances at meetings or work-related activities, I note the type of clothes they are wearing and am impressed if they are "dressed for success."

9. English should be the only national language. If one wants to live in this country, one should learn to speak the language; bilingualism is unimportant.

10. If I could make a choice, I would prefer to lead a wealthy, exciting life as opposed to one that is peaceful and productive in terms of helping other people.

11. Past philosophers like St. Augustine and Descartes are less relevant today than they were 100 years ago, before the modern age.

12. In order to know what's really going on you need to look at the scientific data rather than an individual's personal experience.

13. When considering all the difficulties of life, I have trouble seeing any meaning or order to it.

14. I find myself worrying a lot about circumstances in my life.
15. If I just had more money, my life would be more satisfying.

16. Pain is the opposite of love: in other words, an act of love cannot cause pain.

17. Despite my religious preference (e.g. Jewish, Muslim, Catholic etc.), I still believe there are teachings from different religions that are valid.

18. When someone challenges my beliefs, I am eager to set him/her straight.

19. Winning the lottery would solve all of my problems.

20. When I am confused or unclear about myself or the world about me, I try to push these concerns out of my mind and go on with my life as usual.

21. Working at a job with meaning and purpose is more important than the money received from a job.

22. I am uneasy and bothered by my responsibilities at work and at home.

23. If I were better looking, my relationships with others would be more satisfying.

24. I can remain calm and peaceful even when my boss blames me for another's mistakes.

25. If a "friend" were to betray my confidence and tell some other people a secret of mine, the best way for him/her to learn a lesson is for me to do the same thing to him/her when I get a chance.

26. If my opinion of my uncle has always been different than everyone else's, then I must be perceiving him wrong.

27. If I were president, I would invest more money to develop social programs and less money in high tech development.

28. I feel badly when I see friends from high school who now have better cars, clothes, or homes than I do.

29. There are some people in my past whom I believe I should never forgive.
30. This country would be better off if we restricted immigration to a very select few.

31. Welfare is a mistake: individuals must learn to help themselves.

Endorse the option you believe to be the most correct or true:

32. Black women are best characterized as
   a. the mother's of civilization
   b. too aggressive
   c. overly concerned about sexism
   d. inconsiderate of black manhood
   e. welfare queens
APPENDIX E

Academic Self-Concept Scale
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111-113

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APPENDIX F

Student Information Survey
Student Information Survey

1. What is your age? _______

2. What is your gender? male or female Circle one.

3. What is your marital status? _______
   a. single
   b. married
   c. widowed
   d. divorced

4. How would you describe the area in which you were raised?___
   a. rural
   b. small town
   c. large city or suburb of a large city

5. If you have any spiritual beliefs, to what degree do they
   affect your perceptions of your experiences as a graduate
   student?

   0 1 2 3 4 5
   No Very little Very much
   beliefs

6. To what degree do those beliefs guide your decision-making
   about academic goals?

   0 1 2 3 4 5
   No Very little Very much
   beliefs

7. What is your mother's highest level of education? _______
   a. Some years of high school
   b. High school graduate
   c. Some college or post-high school technical school (A.A.)
   d. College graduate (B.A. or B.S.)
   e. Some graduate or professional school
   f. Graduate or professional degree (Ph.D., L.L.D., M.D.,
      D.D.S.)

8. What is your father's highest level of education? _______
   a. Some years of high school
   b. High school graduate
   c. Some college or post-high school technical school (A.A.)
   d. College graduate (B.A. or B.S.)
   e. Some graduate or professional school
   f. Graduate or professional degree (Ph.D., L.L.D., M.D.,
      D.D.S.)
9. Are you a full-time or part-time student? ________

10. Cumulative G.P.A. (or expected G.P.A.)? ____________

11. Number of years in current academic program? _______

12. Highest degree already received? _______
   a. Bachelor's
   b. Master's
   c. Professional degree (e.g. D.D.S., L.L.D., M.D.)
   d. Other (please specify) ___________

13. In what year did you receive your highest degree? 19____

14. If you have a Master's or Professional degree, is it in the same field as the degree you're currently pursuing?

15. How would you describe the institution which awarded your undergraduate degree? _______
   a. small private
   b. large private
   c. small public
   d. large private

16. Which of these best describes the racial make-up of your undergraduate institution? _______
   a. predominately white
   b. predominately black
   c. racially mixed (fairly even proportion of various races)

17. What was the percentage of blacks among your (pre-college) friends? (circle one)
   <10% 20% 30% 40% >40%

18. What was the percentage of blacks in your (pre-college) academic group? (circle one)
   <10% 20% 30% 40% >40%

19. What is the percentage of blacks in your current social support group? (circle one)
   <10% 20% 30% 40% >40%

20. What is the percentage of blacks in your current academic program? (circle one)
   <10% 20% 30% 40% >40%

21. What level of familial encouragement do you receive for your academic goals? (circle one)
   1 2 3 4 5
   Very low Very high
22. What level of peer encouragement do you receive for your academic goals? (circle one)

1  2  3  4  5
very low  very high

23. Is your advisor the same gender as you? yes or no

24. Is your advisor the same race as you? yes or no

25. Do you have a faculty member who serves as a mentor? yes or no

26. Is your mentor also your academic advisor? yes or no

27. Is your mentor the same gender as you? yes or no

28. Is your mentor the same race as you? yes or no

For the remaining questions, use the scale below to choose the number that best reflects your answers.

1  2  3  4  5
Strongly disagree Disagree Neutral Agree Strongly agree

29. I believe my graduate program is supportive of all their students. ______

30. My advisor takes an interest in . . . (answer each).

a. my progress in the program. ______
b. me as a person. ______
c. my development as a professional. ______
d. my research. ______
e. my thesis/dissertation. ______

31. I have developed a sense of camaraderie with other students in my program. ______
In racial terms, what label do you prefer to use to "classify" yourself? (Pick one)

_______ African

_______ African-American

_______ Afro-American

_______ American

_______ Black

_______ Colored

_______ Negro

_______ Other, please specify

Why do you use the label that you do?

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________
LIST OF REFERENCES


