Multiracial College Students: Understanding Interpersonal Self-Concept in the First Year

by

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DEDICATION

I dedicate this study to my partner in life, *mi reina*, Aurora and sons, the beats of my heart, Marco Kamimura and Michio Kamimura.

Through the blessings of God's grace and love we are one family and my life is fulfilled with the moments we share together.

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ABSTRACT

Multiracial College Students: Understanding Interpersonal Self-Concept in the First Year

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This purpose of this study was to explore the differences between mixed and single race students in the factors that contribute to an interpersonal self-concept. The data in this study are drawn from a national longitudinal survey, Your First College Year (YFCY), from 2004-2005 and include mixed race Black and Asian students and their single race Black and Asian peers to explore interpersonal self-concept.

The results suggest that mixed and single race Asian and Black students have different pre-college and first year experiences, but only mixed race Black students were found to develop a significantly higher interpersonal self-concept after their first-year than their single race peers. Most importantly for mixed and single race students are their interactions with diverse peers. For all groups, both negative and positive interactions based on race within the college environment directly impact interpersonal self-concept. First-year college experiences (Positive Ethnic/Racial

Relations, Racial Interactions of a Negative Quality, Leadership Orientation, Sense of Belonging, Campus Racial Climate, Self-Assessed Cognitive Development) were the most significant contributors to the development of an interpersonal self-concept in comparison to pre-college experiences.

The findings in this study expand the literature on multiracial college students and provide empirical evidence to support institutional practices that aim to promote a positive interpersonal self-concept in the first college year.

CHAPTER 1

INTRODUCTION

Racism in the United States has influenced our social infrastructure and continues to undermine the way we deal with an increasingly diverse society. The formal recognition, through new categories created for the Census, of multiracial people in the United States within the last decade has challenged the boundaries of defined racial categories. Perceptions of ability, equality, access and most importantly power throughout our nation's history have been based on racial background. Racial identity or the lack thereof defines a particular set of oppressions uniquely tied to the structural, historical and political aspects of racism (Dyson, 2004).

Porterfield (1978) exemplifies how racism has suppressed the recognition of a multiracial group with his use of the historic term "the one-drop rule." This term refers to an individual with mixed heritage: if you have one drop of African blood then, no matter what the other parts or portions of you lineage are, you are considered by Whites to be African American. The origins of the one-drop rule during the time of slavery provide a foundation for understanding mixed race today. The early research on racial identity development assumed that individuals of mixed race could be singularly classified according to their parent of color (Cross, 1987).

The normative assumption that racially mixed individuals need to identify with a single racial group is evident in much of the psychological research (e.g., Boykin &

Toms, 1985; Cross, 1987; Helms, 1995; Morten & Atkinson, 1983; Tatum, 1995; Teicher, 1968). For example, Williams and Williams-Morris (2000) found that racially mixed individuals have a tendency to develop negative internalizations of self when they fail to identify with their non-White identity, a direct reflection of racism and the efforts made by the dominant White race to keep individuals of mixed race backgrounds from claiming any privileges based on their European heritage (Nakashima, 1992). Research showing the centrality of racial identity development during the transition to college (Chickering & Reisser, 1993; Evans, Forney& Guido-DiBrito, 1998) suggests that mixed race college students face unique challenges as they navigate their social environment. Racial identification has had a big influence on current studies looking at the self-perceptions and definitions of identity in multiracial populations (Renn, 2004).

Many of the counseling models for people of color (Atkinson, Morten & Sue, 1993) have been based on single-race identity development theories (e.g., Cross, 1971, 1987, 1995; Helms, 1990, 1995; Phinney, 1992). Counseling and practical models of college student development commonly draw from these single-race identity development models. The racial identity of college students has been a key focal point for understanding the adjustment of college students in general (e.g., Chickering & Reisser, 1993; Evans, Forney & Guido-DiBrido, 1998; Pascarella & Terenzini, 1991). The problem with using single-race models (Atkinson & Sue, 1993; Atkinson, Morten & Sue, 1979; Cross, 1978, 1995; Helms, 1990, 1995) is that they fail to offer explanations of racial identity development among students whose parents are from more than one federally designated racial or ethnic group (Renn, 1998, 2000, 2004).[1]

[1] See appendix A. Further discussion regarding the federal designation of racial and ethnic groups will be addressed in Chapter 2 of this study.

Current mixed race identity models do not follow the rigidity of a single race categorization process (based on White supremacy),[2] forcing individuals from a mixed race heritage to reject their White heritage and embrace their minority (non-White) culture (Kilson, 2001; Renn, 2000; Root, 1996; Root, 1992c; Wallace, 2001). These new models attempt to restructure racial identity development of mixed race people by considering choice of racial identity as a preference of the individual. In the university environment, understanding the mediating factors that accompany student racial identity development will expose similar factors that impact students' self-perception. However, when considering the self-perception of multiracial college students a gap remains in the higher education literature.

The 2000 census identified 6.5 million individuals in the United States who self-identified with more than one racial group, of which 42 percent were under the age of 18 (U.S. Census Bureau, 2001). Harris and Sim (2002) estimate these reported numbers to be significantly lower than the real number because many elder individuals may not identify as mixed race. Another assumption is that if parents have identified a single race, the child will manifest that racial identity despite having a multiracial background; this is also true in a single-parent household where only one racial identity is projected. The 2000 census which for the first time allowed individuals to self-identify with more than one racial category raises a number of significant problems that hinder studying college students, most specifically how to define mixed race. The racialization of ethnicity with regard to Latina/os (e.g., segregating Latina/os from Whites as a separate group without recognizing them as a stand-alone racial group) and the inability to compare the 2000 Census data (which allowed

[2] An ideology that the White race is superior to all other racial groups and holds a political and social ideology to maintain a power structure that allows White dominance over non-Whites.

respondents to check multiple boxes or to fill in the blank) with prior Census data or with data from the National Center for Educational Statistics (which currently restricts reporting to a two or more races category) (Renn and Lunceford, 2004) further complicates efforts to study multiracial students. The increased attention to mixed race students presents colleges and universities with the challenge of developing programs, counseling, and support systems that recognize the specific needs of both mixed and single race students.

Statement of the Problem

The racial landscape of higher education is nearing a crossroad. The introduction of multiracial students as a recognized population through the 2000 Census and the fact that this group is receiving increased attention and interest from researchers mark the beginning of this change (Renn and Lunceford, 2004). The importance of race has come under attack politically and has been questioned systematically. Higher education will be forced to reconceptualize racial diversity as the lines between groups increasingly become blurred. We are still in the exploration stages of developing an understanding of the experiences of multiracial students in the college environment. Currently, the majority of literature on multiracial people focuses on K-12 students and the developmental experiences of people in other, non-academic environments. Higher education has spent much time trying to understand the experiences of students from various single race backgrounds but have only just begun with multiracial college students. The factors that influence development and change in multiracial college students involve historical, cultural, social and political aspects of the college environment. Among the many areas yet to be explored is working to *understand the interpersonal self-concept of multiracial college students.* Interpersonal self-concept is defined for this study as how an individual conceives themselves in relation to others in a college environment.

The literature in higher education with regard to multiracial students is limited and primarily focuses on the development of multiracial identity (Renn, 2004). The K-12 literature includes a growing number of studies that include or focus on multiracial students. These studies span depression, self-concept, perception, and achievement (e.g., Morrison & Bordere, 2001; Dodge & Pettit, 2003; Rockquemore & Laszloffy, 2003; Harris, 2003; Herman, 2004). The increased attention to multiracial students in K-12 education over the past ten years suggests an expanded research agenda for higher education is needed in the near future as these students matriculate to college. Higher education research currently addresses a broad spectrum of academic experiences relevant to single-race students – White and non-White (primarily African American, Native American, Asian and Pacific Islander and Latina/o students). Researchers and practitioners in higher education will be challenged to make a transition in how race and racial categories are addressed as the number of multiracial students increases.

I hope to further develop the practical and theoretical knowledge regarding mixed race college students to improve our understanding of this emerging population and their contribution to diversity on college campuses. My process for understanding the self-concept of mixed race students in the college environment mirrors Renn's (2003, 2004) approach. Instead of a traditional developmental identity stage model, Renn uses an ecology model of human development (Bronfenbrenner, 1979, 1993) that describes the influencing elements of development as person, process, context and time (PPCT). This four dimension model offers a framework for understanding how multiracial students experience educational environments like colleges and universities. The ecology model when applied to a university environment describes micro-, meso-, exo-, and macro- system factors that describe: a) physical and social spaces defined by racial identity, and b) how students

experience these spaces (Renn, 2003, 2004). This facilitates a framework for understanding the influence of the college environment and how the individual has positioned oneself in that environment.

Purpose and Scope of the Study

Paolo Friere (1970) suggests that marginal status is created by the society, structures and rules that order it, which brings meaning to one of the key problems affecting the self-concept of multiracial college students. Our society has not created a systematic or institutional means of categorizing multiracial individuals which limits our capacity to address the needs of these students along a developed path. *This study aims to play a role in the expansion of the literature concerning who multiracial college students are as a group by exploring how they understand themselves and others in the college environment.*

The current higher education literature regarding the self-concept of mixed race college students relies on single-race identity development models (Renn, 2004). The literature also suggests that social interactions within the university environment affect the self-concept of multiracial college students. A deeper understanding of mixed race identities within a university environment will inform our efforts to study the interpersonal self-concept of this group of students. The aim of this study is to answer the following research questions:

1) What are the factors influencing the interpersonal self-concept of multiracial college students?
2) Based on pre-college and first year college experiences, how do multiracial students differ in their interpersonal self-concept in comparison to single race students?
3) Does a significant difference exist between multiracial students and single race students in their racial attitudes?
4) Does a significant difference between how students understand themselves and understand others (interpersonal self-concept)?

Previous research on multiracial students focuses on how they racially identify and the factors that influence their racial identification. This study looks at a range of environmental factors and life experiences not directly linked to aspects of multiracial students' identity. Given the growing body of literature on mixed race identity and identification, this study contributes to the research by looking through an interpersonal lens to better understand the multiracial students' experience.

First, this study looks at a how various aspects of a mixed student's ecology affect interpersonal self-concept expanding the traditional lens of racial identification and identity formation. This study includes students' interactions with diverse peers in a number of different environments prior to and within college. Understanding the self-concept of mixed race students will contribute to how we address the needs of this community in higher education. In addition, this study offers new variables to consider when analyzing mixed race identity and development in college and may indeed define a potential model for use beyond the university.

Significance of the Study

Multiracial college students are an emerging community and this study will explore this overlooked, historically underrepresented and oppressed community we know very little about. Much of the discourse around mixed race has been suppressed by the social construction of race that undeniably aims to structurally, politically and psychologically produce a continuum of power within our society. The choice to identify with one or more than one race is a not only a personal choice, but also a political statement and a challenge to our current system of racial and social categories. How students choose to identify runs the gamut, and this choice affects how students experience college.

What students do not realize is that if they are given the choice to select more than one race on applications, surveys and anywhere race is accounted for throughout the institution, they may be coded as being a member of one racial group or another depending on institutional practices. For example, eligibility to apply for federal dollars (Title III, IV and V) is connected to the representation of specific single race groups on campus. The political choice for mixed race students to racially identify with one group or more than one group also impacts single race groups. If students do not have this option, it may hinder their ability to self-identify and lead to them not receiving services for which they are eligible.

This study also examines how mixed-race college students understand others. Mixed race college students experience and negotiate their social interactions with others in different ways (Renn, 2004). There are two interconnected aspects of mixed race experiences that complicate interpersonal self-concept. The first is the notion of passing.[3] Although phenotype is not explicitly addressed, the experience of being pointed out because of your race (or perceived race) is explored by this study. The second is the impact of racism and oppression associated with being a member or perceived as a member of a particular community of color by both White and non-White peers. These two factors undeniably influence how mixed race students develop an interpersonal self-concept.

Another significant aspect of this study is that it begins to clarify a number of unanswered questions about multiracial college students. Ecological factors that contribute to the interpersonal self-concept of multiracial college students are identified and compared regarding how their college experiences impact interpersonal self-concept after the first year

[3] "Passing" is a term that historically refers to a person of both African and European heritage whose phenotypic allow them to be perceived or "pass" as White. Among multiracial communities, the term passing has also referred to individuals who may be a combination of other non-Black communities of color (Asian, Latina/o, Native American) and "pass" as White.

relative to their single race counterparts, which will assist institutions of higher education in developing practical strategies to meet the needs of this population.

This study is also significant because it will expand the literature on mixed race college students. The quantitative approach used is in contrast to most other studies which primarily rely on qualitative research. This study lends supports to the argument to develop more quantitative studies that focus on the college experiences of.multiracial students and/or include them as a group alongside single race groups.

Contributions of the Study

This study is the first to:

- Disaggregate mixed race groups to study college students
- Look at mixed race as a contributing variables without focusing on racial identification as the outcome
- Explore the interpersonal self-concept of mixed race students.

Using a racial climate/ecology lens (Renn, 2004) to focus on interpersonal self-concept, this study also provides answers to assumptions of other studies as to the ability of mixed race students to understand others (Harper, 2007; Binning, Unzueta, Huo & Molina, 2009). By exploring interpersonal self-concept, this study offers an alternative lens to understanding mixed race identity in relation to the identity of single race peers and challenges traditional identity development theory and socially constrained assumptions of single race categories. The findings in this study will have policy implications for redefining diversity and students of color on campus to include mixed race. Lastly, this study will provide practical implications for student affairs programming, resource allocation, support services and fostering an inclusive campus climate.

CHAPTER 2

LITERATURE REVIEW

The complexity of a multiracial interpersonal self-concept is embedded in the historical theories of race as a social construct, the emergence of racial categories, and racial identity development theories. The varied definitions of the term multiracial over time have implications for understanding the interpersonal self-concept of multiracial college students. Understanding the various racial identity development theories on both single-race and multiracial students is important to gaining an insight into the various factors associated with how students look at themselves and others in college. This chapter is divided into four parts: The first will give an overview of the impacts of the Office of Management and Budget (OMB) and 2000 Census, multiracial terminology, and race as a social construct for multiracial college students. The second part is an overview of the literature outlining the educational experiences of multiracial students in higher education and relevant studies on multiracial people. The third part will outline the different theories of multiracial identity development and include a brief section comparing them to single-race identity theories. This is an important section because it lays the ground work for understanding the complexity of self-concept for multiracial college students compared to their single-race peers. The final part provides a synthesis of all relevant literature on multiracial students and differentiates the various aspects of the multiracial experience, which offers a backdrop to understanding the formation of a multiracial interpersonal self-concept.

The Office of Management and Budget (OMB) and the Census 2000

Given the advancements in technology and the ability to sort, we have been able to develop new classifications for vehicles like Sport Vans and Sport Utility Vehicles. Yet, we, as a society, cannot find a means to classify multiracial people beyond "other" or the somewhat more expansive, "mark all that apply".[4] Bashi and McDaniel (1997) state that "racial identification is a symbol of social status, and an important factor in group differentiation" (p. 671). Racial identification is particularly important in higher education because of its connection to financial need, scholarships, fellowships, jobs, eligibility for special programs, and admission decisions. Multiracial students are forced to make decisions about their racial identification that affect access and opportunity. With so much weighing on racial categories, close attention to how multiracial students are sorted and identified is essential in higher education.

As a result of the 1965 Civil Rights Act and the development of the Equal Employment Opportunity Commission, employers were required to report the number of Negro, Oriental, American Indian, and Spanish American people they employed. Form 100 (EEO-1) was developed for this purpose (Fernandez, 1996). The reporting of this data was unorganized; out of a need for statistical management of these groups, standardization of racial groups was developed.

The Office of Management and Budget (OMB) developed Statistical Policy Directive 15 (1977) that defined five racial categories: American Indian or Alaska Native, Asian or Pacific Islander, Black or African American, White, and Hispanic. It

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[4] On many college applications, there is an option to mark other; variations include the opportunity for applicants to include all the races to which they belong. Very few applications allow students to mark all that apply and most do not offer any other options beyond the pre-1997 OMB racial/ethnic categories.

states that you must "check one only" and "other" is not an option for a racial category, an example of institutional hypodescent. In addition to the five racial categories, the government recognizes one ethnicity, Hispanic or Latina/o. In 1990, monoracial responses to the race question were required on the census, but various responses by multiracial citizens were received. The OMB would determine the race of an individual who marked more than one race by using the first race declared and, if mixed or multiracial was stated, a visit by a census surveyor would determine a monoracial classification based on the "one drop rule" or "eyeball test"[5] (Fernandez, 1996; "No Place," 1989).

In 1997, the OMB issued revisions to Directive 15, changing the racial identification process to expand the number of racial categories and allowing respondents to choose more than one race (OMB, 1997; see appendix A). For the first time in U.S. history, the 2000 census allowed for individuals to identify themselves with more than one racial category and diminished the use of hypodescent in the census. The racial categories are now American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Pacific Islander, White, and Some Other Race. In addition, individuals must indicate whether or not are of Hispanic or Latina/o descent. In the 2000 census, 2.4% indicated more than one racial category; 63 new racial categories and 126 possible race/Hispanic origin categories were created to report basic race data (U.S. Census Bureau, 2001).[6] The reporting of multiple race categories is an advance in

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[5] This is an example of the practice of hypodescent by choosing for the individual their race. The eye ball test refers to the surveyor visiting the home of the respondent and deciding based on physical characteristics which race they should be considered.

[6] Information on these racial combinations can be found at: http://www.psc.isr.umich.edu/census2000/subject/race.html

racial identification. However, it has caused new problems in measuring populations when looking at longitudinal data from the 1990 census because accurate comparisons by racial group cannot be made. There are, for example, dubious discrepancies in population growth among the Asian population (48.3 percent vs 72.2 percent) and American Indians and Alaska Natives (26.4 percent vs 110.3 percent) when including

The 2000 census developed a new way of collecting race data, but major impacts for research and society have yet to be seen (Farley, 2001). The intention of the new classification system was to offer new insights to the experiences of multiracial Americans and hopefully college students as researchers and data warehouses integrate inclusive methods of racial classifications.

The changes prescribed by the OMB in 2000 were incorporated by the National Center for Education Statistics (NCES) for Fall 2010 into how race and ethnicity are to be reported by the Integrated Postsecondary Education Data System (IPEDS). This delay created substantial difficulties in the advancement of research, methodologies, data analysis, and interpretation focused on multiracial students. Currently, alignment with the OMB Directive 15 standards presents higher education with a number of challenges, the most apparent being the Federal Educational Records Privacy Act, where unique combinations of race and ethnicity may identify individual students (Renn & Lunceford, 2004).

Social Construction of Race and Racial Categories

The way individuals are classified is important for shaping policy and practice. Within a social framework, there is a chance to edit and redefine the boundaries of racial classification and identity. Historical foundations of classifications and grouping all

things into categories have influenced social determinism and preconceived social identity (Starr, 1992). The categorization of social groups imposes new definitions of social structures for groups; therefore impacting their political mobility within the larger social context (Starr, 1992). The importance of social categories, often race, have been used to determine access to educational institutions, human and civil rights, citizenship, social services, and public resources.

The racial categories currently used at the majority of U.S. institutions of higher education emerge from and reflect a complex history. The concept of race is based in early attempts to develop a scientific taxonomy of the human race and have greatly influenced the social constructions of race in the U.S. and beyond. Because of an array of historical and sociopolitical factors in the U.S., the construction of a multiracial category is complex. Individuals from multiracial backgrounds currently struggle to find their "place" in higher education (Root, 1996). University researchers and practitioners search for the most accurate classifications for multiracial students (Glass & Wallace, 1996; Williams et al., 1996), largely assigning them into a single-race group because of phenotype or social affiliation which has implications for the self-concept of multiracial students. The historical roots of racial categories offer some insight for better understanding the issues that undermine multiracial identification as an identity construct.

No one knows precisely how different races came into existence;[7] to stay within the relevant parameters of this study, I will begin with the known historical social

[7] There is debate regarding the origin and reasons for different racial groups, including folklore, religion and biology. Most Christian religions believe biblically in the story of Abraham and the Tower of Babel as the origin of various races, cultures, and languages. I recognize there are various explanations for how and why there is variation in the classification of racial groups. For this dissertation, I use the literature

constructions of racial categories as recognized by most scholars. Spickard (1992) references the historical roots of race categories through the work of Swedish botanist and taxonomist, Carolus Linnaeus, who categorized humans as members of the kingdom *Animalia*, the phylum *Chordata*, the class *Mammalia*, the order *Primates*, the family *Homididae*, the genus *Homo*, and the species *Homo sapiens.* Blumenbach (1865/1973) further added to the taxonomy of humans, the subsections of *Homo sapiens* to be labeled *races* (racial varieties)*, Caucasian, African, Oriental and American Indian.* In 1795, Blumenbach re-classified the earlier Linnean categories into a double hierarchy of race, adding geography to the system, with the insertion of the *Malay* race variety. This new arrangement moved "outward in two directions from a Caucasian ideal to least desirable Oriental and African endpoints via American Indian and Malay intermediaries…to give his the system full symmetry (Gould, 1998)" (p. 502). In accordance with Darwin's theory of evolution, the hierarchy of race was developed to exemplify the advancement of the human race, ultimately with Caucasians at the top representing the most evolved race (King, 1981). The order starts from the bottom with apes, then chimpanzees, followed by Africans, Native Americans/Indians, Asians and finally Caucasians.

William Ripley (1899) further codified White Europeans into three races: Teutonic, Alpine and Mediterranean. These categories were complicated by the development of subunits further dividing each Caucasian race into more complex iterations with distinctions based on geography and phenotype (Grant, 1918/1970). Grant (1918/1970) re-labeled the Teutonic race as the "great" Nordic race (Banks, 1995) and describing Nordic with the following physical characteristics:

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regarding the development of racial categorizations most referred to by sociologists when discussing the social construction theories of race.

> It is everywhere characterized by certain unique specializations, namely blondeness, wavy hair, blue eyes, fair skin, high narrow and straight nose, which are associated with great stature, and a long skull, as well as with abundant head and body hair (p.150).

The work of Osborn (1924; cited by Barzun, 1965) posited that the achievements of Europeans including Galileo, Cervantes, Napoleon and other great leaders and thinkers were connected to their Nordic bloodlines, and the work of Frederick Douglas, George Washington Carver and Booker T. Washington also benefited from their Nordic gene pool.

At one point some researchers felt there were four or five distinctive and pure races, with divergent gene pools (Spickard, 1992), but there was racial mixing at the margins of these groups creating further complications as to who belonged to a specific group, hence the intermediaries in the Blumenbach system. Richardson (2000) and Bashi and McDaniel (1997) detail studies to determine how those from the Caucasian race were supposedly the most intelligent and most likely to become contributing citizens. Anthropologists have nevered contended there was a "pure" race, instead believing there is an essential commonality among all humans (Spickard, 1992; Brues, 1977; King, 1981) from all geographic locations through genetic and physical traits. Although many physical and social scientists may agree with this notion, the U.S. determination of races still holds to the historical standards of Asian, African, Native, and White.

The construction of race in other countries offers new perspectives to understanding multiracial identification. Brazil, for example, is a nation of mixed people from African, European and Indigenous ancestry and is considered by Freyre (1959) as the birthplace of a new "metarace." In Brazil, racial categorization are ambiguous; however, individuals can still be classified as darker or lighter (Bailey, 2002). The racial

categories are based on historical configurations of race in Brazil, just as in the United States. Similarly to Brazilians, multiracial Americans are also influenced by historical classifications of race.

The "one drop rule" is a term referred to throughout the literature on race, specifically to address people of mixed racial heritage. It means having even one drop of blood from a specific racial group qualifies an individual as a member of that group (Root, 1992a; 1996; Zack, 2001). This rule gained prominence during the late 1890's when Homer Plessy, an "octoroon" (one-eighth Black and seven-eighths White), refused to give up his seat on a bus, which resulted in the separate but equal decision in the Supreme Court's *Plessy v. Ferguson* (Lofgren, 1987) and set a precedent for enforcing the "one drop rule." The United States has tended to function as a monoracial hegemonic culture where race is viewed as absolute and incontestable. Therefore, many multiracial people have been forced into the "boxes" or racial categories that will most subordinate the individual. This phenomenon is called *Hypodescent.*, This system makes it easier for the super-ordinate racial group to be clearly defined and to benefit from advantages in obtaining political, economic, and social power (Omi & Winant, 1986). This incidence of hypodescent classification eliminates the need to develop multiracial categories, because everyone can be categorized.

The ideology of hypodescent is informed by studies of hybrid degeneracy, meaning that people of multiracial heritage are considered to be genetically inferior to both or all of their parent races (Nakashima, 1992). Religion, specifically Christianity, has abetted this line of thought by suggesting that race mixing is "unnatural" (Nakashima, 1992). The theory subsequently informed anti-miscegenation laws aimed at restricting

marriage between Whites and non-Whites; however, they did not govern marriages between racially different non-Whites thus not supporting the need to maintain the "purity" of the White race (Spickard, 1989; Weinberger, 1966). These anti-miscegenation laws were not successfully challenged and ruled unconstitutional until 1967 (*Loving v. Virginia,* 388 U.S. 1).

Partly as a result of the Loving case, a mixed race category was developed within the U.S. and has been furthered by the creation of additional racial categories for the 2000 Census and expected growth patterns based on the 2010 Census. The emergence of a mixed race population has not come without conflict both political and personal. The recognition of mixed race in the 2000 Census created new problems. A person's choice to identify with a particular racial category or multiple categories is a political construction of racial identification (Starr, 1992). To deny hypodescent, the one drop rule, phenotype and other social prescriptions of race, we must construct new political and social boundaries and definitions of race.

Multiracial Terminology

Based on the historical formation of racial categories and governmental distinctions between race and ethnicity, multiracial remains an ambiguous and fluid identity. Throughout this study, I refer to the term multiracial as inclusive of terms such as racially mixed, mixed race, mixed heritage and biracial to refer to individuals with parents from two or more of the federally designated racial and ethnic categories according to the 1997 changes brought forth by the OMB. The use of the term race is distinctly different than the use of the term ethnicity, designating a "genetic" versus a cultural association with a group, though some refer to people of Hispanic/Latina/o origin

interchangeably as race or ethnicity which does not always align with the OMB guidelines. Researchers need to find and use accurate descriptors of their population. This dissertation looks at research studies with multiple single-race samples for relevant findings, and primarily uses studies inclusive of multiracial students.

College Student Identity

The historical foundations and social construction of races influence the racial identification of multiracial college students based on hypodescent. Multiracial students in the past were expected to have self-identified with a racial group that best fit their identity; however, some multiracial college students do not want to choose. As a result, this practice marginalizes multiracial students from the time they begin applying to college (Root, 1992a, 1996; O'Hearn, 1998; Gaskins, 1999; Renn, 2004). The growing number of multiracial students expected to enter college in the next decade based on the 2000 census evidences a need to better understand the factors that influence the interpersonal self-concept of multiracial college students.

The term interpersonal self-concept was chosen to aid in an examination of the factors that influence understanding of self and others as they experience college. There is very limited literature that specifically studies multiracial college students (Calleroz, 2003; Williams et al., 1996; Renn, 2004; Renn & Arnold, 2003; Sparrold, 2003). However, there are studies that examine multiracial people in general (Root, 1992c, 1996) and a larger literature on general college student adjustment and identity development (Pascarella & Terenzini, 1991; Miller & Winston, 1991; Komives et al., 1996; Evans, Forney & Guido-DiBrito, 1998). This section will provide an overview of how an interpersonal self-concept is defined for college students and then discuss the

implications for the development of the interpersonal self-concept of multiracial college students.

According to Pascarella and Terenzini (1991), aspects of college change are associated with the development of academic skills (verbal, quantitative, subject matter competence), psychosocial changes (identity, self-concept, self-esteem, relating to others), moral development, cognitive skills, intellectual growth, and attitudes and values, all of which contribute to educational attainment and social mobility. The interpersonal self-concept of students in college is directly reflective of their experiences in a complex environment that influences many aspects of the individual. Student development research within higher education is dedicated to how students adjust cognitively to the college environment. Evans, Forney and Guido-DiBrito (1998) focus on student development as contributing to the growth of students in the theoretical areas of psychosocial, identity, morality and learning. They describe the importance of these student development theories as formative models to guide research and practice for student affairs professionals. Knefelkamp, Widick and Parker (1978) describe the study of student development as a need to respond to the following four questions:

1. What interpersonal and intrapersonal changes occur while the student is in college?
2. What factors lead to this development?
3. What aspects of the college environment encourage or retard growth?
4. What developmental outcomes should we strive to achieve in college?

These questions are relevant to the study of multiracial students' development, because answering them will further expose the factors that influence their experiences.

The college experience is unique because while in the environment students are continuously adjusting: the transition to college, persisting in the environment, and, in a

relatively short time, preparing to exit college and become productive citizens in the non-academic world. An interpersonal self-concept is impacted by adjustment factors which include anything influencing students at each stage of their development and eventual change throughout college (Pascarella and Terenzini, 1991). For students of color as a collective group, adjustment to college have been studied extensively as individual ethnic and racial groups, looking at how Latina/os, African Americans and Asian Americans transition and persist differently in the collegiate environment (Cabrera et al., 1999; Chavous, 2000; McEwen et al., 2002; Pope, 2000; Fries-Britt and Turner, 2001; Cokley, 2001; Chiang, 2004).

The development of an interpersonal self-concept in college is influenced by the ability of students to adjust to their environment. Some of the major factors that affect the adjustment of students of color are social support from peers (Allen, 1992; Alford, 2000; McGrath, Gutierrez & Valadez, 2000), experience with racism and stereotypes (Smedley et al., 1993; Steele et al., 2002), social integration (Fleming, 1984; Quick, 2004), educational programs (Phinney, 2003; Pascarella, 2004), mentors (Fries-Britt and Turner, 2001; Bullard, 2003), and institutional factors (curriculum, interaction within the campus community, campus demographics) (Martin, 2000; McEwen et al, 2002; Gloria, 2003; Antonio, 2004).

Overview of Relevant Studies on Mixed and Single Race Students

The first part of this section will focus on relevant literature in higher education, examining the various studies and summarizing how multiracial college students are currently considered in the research. The second part will give an overview of how multiracial people are being studied in other fields. The third will examine relevant

studies of single race African American and Asian American students that highlight potential contributors to the development of an interpersonal self-concept. These studies are relevant for exposing the issues multiracial college students may face in their families and social lives outside the university that have indirect and direct influence on their interpersonal self-concept.

Multiracial Students in Higher Education

The predominant work in higher education on multiracial students has focused on identity formation (Root, 1992c, 1996; Renn, 2003, 2004), although scholars also attempt to address multiracial mental health (Nishimura, 1998; Phinney & Alipuria, 1996). There are a few dissertations now available to reference, though all have not been developed into published work (Renn, 1998; Calleroz, 2003; Sparrold, 2003); the focal point of this research is the exploration of identity among multiracial college students.

Renn (2000, 2003, 2004) introduced a human ecology approach (Bronfenbrenner, 1979, 1993) to studying multiracial college students. The human ecological approach was first mentioned as a theoretical method to understand the influential factors impacting multiracial identity in the general population by Robin Miller (1992). The ecology of multiracial identity on campus published by Renn in 2004 is the first complete empirical research document in the higher education literature on multiracial college students. Renn applies the contextual aspects of the Bronfenbrenner (1979) model to a higher education context in *The Ecology of College Student Development Model* (see appendix B).

Renn's study (2004) looked at 56 mixed-race students from six campuses, three in the Northeast, two in rural southern Midwest and one in the northern Midwest. The

sample represented a mix of institutions: private and public, small, medium and large, and varied levels of selectivity. The multiracial students identified with a combination of two or more of the OMB racial and ethnic categories. Renn defines five patterns of multiracial identity for student that emerged from her data:

1. A Monoracial Identity ("I'm black." "I'm Asian.").
2. Multiple Monoracial Identities, shifting according to situation ("I'm half white and half Chinese." "I am Mexican and black.").
3. Multiracial Identity ("I'm biracial." "I'm mixed.").
4. Extraracial Identity, deconstructing race or opting out by refusing to identify according to U.S. racial categories ("I'm Jamaican." "I won't check any boxes." "I don't believe in having a race.").
5. A Situation Identity ("When I'm with my fraternity, I'm like them-white. When I'm with the Japan Club, I'm Japanese American. And when I'm home, I'm hapa [half foreign/White].") (p.67).

Kristen Renn's dissertation (1998) describes the first emergence of these five "patterns" in her 24 person sample at three institutions in New England. This study had two major findings: (1) Various factors inside and outside the college environment impacted the students' identity development; and (2) the campus environment mediated students' racial identity. The experiences of multiracial students weree influenced by students' ability to fit in with existing students of color groups, form their own, or both. In addition, students were impacted by the size and location of the community in relation to the general campus, and the peer culture which facilitated or inhibited movement between public spaces.

Another approach to studying multiracial college students is by looking at the development of multiracial courses in ethnic studies departments on college campuses (Williams et al., 1996). Over the last ten years, multiethnic and multiracial areas of study

have emerged at selected universities (e.g., University of Washington; University of California-Santa Barbara, Los Angeles, Berkeley, Davis, and Santa Cruz; University of Arizona; Brigham Young University-Hawai'i) because of an increased number of multiracial students, faculty and university personnel available to introduce these specialized areas (Root, 1996). The emergence of multiracial issues in the university classroom is being used as a mode of introducing the finite aspects of race at the margins of politics, sociology and history (Williams et al., 1996).

More generalized studies have been done to explore and assess the issues faced by multiracial college students. Nancy Nishimura (1998) developed a preliminary study to assess the attitudes and challenges experienced by multiracial college students. The main finding from this study was that multiracial students were encountering difficulties with counselors who could not accurately assess the psychological issues specific to multiracial students. Furthermore, limited perceptions of diversity exclusive of multiracial and multiethnic students were reported as contributing to the challenges facing multiracial students.

Renn (2003, 2004) and Miller (1992), Calleroz (2003) identifies parents, institutional environment, and peers as the three major factors influencing multiracial college student experience. Calleroz (2003) used a grounded theory approach (Glaser, 1967) with an 11 person, qualitative, single-campus sample, limiting broad based generalizations of the study; however, she was still able to make three assertions based on the data. The first was that parents were influential in defining the racial identity of the student from early childhood which, in turn, affected the individual's approach to their racial identity in college. Secondly, institutional practices influenced the experience of

students because it functioned from a monoracial paradigm forcing multiracial students to choose a single-race category. Many students reported choosing racial identities based on situations, surroundings and peers, termed by Calleroz as "the chameleon effect." The third assertion was the way peers redefined their identity, which solidified it or forced them to justify it in different institutional situations.

Sparrold (2003) explores the impact of ethnic identity on the psychological adjustment of multiethnic college students in a quantitative comparative study of 60 multiethnic and 60 monoracial students. Students completed five questionnaires: a demographic questionnaire, a national background checklist, the Rosenberg Self-Esteem Scale (RSE) (Rosenberg, 1965), the Brief Symptom Inventory (Derogatis, 1993), and the Multi-group Ethnic Identity Measure (MEIM) (Phinney, 1992). Using a multiple regression analysis, Sparrold found that self-esteem in multiethnic students was not significantly predicted by ethnic identity, but was a strong predictor of psychopathology, as were socioeconomic status, ethnic group affiliation, acceptance by others, and parents' marital status. In a sub-sample, multiethnic students reported a higher incidence of stressful family and life events than their monoracial peers. This study indicated the importance of ethnic identity in the emotional health of multiethnic college students.

An earlier comparative psychological study of mental health, attitudes towards other groups, ethnic identity, and ethnic self labeling gathered data from multiethnic/multiracial and monoracial high school and college students (Phinney & Alipuria, 1996). This study is unique because it integrates and compares high school and college students, allowing for a comparison of factors that influence their identity that may or may not be related to the college environment. The researchers found that ethnic

identity does not play a role in the mental health of multiethnic/multiracial students, either in high school or in college. These findings are opposite those in Sparrold's study (2003), which used the Phinney MIEM Scale (1992). In addition, Phinney and Alipuria found that multiethnic/multiracial students had a more positive attitude towards other racial groups when compared to monoracial students. An interesting finding in this study was that multiethnic/multiracial students identified themselves within one ethnic group when in mono-ethnic communities or campuses. Students with one White parent identified fifty percent of the time as White when on predominately White campuses, but only one student with a White parent identified as White on a predominately minority campus. Phinney and Alipuria cite Hall's (1980) reference to the androgynous nature of multiethnic individuals who strongly identify with more than one culture and may identify with one ethnicity over another to avoid conflict.

The numbers of studies in the higher education literature are growing, but are still limited in depth, which is a main reason for the discrepancy in results even when using the same instruments. The emerging literature in higher education is showing more clearly the need to develop research in the area of multiracial experiences in college. Most of the studies focus on identity development which, according to the literature (Root, 1992c, 1996), is the essential factor in understanding all types of multiracial issues. A handful of studies on leadership (Arminio et al., 2000), gender (Ortiz, 2004); Rockquemore, 2004), and satisfaction with campus services (Malaney, 1998) now account for multiracial students in their samples, but have not looked specifically at the factors influencing the interpersonal self-concept among this population.

Relevant Studies of Multiracial Individuals

The literature on interpersonal self-concept outside education is primarily based in psychology and approaches the same issues raised in the higher education and K-12 research using similar measures. Gender and sexuality theory has been offered as parallel paradigms for mixed race research because of similar constructs, concepts and outcomes. For example, it is plausible that students of nontraditional sexual orientations. like multiracial students, have multiple self identities. Since many of the racial identity studies parallel the research presented earlier, I give a brief overview of the work on racial identity and then address the parallels to gender and sexuality theory.

Jaret and Reitzes (1999) explore the development of racial identity of Blacks, Whites and multiracial people in three ways: (1) self-concept, (2) different settings, and (3) contrasting racial identity with other identities. With regard to self-concept, Black individuals were more likely to indicate race was important than multiracial people. Whites reported racial identity was more important at work than at home. It was undetermined for multiracial respondents whether or not different social settings influenced their racial identity. Gender was the most important predictor of racial identity in all groups.

Racial identity is used as a predictor in many studies of self-esteem and psychological adjustment. Mukoyama (1998) found that self-esteem and the ability to adjust to life stressors was higher among bi-ethnic adults involved in a relevant cultural organization using the MEIM (Phinney, 1992), Rosenberg Self-Esteem Scale (RSE) (Rosenberg, 1965), and the Adjective Check List (ACL) (Gough & Heilbrun, 1983). Contradictory to these findings, VanKirk (2003), using the RSE (Rosenberg, 1965) and

the ACL (Gough & Heilbrun, 1983), found that societal influences negatively affect the self-esteem and adjustment of multiracial people. VanKirk's findings align more consistently with the existing research on multiracial self-esteem, depression and adjustment (Ramos, Jaccard, & Guilamo-Ramos, 2003; Comas-Diaz, 1996).

The more enlightening aspect of the non-educational literature is the work of George Kich (1996) and Karen Allman (1996) who explored gender and sexuality as parallel theories from which to view mixed race. Kich (1996) found that in both the racial and gender contexts, choosing one community to identify with does not mean a rejection of the other. "In the postmodern era, being different as a way of life recognizes that living in the cultural margins allows fundamental access to both the perspectives of the insider and the outsider" (p. 271).

Allman (1996) compared the intersection of race and gender in a discussion about the sexualization associated with multiracial people. Allman explored the "borderlands" (Anzaldua, 1987) of multiracial people as they dealt with dominant culture stereotypes affecting the construction of their racial and sexual identities. She concluded that multiracial people are subject to multiple oppressions because of their marginalized status. Gender and sexuality offer similar perspectives of identity through understanding orientation/racial composition, choosing or not choosing an orientation/race, coming out/revealing race, finding a box to check, social networks, peer culture, and self-perception.

Mixed race is defined in various communities differently based on the cultural norms of the subordinate minority group. For example, in Hawai'i *"hapa"* is short for *hapa haole* or half foreign/White; in Louisiana, those with a mixture of Native American,

African American and French roots are referred to as Creole. As stated earlier, hypodescent is the rule of thumb widely used to classify people from mixed race backgrounds.

Binning, Unzueta, Huo and Molina (2009) developed a new system to classify mixed race individuals based on primary racial identification with a low-status group (i.e., Black or Latino/a), a high-status group (i.e., Asian or White), or multiple groups (e.g., Black and White, etc.) to determine whether or not identification with a particular group is associated with positive or negative psychological consequences. The results showed that individuals who identified as multiracial tended to have lower stress levels, more positive affect for school citizenship behavior, positive social engagement, and lower levels of alienation than their low- or high-status peers. The study concluded that multiracial individuals may benefit from the ability to switch salient identities based on social contexts; because of their ability to identify with multiple groups, they can navigate both racially homogenous and heterogeneous environments more readily than those who primarily identify with one group; they avoid tokenism by not conceding membership in the majority group; and they may identify with a larger number of people. This study supports the need to further explore the interpersonal self-concept of multiracial college students in comparison to their single race peers.

Relevant Individual Race Studies

The understanding of multiracial students is complicated by the perpetuation of a normative system based on single race experiences. This section will highlight some of the applicable studies that inform the interpersonal self-concept, identity and attitudes towards diversity of single race African Americans and Asian Americans. However, it is

imperative to underscore the fact that normative frameworks of race further marginalize the experiences of Blacks and Asian Americans and Pacific Islanders (AAPI) by referencing one group in relation to the other, using a Black-White paradigm to represent outcomes and conclusions between Blacks and Asians (Teranishi, Behringer, Grey & Parker, 2009). Therefore, this section aims to highlight the relevant aspects of single race experiences of both African Americans and Asian Americans in juxtaposition to the experiences of multiracial students in this study.

African Americans in the United States have been subjected to hundreds of years of race-based stereotypes that have influenced others' perceptions of who African Americans are, how they perceive themselves, and how they relate and understand each other (Amodio & Devine, 2006). As is the case for many individuals regardless of race, the formation of African Americans' self-concept spans a lifetime, but develops primarily from infancy through early adulthood (Cross & Fhagen-Smith, 2001). This is important because as African American students enter college they are at the very pinnacle of racial identity formation. The experiences leading up to and during college play a major role in the collective self-concept of African American students. In a study by Lionel Scott (2003), African American adolescents (males slightly more than females) have developed coping strategies based on the centrality of their racial identity and self-concept to manage discrimination or other race-based situations. This study is important to understanding the interpersonal self-concept of African American college students because it identifies the likely impact of the pre-college experience on their negotiation of racially diverse and homogeneous college environments.

One's interpersonal self-concept is inextricably connected to race, gender and in-group and out-group experiences. In a study of "targets as perceivers of negative stereotypes", a series of experiments explored the impact of stereotype threat (Steele, 1997) among Black college students. The study found that social stereotypes, perceptions, and the understanding of beliefs and attitudes of people in their social environment affect the probability of Black students being negatively stereotyped (Wout, Shih, Jackson & Sellers, 2009). It also highlighted the adverse affects on Black students and women who contend with stereotype threat, particularly in White- and male-dominated environments. Therefore, interpersonal self-concept, based on these findings, is affected by stereotype threat experienced by students of color in social environments as well as from both in-group and out-group peers.

Asian American students, like their African American counterparts, deal with stereotypes that converge on their interpersonal self-concept in a very unique way. Perceptions of college access and choice, affirmative action, and admissions policies are only a few of the factors that create the racial climate for Asian American students in higher education (Teranishi, Behringer, Grey & Parker, 2009). These perceptions play into the development of Asian American racial identity development in both positive and negative ways and further influence intergroup prejudice (Gurin, Nagda & Lopez; Zirkel & Cantor, 2004).

Successful navigation of the college experience for students of color is often dependent upon their ability to develop support groups and refine their racial identity (Evans, Forney & Guido-DiBrito, 1998). Black and Asian college students tend to be significantly more involved in social and ethnic student activities than their White peers

(Jaret & Reitzes, 2009). At the same time, Asians have a significantly lower positive outlook on their ethnic identity in that they feel more estranged from their aggregate racial group (Jaret & Reitzes, 2009). Asians are often further disaggregated by ethnic, linguistic, generational and historical experiences (e.g. Chinese, Korean, Japanese, Vietnamese and Filipino) on a college campus (Alvarez, 2002). In addition, the salience of racial identity has been identified as a mediator for gender role development in both Black and Asian men (Carter, Williams, Juby & Buckley, 2005). This is important because masculinity for Blacks and Asians has been culturally defined, restricted, and systemically denigrated historically.

The socioeconomic environment presents intergroup conditions that influence the formation of racial attitudes towards others primarily because of the relationships, interactions and perceptions fostered in residential communities (Branton & Jones, 2005). One of the most significant findings of a study done by Branton and Jones (2005) was that the economic status of a neighborhood had a significant impact on the racial attitudes of African Americans and Asian Americans, with affluent environments made racially intolerant attitudes less likely while the opposite was true for impoverished neighborhoods. Intergroup relations remain a significant indicator for developing positive or negative racial attitudes towards out-groups. According to Oliver and Wong (2003), with the exception of Asian Americans, people who reside in racially homogenous neighborhoods develop greater negative stereotypes about minority out-groups. At the root of these tensions is the perceived competition for resources. However, the more racially diverse the neighborhoods become and/or when interactions with out-groups increased, negative racial attitudes were significantly reduced.

The racial composition of neighborhoods and schools is important because it provides a framework to draw upon when students interact with diverse peers, which in turn can influence friendship groups in college (Ting-Toomey, 1981; Tatum, 1997; Gurin, Peng, Lopez & Nagda, 1999). At four-year colleges, a large number of first year students live on campus in residence halls, in which school and neighborhood are combined, This brings together students from a wide array of socioeconomic backgrounds, challenging many ideas and values, including racial attitudes. Lopez (2004) conducted a study of interethnic contact and attitudes in the first year of college, examining the impact of in-group and out-group interactions on racial attitudes. The study found that Whites' racial attitudes were most changed from out-group contact with African Americans; Asian Americans' racial attitudes marginally improved from out-group contact with African Americans; and African Americans' racial attitudes were unchanged.

Theories on Multiracial Identity

The interpersonal self-concept of multiracial college students is a complex area of study because of the many aspects of identity that factor into their experiences. Researchers have attempted to identify these factors using a variety of theoretical frameworks. The theoretical approaches currently being developed in the area of multiracial college student experiences continue to use traditional aspects of race and student development theory. This section will provide an overview of the three theoretical approaches used as a framework to understand multiracial interpersonal self-concept: the Linear Racial Identity Development Approach; the Resolution Approach; and the Ecological Approach.

Linear Racial Identity Development Approach

The development of a positive racial identity is correlated with the development of a healthy identity of self (Erikson, 1968). However, models based on Erikson's work assume a universal development process (Miller, 1992) and presume a monoracial identity. Many of the theories used to study race are based on traditional theories of development (e.g., Erickson, 1968; Chickering, 1993), but focus primarily on single-race populations (Tatum, 1995; Helms, 1990, 1995; Cross, 1991, 1995). Linear racial identity development models are typically associated with a multiple stage approach, advancing linearly from one to another, ultimately achieving a positive identity. The linear approaches to identity adjustment described in this section were developed specifically for the advancement of a positive multiracial identity and draw parallels to single-race theories.

Poston (1990) developed a five stage model:

- *Personal Identification* during which the individual is just becoming aware of membership in a racial group which occurs commonly in childhood.
- *Choice of Group Categorization.*.Some individuals may identify as multiracial but are most likely to identify with one group over another based on pressure from peers, family or other social groups. Poston identifies status factors such as neighborhood and socioeconomic class, social support networks and personal factors influencing identity adjustment at this stage.
- *Enmeshment/Denial* are synonymous with confusion in this stage as individuals, typically in adolescence, are unsure how or why to pick one racial

identity over another. A result of this stage is a desire to learn and understand more about their heritage, which evidences movement into the next stage.

- *Appreciation* of their heritage.
- *Integration* of their multiple racial identities.

George Kich (1992) developed a three-stage model to describe the development of biracial individuals, although the first and third stages could be separated to develop five stages: *Awareness of Differentness and Dissonance* is a slightly more advanced notion of Poston's (1990) personal identification without choosing an identity, recognizing that they belong to more than one group, but do not identify with any group; *Struggle for Acceptance* into peer networks, experimenting identification with one race or another and exploring their multiple heritages; and *Self-Acceptance and Assertion of an Interracial Identity,* during which individuals are able to positively define themselves and seek out an environment that does not challenge their racial identity.

Traditional stage models (e.g., Cross, 1971, 1987; Helms, 1990) tend to define psychological experiences rather than a specific stage of life. The Kerwin-Ponterotto (1995) model reflects a six stage life span approach towards an integrated multiracial identity: *Preschool* and the development of self awareness; *Entry to School* is a period of self assessment as students learn to categorize (Morrison and Bordere, 2001) (these two states are very similar to Poston's (1990) first two stages); *Preadolescence* marks the period of time when children begin to understand the nuances of group membership based on physical appearance; *Adolescence*, described by Kerwin and Ponterotto as the most difficult time for multiracial youth because of the issues surrounding peer acceptance and sexuality (Allman; Kich; Twine, 1996); *College/Young Adulthood*, which

continues either an immersion in one culture or an exploration of multiple heritages and a multiracial identity; and *Adulthood* when people will experience varying levels of self understanding based on changing situations and the integration of a multiracial identity with other identities of self.

These linear racial identity approaches are very similar in that they aim to theorize the facets of multiracial identity development, detailing the varying situations, life stages and circumstances. Linear models are important to understanding multiracial adjustment because they suggest differing paths of attaining a multiracial identity from early childhood through adulthood. With regard to multiracial college student adjustment, a linear approach is easily adaptable and familiar to student affairs practitioners. Based on the models presented here, much of the search for further understanding is during the college years.

Resolution Approach

This is labeled the resolution approach because Root (1990), Wallace (2001), Kilson (2001) and Rockquemore and Brunsma (2002) offer strategies for developing a healthy multiethnic identity. Root (1990) prescribes four strategies that are not progressive or definitive of an exclusive category from which to identify. The first strategy is to *accept the identity society assigns*. This strategy is the weakest because your identity may change with time and location without solidification. The second strategy involves *identification with both racial groups.* The drawback to this strategy is that individuals have to develop coping strategies when not accepted by one or both of the groups; however, being accepted by both groups can have a positive affect on self-identity, and allows for multi-group membership. The third strategy is to *identify with a*

single racial group, similar to the first strategy but differentiated by being more active than passive. Obstacles for individuals who choose this strategy include their ability to negotiate questions about their identity, mostly based on physical features. The final strategy is the *identification of a new racial group*. Root (1990) describes this as offering the individual the most freedom to move freely between racial groups with a multiracial identity. Root's strategies delineate choices multiracial students can make about how they racially identify.

Wallace (2001) developed four visual representations of the strategies outlined by Root (1990). These visual representations are: *Home Base/Visitor's Base*, where an individual is mostly in one community but occasionally identitfies with their "other" side; *Both Feet in Both Worlds*, describing an individual who is firmly grounded in the identities of each racial community; *Life on the Border*, represents a person who is multifaceted and recognizes an identity that is essentially mixed; and *Shifting Identity Gears*, depicting racial identity as something that may or may not be at the forefront of their identity, allowing other aspects of one's identity like gender to emerge based on social contexts.

The choices developed by Kilson (2001) and the categories described by Rockquemore and Brunsma (2002) are nearly identical. Kilson's choice, *Monoracial Identity of Color* and Rockqumore and Brunsma's category, *Singular Identity,* are both directly labeled; the choice, *Biracial or Multiracial Identity,* describes having more than one identity (i.e., I am Black and Japanese) while the category, *Border Identity,* describes the opposite--instead of having more than one identity, identity is not validated for any of the races; the choice, *Raceless Identity* and category, *Transcendent Identity* both describe

the identification of self beyond any racial categorization ("I am human"); the final choice, *Multiple Descriptors,* and category, *Protean Identity,* both rely upon social contexts to determine whether or not racial identity is most salient to the situation.

The resolution approach reframes multiracial identity formation as an active set of options for multiracial individuals to explore, rather than a process of linear development. This approach shows researchers and practitioners that students will probably be resolving into one of these identities while in college. Another benefit of this approach from a student development perspective is that students can claim an identity but experiment with it (Root, 1990). The university environment offers multiple ways for students to experiment, adjust and learn about their identity (Kerwin and Ponterotto, 1995) through participation in cultural centers and organizations, the Greek system, living-learning centers, religious groups, androgynous organizations like student government, and service societies.

Ecological Approach

The initial ecological approaches applied to mixed race is based on Robin Miller's (1992) human ecology of multiracial identity and Uri Bronfenbrenner's (1977, 1979, 1993) ecology of human and cognitive development. Miller (1992) described a social-ecological model as a theory to understand the factors influential in shaping identity. She describes the developmental process of multiethnic and multiracial people as being "embedded in a system of intergroup relations" (p. 25). The ecological factors described in the Miller model are economics (family and community wealth), population ratios (community and campus), societal images (television, school, ads, movies, media), socialization by the collective (parental and peer influence), historical legacies

(construction of race and history of relevant racial groups), and rules for intergroup boundaries (cultural norms and values). Each of these factors are explored and identified as relevant through more recent studies on multiracial populations (e.g., Morrison & Bordere, 2001; Jaret & Reitzes, 1999), but not all in the same study.

One of the more complex yet influential models used to describe multiracial adjustment was the adaptation of the human ecology model (Bronfenbrenner, 1979) by Kristen Renn (2003) to the college environment, specifically to look at multiracial students. Renn (2000, 2003, 2004) introduces the ecology of multiracial identity on campus as a holistic approach to understanding the racial identities of multiracial college students.

Bronfenbrenner (1979) based his model on the Lewin (1936) psychological theory that (*B*) Behavior is a (*f*) function of the interaction of the (*P*) person and (*E*) environment, more popularly shown as the equation $B=f(PE)$ and applied to many other developmental theories (e.g., Banning & Kaiser, 1974; Strange & Banning, 2001; Tinto, 1987, 1993; Weidman, 1989). In 1977, Bronfenbrenner outlined the key elements of his model to include person, process, context and time (PPCT). *Person* refers to the individual and their current state of development which guides characteristics of interactions with the environment; *Process* describes the actual interactions between the person and the impact those interactions have on the individual and environment; and *Context* which encompasses both the environment in which these interactions occur as well as the influence outside settings (socio-political-historical) have on the immediate environments where development occurs.

The driving force behind Bronfenbrenner's model is the *context* of interactions. This context of human ecology is divided into four systems, *micro-, meso-, exo-* and *macrosystems.* Renn (2003, 2004) describes each of these systems in relation to higher education. The microsystem is the most immediate force affecting development and includes the academic setting, residential/family settings, formal co-curricular and/or community settings, and informal social settings. Mesosystems represent the collection of immediate microsystems and the individual's interactions across settings. Renn and Arnold (2003) argue that these are the settings from which peer cultures develop. Peer culture in college defines the acceptability of identities, attitudes and behaviors (Renn & Arnold, 2003). The exosystem represents the settings where the student is not embedded, like faculty committees, parent's workplace and federal agencies. Many times these exosystems have direct and indirect impacts on the student through policies developed at faculty meetings, the change in parent's job site or status, and recognition of different races by a federal agency like the OMB. The macrosystem is mostly representative of the socio-cultural environment such as historical trends, cultural values and political ideologies. Theses contextual systems impact students as the settings in which the student is embedded are influenced by each other.

The ecological approach may offer the most complete theoretical framework through which to examine the interpersonal self-concept of multiracial college students. The PPCT component of the ecological approach accounts for the varying levels of racial understanding of multiracial college (time) students (person) and their peers (context) on university campuses (place). The college environment is in itself a haven for microsystems that develop almost spontaneously. Viewing these settings through an

ecological lens provides a framework to examine the identity development of multiracial students.

Comparisons Between Single-Race and Multiracial Research

The limited research on multiracial people uses a variety of approaches and methodologies that mirror those of single-race studies; however, because of the variations in the definition of multiracial, outcomes tend to be more suspect in terms of validity. This section will give a comparative analysis of theories and methodologies used with single-race and multiracial people. In order to stay within the parameters of this study, only single-race studies of Blacks and Whites will be used for comparison. These comparisons will then be summarized in the context of how studies of both groups can better understand the interpersonal self-concept of multiracial college students.

Theoretical Comparison

The greatest similarities across theories when comparing single-race and multiracial people are found in the linear approaches to identity development. The theoretical models developed by Poston (1990), Kich (1992) and Kerwin and Ponterotto (1995) rely heavily on the theoretical work of Cross (1978) and his theory of Nigrescence (Black identity development). Cross's theory, since revised (1991, 1995), has been used to develop alternative theoretical models for Black and White identity development (Helms, 1990, 1995; Tatum 1995) and informs the vast majority of research on college student development. Each of these models operates under the assumption of a linear progression through stages towards a more positive identity. Cross developed a five-stage model and labeled the stages *Pre-Encounter* (non-Afrocentric perspective on identity), *Encounter* (cognitive dissonance about what identity to accept),

Immersion/Emersion (rejection of dominant culture for an ethnocentric perspective), *Internalization* (acceptance of a positive Black/African American identity), and *Internalization/Commitment* (Afrocentric identity formation with an understanding of this perspective in relation to greater society). These stages represent a linear development in knowledge of and commitment to the tenets of an Afrocentric identity.

Poston (1990), Kich (1992), and Kerwin and Ponterotto (1995) use variations of Cross's labels and explanations for each stage. The identity, central to the single-race Cross and Helms models, is one-dimensional, allowing for a much clearer but less complex understanding of identity from the beginning through the stages. The linear multiracial models make similar assertions about stages of development and progression. The issue that becomes more complex in validating the multiracial models is defining the racial identities of the multiracial group. The multiracial theories account for identifying with multiple races, then one more than another, and an eventual integrated multiracial identity. The progression through the stages of multiracial identity development is fluid and does not necessarily follow the linear notions of the Cross and Helms models. Parham (1989) added a revision to the Cross model asserting that Blacks/African Americans could experience regression to earlier stages of racial identity development depending on context and events in people's lives.

A distinctive difference between the models is that the perception of regression (Parham, 1989) in the single-race models is described as progression in the multiracial models. A White/European identity can be perceived as part of the integrated identity of a multiracial person with a White heritage, yet is part of the first and second stages of the Cross model. The historical impact of hypodescent or the one drop rule in the Cross

model (1978) offers further explanations for this discrepancy; Cross believed that mixed Black/African Americans should identify as such instead of ascribing to a multiracial identity.

The outcomes based on single-race models tend to offer unilateral outcomes versus options for situating oneself in multiple communities simultaneously. The linear models more importantly describe the development of racial identity over the life span. In terms of adjustment, the linear models become very hard to apply as a whole to the college environment because college only accounts for a small period of time in a person's life.

The ecological and resolution approaches to multiracial identity, unlike the linear models of either single-race or multiracial people, better describe the overall interpersonal self-concept of the individual because they account for a variety of influencing factors, and they can be applied directly to the college environment (Renn, 2003, 2004). After evaluating the different theoretical models of racial identity development available to explore the multiracial experience in college and the adjustment factors for this population, these two theoretical approaches offer the most complete assessment.

The move away from linear approaches toward more detailed, ecological theories of development, emphasizes the interaction between peers, family and environment (Miller, 1992). The Bronfenbrenner (1979) model, on which Renn (2003, 2004) superimposed the university ecological system, created a theory to examine both the factors influencing the student as well as the students interaction and influence on the environment. (Renn's five patterns of identity were described in Section II.) Although

the results of Renn's study would normally be categorized with the theoretical outcomes of Kilson (2001), Wallace (2001) and Rockquemore and Brunsma (2002) and more loosely to Root (1990), her theoretical approach to understanding these outcomes is dissimilar. However, an ecological lens when used in collaboration with the resolution approach may offer uncover some of the reasons multiracial students use different categories, visualizations or strategies to define their racial identity and the systems influencing the context of students on college campuses (peer networks, organizational involvement, family ties and academic choices).

The development of new and different theories for understanding multiracial students also informs single-race theories. Two theories of multiple identities are based in Root's (1990) resolution strategy theory. Both promote the recognition of multiple identities that depict the Protean Identity (Rockquemore & Brunsma, 2002), Multiple Descriptors (Kilson, 2001), Shifting Identity Gears (Wallace, 2001) and Identification with a New Racial Group (Root, 1990).

The multiple oppressions model (Jones & Pope, 1991) which asserts that individuals may experience discrimination based on multiple social identities, with membership in more than one oppressed group one group having a compounding effect. Examples of students with multiple oppressions could include: lesbian-White-women, African American-women, Muslim-Asian Americans, or working class-Latinas/os. Jones and Pope define underrepresented minorities as oppressed based not necessarily on their race alone.

The second model is Jones' and McEwen's multiple dimensions of identity (2000) which posits that each identity is not understood singularly but in relation to the

other identities. Jones and McEwen do not base their model on an ecological framework but describe the very settings described by Renn (2003, 2004) in the college environment as affecting the saliency of each identity at a particular time. This model theorizes that more than one dimension of identity can be engaged in by an individual at one time. The development of these multiple identity models is an example of how multiracial theoretical approaches are being re-integrated to advance general identity theory.

Although not mentioned in either of these studies, multiracial college students experience similar challenges as those defined by the multiple oppressions model. Multiracial college students are considered students of color, but within each of their racial communities are considered minorities, hence the Border Identity described by Rockquemore and Brunsma (2002) as not having validation in any racial community:. Multiracial students deal with the oppressive stereotypes, discrimination and adjustment issues of being part of multiple oppressed groups (Root, 1992a, 1996). An example of this would be a student of Mexican and African American heritage who deals with the "ghetto" stereotypes associated with being African American and also the "language" stereotypes associated with Latinas/os.[8] Multiracial students often have to prove (e.g., Diaz, 1999; Maillard, 1999; Rockquemore & Brunsma, 2002) they belong to a specified group, whether it be White, Asian or Latina/o. Multiracial students, therefore, experience multiple oppression based on race not only from the dominant group but from all the oppressed groups to which they belong (Maillard, 1999).

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[8] Ghetto language is often referred to as a slang that has connotations of being poor, underprivileged, etc., and also carries negative stereotypes associated with being from a racial minority like lazy, violent, unlawful, etc. Language stereotypes associated with Latinas/os are most common if they do not speak English or refuse to learn English, which is often misinterpreted as an anti-American attitude.

Comparatively, in all three of the theoretical approaches for multiracial identity, the single-race models can be used to evaluate multiracial individuals who claim a monoracial identity. Since these models are psychosocial, some conflicts may occur during stages of development, but if the individual truly subscribes to a single-race identity, he/she should advance through the stages of the model. There are facets of theories developed for single-race populations that are useful in framing the research on multiracial individuals.

Indicators of Multiracial Interpersonal Self-Concept

Based on a synthesis of the literature on multiracial individuals, this section identifies factors related to interpersonal self-concept sorted into three categories: The factors present and unique to a) primary and secondary school (K-12), b) during college, and c) those that are influential over the life span of the individual. The influences of both K-12 and life span identify factors are, obviously, outside the college, but are key to understanding multiracial college students' interpersonal self-concept. A table of factors affecting multiracial interpersonal self-concept is presented (Table 1) to consolidate and represent those identified in the literature.[9] The factors are grouped into nine dimensions: positional, resources, information, relationships, environment, involvement, politics, identity and personal.

[9] Since the research and literature is limited in this area, I recognize the table may not represent all factors affecting interpersonal self-concept.

Table 2.1 Factors Contributing to a Multiracial Interpersonal Self-Concept

	Categories		
Dimensions	***Life Span***	***K-12***	***College***
Positional	**Social Alignment** (Diaz, 1999; Evans, 1999, Kich, 1992; Randolph, 1999)	**School Demographics** (Herman, 2004; Miller, 1992)	**Campus Racial Diversity** (Evans, 1999; Laura, 1999; Miller, 1992) **Size and Geographic Location (National)** (Renn, 2004)
Resources	**Socioeconomic Status/Position** (Miller, 1992; Sparrold, 2003)	**Neighborhood Demographics** (Race and Income) (Herman, 2004; Miller, 1992; Poston 1990)	**Institutional Resources** (Williams et al., 1996; Renn, 2004)
Information	**Societal Influences** (Fernandez, 1996; Miller, 1992; Renn, 2004; Renn and Lunceford, 2004; VanKirk, 2003)	**Curriculum** (Morrison & Bordere, 2001) **Heritage Exploration** (Kerwin & Ponterotto, 1993; Morrison & Bordere, 2001; Wardle, 1996)	**Academic Courses** (Kerwin & Ponterotto, 1993;Williams et a., 1996) **Educational Programs** (Renn, 2004)
Relationships	**Family Influence, Parental Preference** (Jackman, Wagner & Johnson, 2001; Morrison & Bordere, 2001; Phinney & Alipuria, 1996; Poston, 1990; Renn, 2004; Sparrold, 2003; Williams et al., 1996)	**School Culture** (Teachers and Counselors) (Jackman, Wagner & Johnson, 2001; Noguera, 2003)	**Counselor Awareness** (Jackman, Wagner & Johnson, 2001; Harris, 2002; Nishimura, 1998) **Representation of Faculty and Administrators** (Root, 1996)
Environment	**Social Context** (Kerwin & Ponterotto, 1993; Kilson, 2001; Miller, 1992; Renn, 2004; Rockquemore & Brunsma, 2002; Root, 1990; Wallace, 2001)	**Rules for Interaction** (Morrison & Bordere, 2001; Phinney & Alipuria, 1996)	**Campus Peer Culture** (Miller, 1992; Renn, 2004; Renn & Arnold, 2003; Sparrold, 2003)
Involvement	**Religion** (Kerwin, Ponterotto, Jackson & Harris, 1993)		**Student Organizations** (Maillard, 1999; Mukoyama, 1998; Renn, 2004; Williams et al., 1996)
Politics	**Political Empowerment** (Diaz, 1999; Harris, 1999; Maillard, 1999)		**Practices/Paradigm** (Calleroz, 2003)
Identity	**Self Identification, Racial/Ethnic Identity** (Bashi and McDaniel, 1997; Gaskins, 1999; Harris, 1999; Jaret & Reitzes,1999; Kilson, 2001; Maillard, 1999; Morrison & Bordere, 2001; Phinney & Alipuria, 1996; Renn, 2004; Rockquemore & Brunsma, 2002; Wallace,	**Discrimination** (Herman, 2004) **Affirmation and Belonging** (Spencer et al., 2000)	**Acceptance by Others** (Sparrold, 2003)

	2001) **Physical Characteristics** (Kerwin & Ponterotto, 1993; Morrison & Bordere, 2001) **Hypodescent, Terminology** (Diaz, 1999; Nakashima, 1992; Root, 1992b, 1996) **Authenticity** (Diaz, 1999; Hobson, 1999; Maillard, 1999; Randolph, 1999; Renn, 2004; Rockquemore & Brunsma, 2002)
Personal	**Self-Esteem** (Herman, 2004; Sparrold, 2003) **Life Stressors** (Renn, 2004; Sparrold, 2003) **Gender** (Allman, 1996; Kich, 1996; Streeter, 1996; Twine, 1996)

Positional

People are learning about themselves and adjusting to their environment continuously. Nancy Schlossberg (1995) refers to this process for college students through her theory of adults in transition. The *positional* dimension refers to the racial categorization of the individual in multiple environments. The category, lifespan, identifies social alignment (Diaz, 1999; Evans, 1999; Kich, 1992; Randolph, 1999) as a factor because racial categories already exist and from the time you begin interacting with society, they begin aligning you with one of the racial categories. Multiracial college students may have varying experiences depending on the racial diversity of their campus (Evans, 1999, Laura, 1999, Miller, 1992), much of which depends on the size and geographic location of the university (Renn, 2004). Renn (2004) identifies the most racially diverse campuses to be in the northeast and western states. Not surprisingly, the major cities in these regions are also identified as having the highest percentages of multiracial people (Farley, 2001; Wong, 1999). As students position themselves in

college, their transition to the college environment is impacted by the demographics of their primary and secondary school experiences. Positive and negative experiences during their youth will play a role in their development of an interpersonal self-concept within the college environment.

Resources

There is a saying among people of color that "money can have a Whitening effect" meaning that social access and acceptability are increased with wealth. The dimension *resources* refers partially to this notion. According to Pascarella and Terenzini (1991), change in socioeconomic status is often an outcome of a college education. In the college environment, the socioeconomic status of students plays a role in the types of relationships they foster, their behavior, and their ability to gain access and acceptance in a variety of social networks (Herman, 2004). Renn (2004) and Williams and colleagues (1996) refer to the institution's ability to provide the type of educational resources to compliment and contribute to the adjustment of multiracial college students. These resources are not necessarily correlated with wealth, but represent social capital for multiracial students built, in part, through finding faculty who do research on multiracial students and teachers from multiracial backgrounds who integrate a multiracial perspective in their courses.

Information

This dimension refers to the information available or not available to multiracial students. Growing up, there are a number of societal influences that contribute to one's perception of self and identity. These influences can take the form of visual representations in the media and popular culture (Fernandez, 1996; Miller, 1992), new

ways of identifying multiracial people (Renn and Lunceford, 2004), and an emergence into the dialogue on race (VanKirk, 2003). These factors not only influence multiracial students themselves, but also the way their single-race classmates define them. Lack of information or misinformation is commonplace when discussing multiracial people.

Throughout the educational experience, from Kindergarten through college, integrating into the curriculum experiences, images, readings, dialogue and specific courses about multiracial people are positive factors (Kerwin & Ponterotto, 1993; Morrison & Bordere, 2001; Williams, 1996). Gaining information about one's own heritage is common across racial groups as they develop a positive racial identity; multiracial students are no exception. Along with curricular factors influencing their self-concept, educational programs (Renn, 2004; Renn & Arnold, 2003) and heritage exploration for multiracial students (Kerwin & Ponterotto, 1993; Morrison & Bordere, 2001; Wardle, 1996) can also be beneficial. Multiracial students are unique in that exploring their multiple heritages may take a significantly longer period of time than that needed by their single-race peers. Opportunities for this type of exploration, however, often do not exist.

Relationships

Relationships as a dimension of interpersonal self-concept aims to identify the influencing relationships of family members, parents, teachers, counselors, faculty and administrators. Typically these are adults in a position of power/influence with the exception of younger family members or in the case of non-traditional age students. The influence of parents and family instill in the student from a young age what their racial identity is; and in cases where a single-race has been dominant, exploration of heritage

can cause conflict in this relationship (Jackman, Wagner & Johnson, 2001; Poston, 1990; Renn, 2004; Sparrold, 2003). Family can also be a source of support and guidance towards a more positive understanding of a mixed race heritage.

For college students, family remains a constant influence, although other individuals may substitute for them on campus. Many of the people who substitute in parental roles, however, do not have experience working with multiracial students which may cause assessment problems, especially with psychological counselors (Jackman, Wagner & Johnson, 2001; Harris, 2002; Nishimura, 1998). Faculty and administrators who share a similar background with multiracial students can understand better their needs; these individuals can have many roles including secondary counseling support and mentorship, and can become role models (Root, 1996). Relationships are key to the adjustment of multiracial students in the college environment. Mismanagement of these relationships can expose the student to a variety of experiences (Nishimura, 1998), both difficult and reinforcing.

Environment

The context that defines social interactions is referenced by all of the resolution approach theories as impacting the saliency of identity including Renn's (2000) situational identity patterns. This dimension is labeled *environment* to encompass three factors: the social context across the life span, rules for interaction in K-12, and campus peer culture in college. In early childhood, development consists of learning how to sort, categorize, and follow the rules for peer interaction (Morrison & Bordere, 2001). Based on how children sort themselves (boys vs. girls, dark hair vs, light hair, etc.), they

develop peer-based rules for interacting that exclude some children from friendship groups because of differences; this is a common experience for multiracial children.

In the higher education literature, this type of group interaction is referred to as campus peer culture (Renn and Arnold, 2003). As multiracial students adjust to the university environment, they become sensitive to the social rules that exist as they attempt to gain acceptance (Sparrold, 2003). The peer culture, according to the ecological model, consists of different types of microsystems on a particular campus, such as student organizations, social support networks and residence halls (Renn, 2004). Some campuses have a culture that supports and encourages embracing differences; however, the peer culture on campus is often defined by the diversity of the student body and the types of experiences they have had with multiracial peers (Williams et al., 1996). The university environment as a social context can bring to the forefront a number of different identities as important or more valued than others. The adjustment factors within the environment dimension provide a context for a multiracial student's interpersonal self-concept. At the same time, these factors can reject notions of mixed race, making individuals choose a heritage (Renn, 2004).

Involvement

In college, there are organizations for just about everything: religion, culture, Greek life, hobbies, academic interests, club sports. The *involvement* dimension is important for the social alignment of multiracial students because it can lead to participation in self-devised support microsystems (Mukoyama, 1998; Renn, 2004). Multiracial students usually join cultural organizations so they can relate with others like themselves. On the other hand, students may choose not to join organizations because

they are afraid of rejection by the group based on their looks or a lack of knowledge about their culture by others in the group (Maillard, 1999). Students also may join student organizations for alternative reasons, like peer pressure or developing a social network (Renn, 2004). The bi-ethnic study by Mukoyama (1998) identified involvement in a cultural organization as an important positive factor in adjustment of young adults.

Involvement in organizations for many people begins with religion in early childhood; for people of color, religion is often an important part of their culture. Some religions do not accept the intermixing of races, citing it as unnatural and against God's division of the races (Glass & Wallace, 1996). On the other hand, some religions encourage an acceptance of the person regardless of race, placing emphasis on religious identity. Kerwin, Ponterotto, Jackson and Harris (1993) studied six families and identified religion as a major factor in aiding overall adjustment. College students with a religious background can continue to rely on it as they deal with the university environment through campus religious organizations. When organizations do not exist that satisfy the needs of multiracial college students, they may develop new organizations, a growing phenomenon across the country (Williams et al., 1996).

Politics

The dimension of *politics* is mostly connected to empowerment of the individual and the community as a whole. To racially identify as multiracial and maintain that identity in personal relationships and as a collective is a political act. Teachers, counselors and peers, whether in grade school or in college, prefer to categorize and refer to multiracial individuals as only being from one group (Harris, 1999). As explained in earlier in this chapter, the historical roots of racial categories and the practice of

hypodescent are intended to maintain the political superiority of the dominant groups in society. The expansion of the OMB racial and ethnic categories politically recognizes the existence of multiracial individuals. Diaz (1999) mentioned that through Directive 15, the recognition of multiracial people would give community to this group.

On college campuses, multiracial students are challenged to make politically-charged choices such as groups to identify with and taking a position on issues. Maillard (1999) gives two examples of student adjustment to these political intersections through community politics and affirmative action. First, students who come to college with a mixed identity are challenged to understand the identity politics played out on campuses through single-race student organizations. Physical characteristics factor into your acceptance by a group and their perception of your ability to understand their "struggle." Students of color often fight for the discrete resources allotted for them. This can result in student civil unrest, as it did at the University of Michigan with the Black Action Movements of the 1960's and late 1980's. Adjusting to these segregated political issues based on racial identification impacts the political empowerment of multiracial students.

The second example is affirmative action policies at universities. At some universities, students can mark more than one race but are coded into the system according to a racial hierarchical coding system, basically a variation of hypodescent. Based on this coding system, access to scholarships, fellowships, admissions, and a variety of other retention/support/academic programs can be determined. This type of institutionalized hypodescent can be an initial source of interpersonal self-concept problems faced by students, because it categorizes multiracial individuals into a single race and thus may result in misrepresentation of the individual and the community of

color. Multiracial students may, therefore, be disempowered as a group and turn to the formation of various student groups to advocate for their specific needs (Williams et al., 1996). The dimension of politics may become more pertinent to the interpersonal self-concept of multiracial students as more students begin to identify as multiracial.

Identity

Identity is paramount to understanding multiracial interpersonal self-concept in the college environment and in many ways can be the focal point from which all other dimensions develop. Racial identification has been mentioned in almost every major study as being influential to the outcomes they were measuring (e.g., Phinney & Alipuria, 1996; Renn, 2004; Wallace, 2001). Racial identity as described by resolution theory is an important factor in how students adjust to the university environment (e.g., Root, 1990; Kilson, 2001; Wallace, 2001). Unfortunately, university environments do not always encourage multiracial students to explore the racial identification that is best for them.

Many times the factors of hypodescent, physical characteristics, and the racial paradigm under which the university operates define for multiracial students how they should identify and interact with their environment (Calleroz, 2003; Diaz, 1999; Kerwin & Ponterotto, 1993). Authenticity is often associated with physical characteristics (Maillard, 1999), making some multiracial students feel they have to prove they share cultural ties with similar students. Multiracial students are constantly questioned concerning the authenticity of their claims of belonging to multiple racial groups or even the claim of simply being a student of color (Hobson, 1999; Maillard, 1999; Randolph, 1999; Renn, 2004; Rockquemore & Brunsma, 2002).

Another dimension of identity associated with the interpersonal self-concept of multiracial college students is acceptance by others (Sparrold, 2003). Finding acceptance in college is sometimes made more difficult by discrimination faced by students as they were growing up (Herman, 2004). During the youth, of multiracial students, affirmation of their identities has lasting effects on their psychological need to belong (Spencer et al., 2000); it can be assumed, based on the K-12 research, that their experiences regarding identity effect their ability to manage the influences of campus peer culture.

Personal

The *personal* dimension refers to the adjustment factors of self-esteem and life stressors. The self-esteem of multiracial students from K-12 through college has a role in the development of a positive self-perception (Herman, 2004; Sparrold, 2003). This is related to both positive and negative aspects of factors in the other dimensions such as authenticity, peer culture, and societal and school influences. Renn (2004) and Sparrold (2003) indicate that the general experiences of multiracial students include life stressors not experienced by single-race students. These stressors are, at points, unidentifiable because multiracial people have normalized them as part of their lived experience.

Another area of the personal dimension that affects interpersonal self-concept is gender; our society defines dimensions of identity differently for men and women (Streeter, 1996). Gender plays a role in self-esteem and the types of stressors experienced by multiracial people (Allman, 1996). Streeter (1996) refers to the exotic references ascribed to multiracial women which weigh on self-esteem by narrowing references of inclusion in popular culture. If multiracial college students recognize these

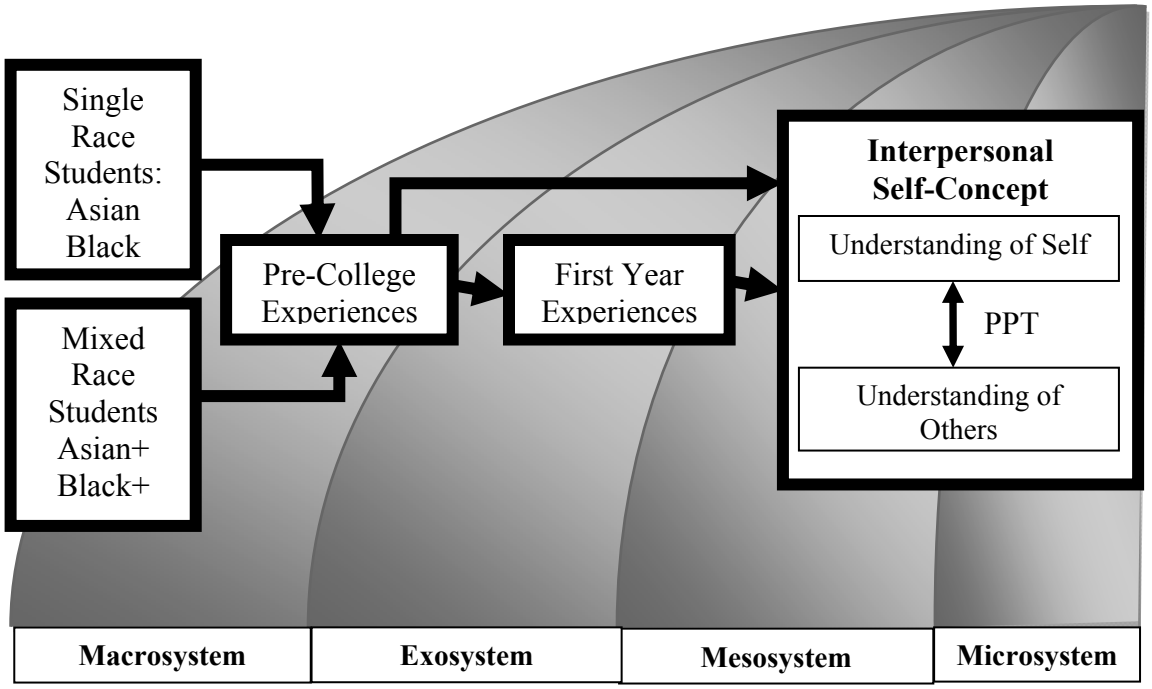
personal dimensions and seek to address them through counseling, they often encounter counselors who lack understanding of their issues (Nishimura, 1998).

Conceptual Model

The conceptual model illustrated in Figure 2.1 represents the major aspects of the multiracial experience pre-college and during the first year of college compared to those of their single race peers. The literature outlined in this chapter on multiracial students highlighted some of the various aspects that contribute to their interpersonal self-concept. The literature on single race students focuses primarily on the educational experiences of African Americans and Asian Americans. The contributing factors to the interpersonal self-concept of these single race groups may be similar to those for some multiracial students because a mixed race background does not automatically denote a mixed race identity.

The arcs in the figure represent the four ecological systems (micro-, meso-, exo-, macro-) defined by Brofenbrenner's (1979) and Renn's (2004) applied to the college environment. These systems represent another dimension of a student's college experience not exclusively connected to the college environment but rooted in individual experiences and interactions as much as it is shaped by societal dynamics. Macrosystem experiences are to some degree measured by the race factor itself, the historical categorization of race and its implications for identification as single or mixed race. The ecological representation is important because a student's interpersonal self-concept is measured theoretically by their ability to negotiate all of these systems at once.

Figure 2.1 Conceptual Model for Interpersonal Self-Concept



CHAPTER 3

METHODOLOGY

This chapter describes the research design and methodology used to answer the research questions:

1) What are the factors influencing the interpersonal self-concept of multiracial college students (Black and Asian student subgroups)?
2) Based on pre-college and first year college experiences, how do multiracial students differ in their interpersonal self-concept from single race students?

This study will also examine the following sub-questions in order to provide a more complete picture of the interpersonal self-concept of multiracial college students.

3) Does a significant difference exist between multiracial students and single race students in their racial attitudes?
4) Does being single race or multiracial define a significant difference between how students understand themselves and understand others (interpersonal self-concept)?

Date Sources and Data Collection

The data used in this study comes from the Cooperative Institutional Research Program (CIRP) Freshman Survey, a national survey administered by the Higher Education Research Institute (HERI) at the University of California at Los Angeles to give practitioners and faculty a comprehensive overview of students' readiness for

college, their values and beliefs, perspectives on diversity, politics, and a broad, baseline portrait of students as they enter college. The CIRP is administered to more than 400,000 incoming freshman at more than 600 colleges and universities nationwide.

These institutions self-selected to participate in the CIRP and yielded a wide spectrum of students for this study. The CIRP survey was usually administered at freshman orientation prior to starting the academic year by paper and pencil, on the web, or a combination of the two; some institutions, however, administered the survey to students during classes designed for first year students. Campuses used a variety of incentives for students developed independently by each institution.

At the end of the first year, a subset of these schools also administered the Your First College Year (YFCY) study in 2005, a newer survey within HERI first administered nationally in 2002 which repeats nearly two-thirds of the items from the CIRP. The 2005 YFCY data set includes 203 four-year institutions and more than 26,000 first-time, full-time students. These students are used in this longitudinal study. Respondents come from both public and private four-year institutions that also participated in the 2004 CIRP. The mean institutional response rate for the 2005 YFCY was 48.2 percent. The CIRP is valuable because it provides a snapshot of students as they enter college and, combined with the YFCY survey, allows for the longitudinal assessment of how college impacts student experiences and perspectives in the first year of college.

Sample

The sample includes students from the 2004-05 CIRP and YFCY data sets. I look at three sets of multiracial populations; 1) 485 (15.5%) African American/Black and another race (Black+); 2) 464 (19.4%) Asian American/Pacific Islander and another race

(Asian+); and all combinations of mixed race students (2093) in the sample, which includes all Black+ (23.2% of mixed students) and Asian+ (22.2%) students. I examine Black+ and Asian + populations specifically, because these two groups account for the largest percentage of multiracial "mixes" and are the focus of the majority of the available research (Root, 1996). In addition to these mixed race groups, a sample of 2647 Black only and 1927 Asian only students are used as comparison groups.

Table 3.1 Sample Size

Race	*n*	%	% of All Mixed Race
Black+	485	15.5	23.2
Black Only	2647	84.5	
Total Black	3132		
Asian+	464	19.4	22.2
Asian Only	1927	80.6	
Total Asian	2391		
Total Mixed Race	2093		

Note: The racial categories are not mutually exclusive. 48 cases are replicated in Black+ and Asian+ because each of these cases is both Black and Asian. The Total Mixed Race sample includes all cases in the dataset where more than one race was selected.

The 48 Cases

This study only looked at mixed race students who fit into two major categories; Asian and another race and Black and another race. However, when recoding race it was discovered that 48 students in this study were *both* Asian and Black. These 48 cases are significant because one of the points of discussion on the importance of studying mixed race students is that they are often forced into single race categories or excluded altogether. The exclusion or inclusion of various mixed race subsets is dependent on the parameters of race set forth in a particular study; the baseline for this study is students who are *either* Black or Asian and another race. Given this, the 48 cases are included in both the Asian plus and Black plus racial groups.

Dependent Variable

This study examines one dependent variable, interpersonal self-concept, which is a factor developed from two independent items: "understanding of self," and "understanding of others." These two items were originally a part of a three-item factor in the YFCY dataset which included "emotional health;" however, the third item does not theoretically connect with this study and was therefore dropped. Once the "emotional health" item was dropped from the interpersonal self-concept factor, the remaining two items had a Chronbach alpha loading of .599 for the Black and Black+ groups and .647 for the Asian and Asian+ groups.

Given the concentration of research on racial identity development and formation among mixed race college students, choosing this dependent variable provided a non-race focused way to understand mixed race students, thus expanding our knowledge of this community. The research and theories guiding this study have shown that multiracial students' identity is a major part of their college experience; however, previous studies rarely focused on aspects of the pre-college and first year experience that contribute to an individual's internal understanding of self and peers.

This dependent variable was also chosen because of its complimentary interdependent properties (as shown in Figure 2.1) through which to view students. As described in the literature, the experience of mixed race individuals in general is complicated and, for many, racial identity is more aptly described as racial negotiation based on a number of environmental and situational factors. The constant process of racial negotiation for mixed race students may complicate their own understanding of self (Root, 1992, 1996; Renn, 2004).

Table 3.2 Interpersonal Self-concept Factor Analysis

	Factor Loadings			
Variables	**Black+ and Black Only Pre-Test 04**	**Black+ and Black Only Post 05**	**Asian+ and Asian Only Pre-Test 04**	**Asian+ and Asian Only Post 05**
Self Understanding	.582	.654	.632	.692
Understanding of Others	.582	.654	.632	.692
	Descriptive Statistics			
Cronbach's Alpha	.506	.599	.571	.647
KMO	.500	.500	.500	.500
N	3068	3082	2366	2383
P	***	***	***	***

Note. Index: 1= Lowest 10%, 2= Below average, 3= Average, 4= Above average, 5= Highest 10%.
***p≤.001

Independent Variables

The independent variables were chosen to provide the best portrait of the mixed race college student population. The demographic variables are a base for developing a more complete background on this student population to provide for more accurate predictions as to how experiences influence mixed race conceptions of self in comparison to their single race peers.

Pre-College Experience Measures: One of the major barriers to determining the ultimate outcomes associated with college is that students have had many meaningful and influential experiences prior to starting college. It is important to take into consideration the pre-college experiences of students to determine the net effect college has on their interpersonal self-concept (Pascarella and Terrenzini, 1991). Pre-college experiences are

controlled for in this study by surveying students at college entry through the CIRP study through questions about their perspectives related to diversity and interpersonal self-concept. These items include race, gender, parents' income, parents' education and their previous experiences with diversity.

Three independent variables were recoded to produce six independent variables (Table 3.3). Mother's Education was recoded to produce two dichotomous variables: Some High School/High School Graduate and Some College; the referent group for each of these is (completion of) College. Racial Composition of Neighborhood and Racial Composition of High School were recoded in the same way: Mostly/All White and Mostly/All Racial/Ethnic Minorities; the referent group for each of these were neighborhoods or high schools that were equally (50/50) White and Ethnic Minorities.

While the literature suggests that race plays a role in the interpersonal self-concept of individuals, it is not clear whether being one race or another or more than one race is statistically significant. In order to control for this, comparison groups of mixed race Black and mixed race Asian students were dummy coded to identify the impact of mixed race and for comparisons across these two racial groups.

First Year College Measures: The independent variables in the first college year primarily focus on the students' experiences with diversity, race and interactions with diverse peers on campus. There variables were all developed by factor analysis. Two variables controlled for in this study are the students' self-rating of Positive Race/Ethnic Relations and Racial/Ethnic Interactions of a Negative Quality (Tables 3.4 and 3.5). These are important because according to Root (1992) the interactions students of color have based on their race influence the formation of their racial identity and can even

trigger the movement from one phase of development to another. Although these experiences are interactions with peers, they influence how multiracial students understand themselves and impact their understanding of others.

Another first year college variable controlled for was Racial/Ethnic Composition of Environment. This variable is important because the social interactions with diverse peer groups inform a students' development of interpersonal self-concept. Additional variables controlled for during the first year college experience include Campus Racial Climate, Satisfaction with College, Leadership and Community Orientation, Informed Citizen, Sense of Belonging, and Self-Assessed Cognitive Development.

Table 3.3 Summary of Variables and Indices

	Variable Name	Variable Type	Scale Range
Dependent Variable	Interpersonal Self-Concept	Scaled index, five items	1=Lowest 10% to 5=Highest 10%
Independent Variables	Pre-college Characteristics		
Block 1	Student's gender	Dummy coded	0=Male, 1=Female
	Student's race/ethnicity	Dummy coded	Black=0, Black+=1 Asian=0, Asian+=1
	Mother's Education (Some HS/HS Graduate and Some College)	Dummy coded	College=0, Some HS/HS graduate=1 College=0, Some College=1
	STEM Majors	Dummy coded	Non-Stem Major=0, STEM Major=1
Block 2	Pre-college Attitudes on Diversity		
	Racism is no longer a problem	Single Item, categorical	Disagree strongly=1 to Agree strongly=4
	Prohibit racist speech on campus	Single Item, categorical	Disagree strongly=1 to Agree strongly=4
	No more need for affirmative action in college admissions	Single Item, categorical	Disagree strongly=1 to Agree strongly=4
Block 3	Pre-college Interaction with Diverse Peers		
	Racial composition of neighborhood (Racial Ethnic Minority and White)	Dummy coded	50/50 Minority and White=0 All or nearly all racial/ethnic minorities=1 50/50 Minority and White=0 All or nearly all White=1
	Racial composition of high school (Racial Ethnic Minority and White)	Dummy coded	50/50 Minority and White=0 All or nearly all racial/ethnic minorities=1 50/50 Minority and White=0 All or nearly all White=1

3.3 Summary of Variables and Indices (cont'd)

	Variable Name	Variable Type	Scale Range
Block 4	First Year Diversity Experiences		
	Positive Race/Ethnic Relations	Scaled index, three items	1= Not at all to 3= Frequently
	Racial Interactions of a Negative Quality	Scaled index, five items	1= Never to 5= Very often
	Campus Racial Climate	Scaled index, four items	1= Disagree strongly to 4= Agree strongly
	Race/Ethnic Composition of Environment	Scaled index, six items	1= N/A, 2=All or nearly all racial/ethnic minorities to 5= All or nearly all White
Block 5	First Year Community Orientation		
	Leadership and Community Orientation	Scaled index, four items	1= Not important to 4= Essential
	Informed Citizenship	Scaled index, five items	1= Much weaker to 5= Much stronger
Block 6	First Year Self Assessment		
	Satisfaction with College	Scaled index, five items	1= Very dissatisfied to 5= Very satisfied
	Sense of Belonging	Scaled index, four items	1= Disagree strongly to 4= Agree strongly
	Self-Assessed Cognitive Development	Scaled index, five items	1= Much weaker to 5= Much stronger

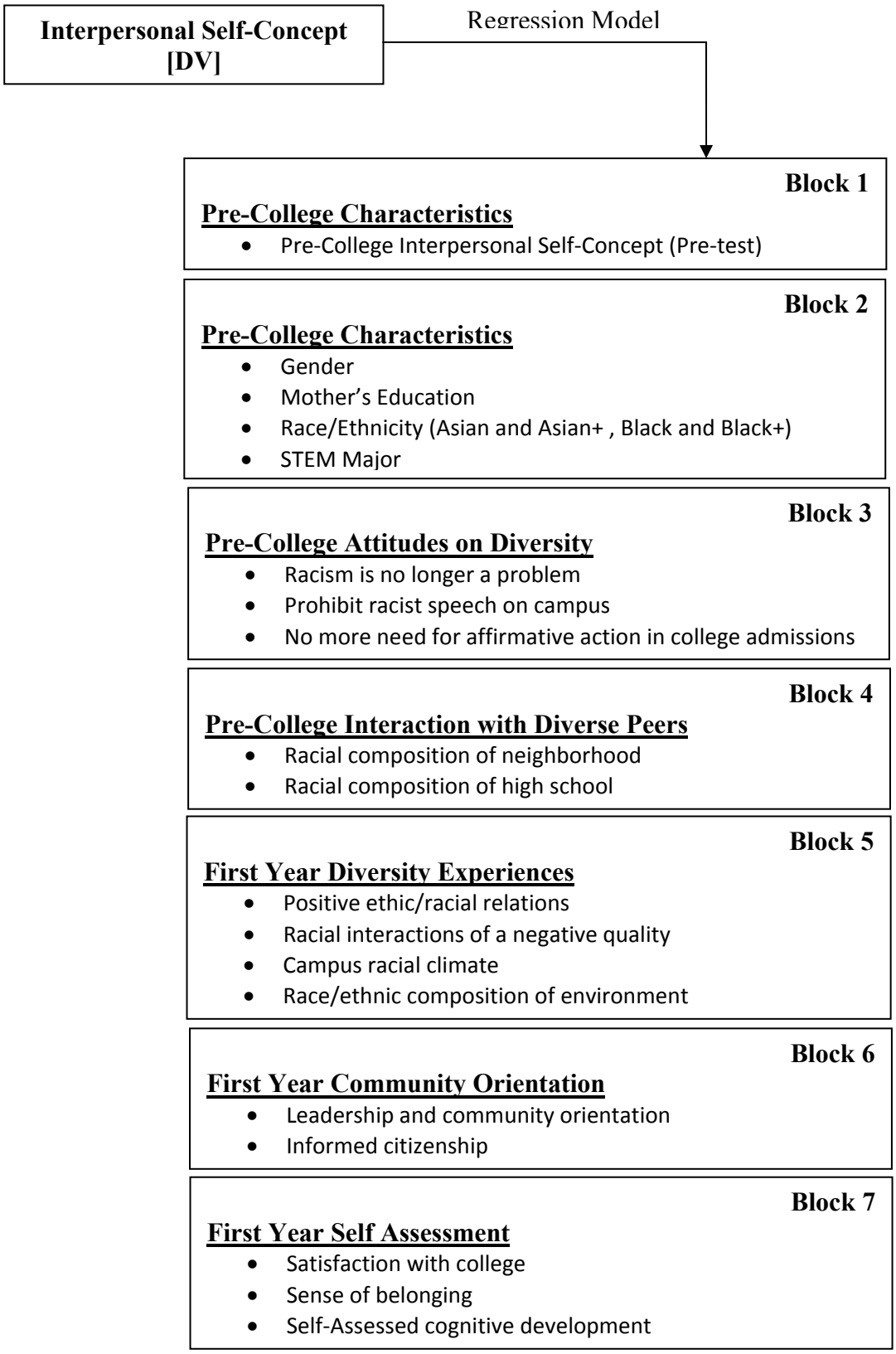
Conceptual Regression Model

The conceptual regression model depicted in Figure 3.1 illustrates the block regression models used to explore the interpersonal self-concept between mixed race and single race students. The major blocks of independent variables include both pre-college and first year experiences that influence mixed race and single race students' interpersonal self-concept. Pre-college environments and experiences play a significant role, confirming previous findings on the development of mixed race identity and its likelihood to impact on interpersonal self-concept.

Mixed race and single race students enter college from diverse backgrounds that influence their behaviors and attitudes in college. Racial demographics of neighborhoods and friendship groups, cultural influence of family, and socioeconomic status are among the experiences that affect students' preconceived notions of who they are and how they view those around them. These perceptions are complicated by the college environment; both mixed and single race students in their first year experience new ideas, ways of thinking and experiences.

The interpersonal self-concept of mixed and single race students is presented as intertwined understandings of self and others. In theory, mixed race students' understanding of self may be more complicated in comparison to their single race peers because they are constantly confronting their racial identity based on environmental influences. Conversely, the understanding of others for mixed race students may also be more complex than their single race peers because of their perpetual interactions with others dissimilar to them.

Figure 3.1 Conceptual Regression Model



Data Preparation

There are nine single race categories in the YFCY dataset. For this study, the mixed race categories developed included Asian+ and Black+. In the Asian+ group, all respondents that selected Asian and one or more of the other eight racial categories were included; the same process was used for the Black+ group. As stated earlier, in both the Asian+ and Black+ there are 48 replicated cases (e.g. students who are of mixed heritage with a combination that includes at least both Black and Asian).

The next step was data reduction conducted through factor analysis. This process was selected to develop new variables that conceptually represented numerous items within the survey extracted using the Principal Axis Factoring method in SPSS 16.0. A varimax rotation was implemented to yield factors uncorrelated with one another. These factors were scaled using the regression method. The scores produced have a mean of 0 and variances equal to the squared multiple correlation between the estimated factor scores and the true factor values (Table 3.3).

An exploratory factor analysis was conducted that represented numerous constructs on diversity and first year college experience. The items entered into the factor analysis were based on preliminary factors developed by HERI for the entire CIRP and YFCY datasets. Each factor was examined for strength of items within the factor. The factor loadings for two factors (Leadership and Community Orientation, and Self-Assessed Cognitive Development) had individual items that were weak and had no theoretical connection to the study and therefore were eliminated from the factor. In addition, two factors (Informed Citizenship, and Satisfaction with College) split into two factors. In each of these cases the factor that was most representative of the constructs to

be studied was chosen. A subsequent confirmatory factor analysis was conducted for each of the four racial groups and described in detail in Tables 3.5-3.13. The factors for combined mixed and single race groups were used in the succeeding multivariate analysis.

Table 3.4 Factor Analysis Descriptive Statistics

	Black All				Asian All			
Factors	***N***	**Min.**	**Max.**	**Std. Dev.**	***N***	**Min.**	**Max.**	**Std. Dev.**
Interpersonal Self-Concept 04 Pre	3068	-2.97	1.20	.71	2366	-2.46	1.42	0.76
Interpersonal Self-Concept 05 Post	3082	-3.14	1.29	.77	2383	-3.12	1.40	.80
Positive Race/Ethnic Relations	2973	-1.71	1.65	.96	2349	-2.65	1.49	.94
Race Ethnic Interactions of a Negative Quality	2998	-.80	3.07	.90	2361	-.91	3.09	.90
Campus Racial Climate	3011	-1.03	2.61	.82	2371	-1.26	2.75	.80
Race/Ethnic Composition of Environment	3044	-1.48	2.72	.85	2374	-1.92	2.04	.84
Leadership and Community Orientation	3015	-1.03	2.61	.82	2372	-2.08	2.01	.92
Informed Citizenship	2976	-3.75	1.86	.96	2369	-3.43	1.96	.96
Satisfaction with College	2951	-2.72	1.53	.92	2361	-2.72	1.68	.92
Sense of Belonging	2993	-3.01	1.47	.92	2361	-3.01	1.65	.93
Self-Assessed Cognitive Development	2955	-5.40	1.98	.87	2358	-5.42	2.14	.87

Table 3.5 Positive Race/Ethnic Relations

	Factor Loadings					
Variables	**Black+**	**Black Only**	**Black All**	**Asian+**	**Asian Only**	**Asian All**
Had intellectual discussions outside of class	.839	.846	.849	.849	.782	.795
Shared personal feelings and problems	.807	.817	.820	.785	.785	.786
Dined or shared a meal	.797	.789	.808	.670	.763	.746
Socialized or partied	.793	.803	.797	.677	.742	.730
Had meaningful and honest discussions about racial/ethnic issues outside of class	.779	.789	.792	.686	.697	.696
Studied or prepared for class	.774	.764	.769	.712	.658	.665
Attended events sponsored by other racial/ethnic groups	.644	.679	.676	.522	.543	.538
Socialized with someone of another racial/ethnic group	.450	.534	.535	.517	.446	.461
Descriptive Statistics						
Cronbach's Alpha	.904	.912	.913	.865	.869	.868
KMO	.913	.928	.929	.889	.905	.903
N	465	2508	2973	456	1893	2349
P	***	***	***	***	***	***

Note. Index: 1= Not at all, 2= Occasionally, 3= Frequently. ***p≤.001

Table 3.6 Racial/Ethnic Interactions of a Negative Quality

	Factor Loadings					
Variables	**Black+**	**Black Only**	**Black All**	**Asian+**	**Asian Only**	**Asian All**
Had tense, somewhat hostile interactions	.863	.807	.816	.790	.832	.822
Felt insulted or threatened because of race/ethnicity	.767	.695	.714	.773	.724	.735
Had guarded/cautious interactions	.673	.723	.708	.741	.653	.672
Descriptive Statistics						
Cronbach's Alpha	.807	.783		.809	.776	.784
KMO	.696	.699	.699	.715	.687	.694
N	469	2529	2998	457	1904	2361
P	***	***	***	***	***	***

Note. Index: 1= Never, 2= Seldom, 3= Sometimes, 4= Often, 5= Very often. ***p≤.001

Table 3.7 Campus Racial Climate

	Factor Loadings					
Variables	**Black+**	**Black Only**	**Black All**	**Asian+**	**Asian Only**	**Asian All**
I have been singled out because of my race/ethnicity, gender or sexual orientation	.668	.686	.683	.727	.640	.656
There is a lot of racial tension on this campus	.690	.676	.664	.509	.640	.612
I have heard faculty express stereotypes about racial/ethnic groups in class	.612	.507	.520	.535	.557	.554
Descriptive Statistics						
Cronbach's Alpha	.654	.651	.651	.612	.639	.633
KMO	.656	.642	.645	.627	.650	.648
N	472	2539	3011	461	1910	2371
P	***	***	***	***	***	***

Note. Index: 1=Strongly disagree, 2= Disagree, 3= Agree, 4= Strongly Agree. ***p≤.001

Table 3.8 Race/Ethnic Composition of the Environment

	Factor Loadings					
Variables	**Black+**	**Black Only**	**Black All**	**Asian+**	**Asian Only**	**Asian All**
Friends you socialize with in college	.631	682	.690	.690	.719	.718
Your informal study groups	.689	.695	.678	.701	.683	.684
Clubs/organizations to which you belong	.627	.672	.670	.575	.591	.596
Descriptive Statistics						
Cronbach's Alpha	.677	.716	.713	.656	.687	.688
KMO	.667	.682	.681	.663	.668	.669
N	480	2564	3044	459	1915	2374
P	***	***	***	***	***	***

Note. Index: 1= N/A, 2= All or nearly all racial/ethnic minorities, 3= Mostly racial/ethnic minorities, 4= Half White and half racial/ethnic minorities, 5= Mostly White, 6= All or mostly all White. ***p≤.001

Table 3.9 Leadership and Community Orientation

	Factor Loadings					
Variables	**Black+**	**Black Only**	**Black All**	**Asian+**	**Asian Only**	**Asian All**
Helping to promote racial understanding	.730	.720	.722	.758	.775	.772
Participating in a community action program	.677	.709	.702	.746	.722	.727
Improving the health of minority communities	.740	.665	.674	.756	.699	.711
Becoming a community leader	.693	.660	.666	.634	.651	.686
Improving my understanding of other countries and cultures	.599	.640	.633	.657	.694	.648
Influencing social values	.521	.565	.559	.581	.586	.584
Descriptive Statistics						
Cronbach's Alpha	.822	.822	.821	.844	.843	.843
KMO	.840	.858	.856	.863	.864	.865
N	473	2542	3015	463	1909	2372
P	***	***	***	***	***	***

Note. Index: 1= Not important, 2= Somewhat important, 3= Important, 4= Essential. ***p≤.001

Table 3.10 Informed Citizenship

	Factor Loadings					
Variables	**Black+**	**Black Only**	**Black All**	**Asian+**	**Asian Only**	**Asian All**
Understanding of national issues	.937	.939	.938	.925	.931	.930
Understanding of global issues	.875	.852	.855	.903	.919	.916
Understanding of problems facing your community	.556	.604	.596	.598	.564	.570
Descriptive Statistics						
Cronbach's Alpha	.825	.834	.832	.845	.841	.841
KMO	.644	.662	.659	.661	.645	.648
N	466	2510	2976	461	1908	2369
P	***	***	***	***	***	***

Note. Index: 1= Much weaker, 2= Weaker, 3= No change, 4= Stronger, 5= Much stronger. ***p≤.001

Table 3.11 Satisfaction with College

	Factor Loadings					
Variables	**Black+**	**Black Only**	**Black All**	**Asian+**	**Asian Only**	**Asian All**
Overall sense of community among students	.801	.842	.835	.878	.876	.876
Campus social activities	.746	.776	.771	.712	.759	.749
Overall college experience	.732	.768	.765	.761	.719	.727
Descriptive Statistics						
Cronbach's Alpha	.803	.836	.832	.825	.827	.826
KMO	.710	.722	.721	.704	.705	.706
N	462	2489	2951	459	1902	2361
P	***	***	***	***	***	***

Note. Index: 1=Very dissatisfied, 2=Dissatisfied, 3= Neutral, 4= Satisfied, 5= Very satisfied. ***p≤.001

Table 3.12 Sense of Belonging

Variables	Black+	Black Only	Black All	Asian+	Asian Only	Asian All
			Factor Loadings			
I feel I am a member of this college	.814	.836	.832	.882	.864	.868
I feel I have a sense of belonging to this college	.809	.822	.820	.844	.813	.820
I see myself as part of the campus community	.759	.680	.692	.774	.730	.740
			Descriptive Statistics			
Cronbach's Alpha	.835	.820	.822	.870	.842	.848
KMO	.724	.704	.707	.732	.717	.720
N	468	2525	2993	460	1901	2361
P	***	***	***	***	***	***

Note. Index: 1=Strongly disagree, 2= Disagree, 3= Agree, 4= Strongly Agree. ***p≤.001

Table 3.13 Self-Assessed Cognitive Development

Variables	Black+	Black Only	Black All	Asian+	Asian Only	Asian All
			Factor Loadings			
General knowledge	.632	.650	.647	.792	.663	.650
Ability to make your own decisions	.586	.573	.579	.651	.626	.629
Ability to conduct research	.619	.572	.575	.505	.580	.574
Knowledge of a particular field or discipline	.591	.565	.565	.542	.564	.546
Ability to get along with others	.516	.560	.557	.451	.548	.543
Knowledge of people from different races/cultures	.539	.546	.546	.381	.544	.519
			Descriptive Statistics			
Cronbach's Alpha	.749	.747	.747	.701	.756	.745
KMO	.786	.788	.789	.733	.783	.777
N	465	2490	2955	458	1900	2358
P	***	***	***	***	***	***

Note. Index: 1= Much weaker, 2= Weaker, 3= No change, 4= Stronger, 5= Much stronger. ***p≤.001

Limitations

There are four specific limitations to this study. First, as with the majority of quantitative studies on multiracial students, the size of the mixed race subgroups in this sample is small. In comparison of multiracial students to their Black and Asian single race peers, the size of the sample remains a limitation given the small numbers of Black and Asian students at the colleges sampled. A contributor to the smaller sample size is the fact that fewer institutions participated in YFCY, minimizing the access to the much larger sample included in the CIRP.

Second, this study only examines the identification of being either mixed or single race Black or Asian, thus eliminating the opportunity to look further at the perspectives of other sub-groups of racially mixed students. Sample size remains an issue to be dealt with in this study and in the future, which also impacts the ability for this study to address other aggregate groups like American Indian and Latina/o mixed race experiences. In colleges across the country, these two groups are vastly underrepresented which impact the study of these two groups generally; however, when further disaggregated by mixed race, these are the largest "base" subgroups of mixed race (American Indian, *N*=550 and Latina/os, *N*=999). These groups were not included in this study because of lack of representation in the literature and the complex distinction in the U.S. with regards to ethnicity and race for Latinas/os. Most of the mixed race experiences described have been with mixed Black and mixed Asian; however, some of the students in those two categories are may be mixed with American Indian and Latina/o.

The third limitation of this study is that participants are first year students who are primarily 18 or 19 years old. Additional studies will be needed to account for age and

years in college by sampling students after two or more years (e.g. College Senior Survey). This study cannot account for the impact of the types of courses students take in college related to diversity/ethnic studies and whether or not those courses were associated with their own racial or ethnic background.

The final limitation surrounds the choice to use the identification of race at the entry of college instead of at the end of their first year. Preliminary frequencies suggest that students did change racial identification. Harper (2007) suggests there are students who identified as mixed race at the beginning of college who: a) chose a single race category; b) chose a different combination of mixed race that did not include one of the base groups in the study; or c) students who identified as single race chose a mixed race identity at the end of the first year.

CHAPTER 4

RESULTS

This chapter provides an overview of the results of this study to answer the research questions previously defined and explore the variables that contribute to the interpersonal self-concept of mixed and single race students in their first year of college. The research questions were:

1. What are the factors influencing the interpersonal self-concept of multiracial college students?
2. Based on pre-college and first year college experiences, how do multiracial students differ in their interpersonal self-concept in comparison to single race students?
3. Does a significant difference exist between multiracial students and single race students in their racial attitudes?
4. Does being single race or multiracial define a significant difference between how students understand themselves and understand others (interpersonal self-concept)?

The results reported in this chapter are divided into two major sections. The first is a comparison of means for the dependent variable and each of the independent variables for mixed and single race Asians and Blacks providing a summary of the characteristics and differences that exist. The second section is a multivariate examination of the relationship of pre-college and first-year college characteristic and experiences on interpersonal self-concept by racial group. Based on the theoretical assumptions in the literature (Renn, 2004; Binning, Unzueta, Huo & Molina, 2009), this analysis provided a method to understand further the impact of these pre-college and first year experiences have on interpersonal self-concept.

Independent t-Tests

Independent *t*-tests were conducted to determine if the mean differences in responses to the dependent (interpersonal self-concept) and independent variables (e.g., gender, campus racial climate) between mixed race Asians and Blacks and single race Asians and Blacks were statistically significant.

Single Race Black Students and Mixed Race Black Students (Independent Variables)

T-test comparisons between mixed race blacks and their single race peers revealed a number of significant differences as shown in Table 4.1. Within each group, a higher proportion of the students were females (70% of single race Blacks and 76% of mixed race Blacks). In addition, 23% of single race students and 19% of mixed race students stated they were science, technology, engineering, and mathematics (STEM) majors.

There were no significant differences by race among the three pre-college attitudes regarding diversity variables: racial discrimination is no longer a problem, prohibit racist/sexist speech on campus, and no more need for affirmative action in college admissions. In contrast, the pre-college environment/interactions with diverse peers yielded significant differences: Mixed race Black students lived in more evenly mixed communities where both schools and neighborhoods were half White and half ethnic minorities while single race Black students came from communities that were mostly ethnic minorities ($p \leq .001$). However, both mixed and single race Black students attended more ethnically diverse schools than the neighborhoods in which they lived.

Looking at the four variables comprising the theme of "First Year Diverse Experiences," mixed race students were significantly more likely to have Positive

Ethnic/Racial Relationships ($p \leq .001$) than their single race peers. However, this is probably because mixed race Black students tend to participate in more integrated spaces (Racial/Ethnic Composition of Environment, $p \leq .001$) than their single race peers. Leadership and Community Orientation, defined as engagement in activities that have a positive impact on ethnic minority communities, was significantly ($p \leq .05$) higher for mixed race Black students than their single race peers as was Satisfaction with College ($p \leq .05$).

Table 4.1 Frequencies, Means, Standard deviations, and Test of Significance on Independent Variables for Entire Sample by Race (Total Black n=2647 and Total Black+ n=485)

Variable Name	Black		Black+		Mean Difference
Independent Variables	Mean	S.D.	Mean	S.D.	
Pre-college Characteristics					
Mother's education Black *n* =2586; Black+ *n* =476	5.18	1.85	5.30	1.82	.12
Student's gender (male)	Male	Female	Male	Female	
Black *n* =2643; Black+ *n* =485	29.5%	70.5%	24.1%	75.9%	
STEM major (non-STEM)	STEM	Non-STEM	STEM	Non-STEM	
Black *n* =2647; Black+ *n* =485	22.9%	77.1%	18.8%	81.2%	
Pre-College Attitudes on Diversity					
Racial discrimination is no longer a problem Black *n* =2543; Black+ *n* =477	1.52	.74	1.51	.70	.01
Prohibit racist/sexist speech on campus Black *n* =2513; Black+ *n* =467	2.77	1.08	2.81	1.11	.04
No more need for affirmative action in college admissions Black *n* =2483; Black+ *n* =465	1.92	.85	2.01	.90	.09
Pre-college environment/interaction with diverse peers					
Racial composition of high school Black *n* =2568; Black+ *n* =482	3.62	1.34	4.02	1.28	.40***
Racial composition of neighborhood Black *n* =2512; Black+ *n* =475	3.29	1.39	3.89	1.37	.60***
First Year Diverse Experiences					
Positive Ethnic/Racial Relations Black *n* =2508; Black+ *n* =465	-.08	.96	.41	.89	.49***
Racial Interactions of a Negative Quality Black *n* =2529; Black+ *n* =469	-.01	.89	.06	.92	.07
Campus Racial Climate Black *n* =2539; Black+ *n* =472	-.01	.82	.03	.81	.04
Race/Ethnic Composition of Environment Black *n* =2564; Black+ *n* =480	-.05	.82	.28	.95	.33***
First Year Community Orientation					
Leadership and Community Orientation Black *n* =2542; Black+ *n* =473	-.01	.91	.08	.91	.09*
Informed Citizenship Black *n* =2510; Black+ *n* =466	-.001	.94	.004	1.02	.005
First Year Self Assessment					
Satisfaction with College Black *n* =2489; Black+ *n* =462	-.02	.92	.09	.89	.11*
Sense of Belonging Black *n* =2525; Black+ *n* =468	-.01	.92	.06	.88	.07
Self-Assessed Cognitive Development Black *n* =2490; Black+ *n* =465	-.01	.87	.04	.88	.05

Note. Parentheses indicate referent group for dichotomous variables. *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$.

Single Race Asian Students and Mixed Race Asian Students (Independent Variables)

In the analysis of the means for mixed race Asian students and single race Asian students, a number of independent variables are significant (Table 4.2). The first is mother's education, which is significantly higher for mixed race Asians than their single race peers ($p \leq .001$). The responses to questions about "Pre-College Attitudes on Diversity" yielded similar responses from both single and mixed race students. There were significant differences in the "Pre-College Environment/Interaction with Diverse Peers" variables. Single race Asians lived in neighborhoods and went to high schools that were slightly more ethnic minority than their mixed race peers ($p \leq .001$).

Table 4.2 Means, Standard deviations, and Test of Significance on Independent Variables for Entire Sample by Race (Asian Total n=1927and Total Asian+ *n*=464)

Variable Name	Asian		Asian+		Mean Difference
Independent Variables	Mean	S.D.	Mean	S.D.	
Pre-college Characteristics					
Mother's education Asian *n* =1897; Asian+ *n* =461	4.95	2.17	5.65	1.79	.70***
Student's gender (male) Asian *n* =1924; Asian+ *n* =464	Male 34.3%	Female 65.7%	Male 34.5%	Female 65.5%	
STEM majors (non-STEM) Asian *n* =1927; Asian+ *n* =464	STEM 33.1%	Non-STEM 66.9%	STEM 30.4%	Non-STEM 69.6%	
Pre-College Attitudes on Diversity					
Racial discrimination is no longer a problem Asian *n* =1881; Asian+ *n* =450	1.79	.75	1.76	.75	.03
Prohibit racist/sexist speech on campus Asian *n* =1872; Asian+ *n* =449	2.81	.98	2.78	.99	.03
No more need for affirmative action in college admissions Asian *n* =1842; Asian+ *n* =443	2.58	.84	2.50	.91	.08
Pre-college environment/interaction with diverse peers					
Racial composition of high school Asian *n* =1865; Asian+ *n* =461	3.91	1.26	4.23	1.16	.32***
Racial composition of neighborhood Asian *n* =1819; Asian+ *n* =448	3.92	1.41	4.28	1.36	.38***
First Year Diverse Experiences					
Positive Ethnic/Racial Relations Asian *n* =1893; Asian+ *n* =456	-.03	.95	.12	.93	.15**
Racial Interactions of a Negative Quality Asian *n* =1904; Asian+ *n* =457	.02	.89	-.08	.91	.10*
Campus Racial Climate Asian *n* =1910; Asian+ *n* =461	.01	.79	-.03	.83	.04
Race/Ethnic Composition of Environment Asian *n* =1915; Asian+ *n* =459	-.06	.83	.26	.86	.32***
First Year Community Orientation					
Leadership and Community Orientation Asian *n* =1909; Asian+ *n* =463	.01	.92	-.04	.94	.05
Informed Citizenship Asian *n* =1908; Asian+ *n* =461	-.01	.96	.03	.97	.04
First Year Self Assessment					
Satisfaction with College Asian *n* =1902; Asian+ *n* =459	.00	.91	-.01	.98	.01
Sense of Belonging Asian *n* =1901; Asian+ *n* =460	-.00	.91	.01	.99	.01
Self-Assessed Cognitive Development Asian *n* =1900; Asian+ *n* =458	.01	.88	-.03	.84	.04

Note. Parentheses indicate referent group for dichotomous variables. *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$.

In the first year, three variables measuring experiences with diversity were significantly different. For Positive Ethnic/Racial Relations, mixed race students had a higher frequency of these experiences with diverse others ($p \leq .01$). Racial Interactions of a Negative Quality were more likely to occur for mixed race Asian students than their single race peers ($p \leq .05$). The final significant difference was the Racial/Ethnic Composition of the Environment, which suggested that mixed race Asian students had a more social, academic and organizational interactions with diverse others than their single race peers ($p \leq .001$). There were no significant differences for Leadership and Community Orientation and Self-Assessed Cognitive Development.

Interpersonal Self-concept (Dependent Variable)

The results of the *t*-tests on the dependent variable, Interpersonal Self-Concept, are presented in Table 4.3. No significant differences were found between mixed and single race Asian students either at the beginning or at the end of their first year. However, the differences for mixed and single race Blacks were no different at the beginning of college but were significant at the end of their first year of college year ($p \leq .01$), with mixed race Black students having a higher interpersonal self-concept than their single race peers.

To expand on the results of the independent *t*-tests, paired sample *t*-tests were conducted to determine if any significant differences existed between interpersonal self-concept at the beginning of college and the end of their first year for each racial group (Black, Black+, Asian and Asian+). As presented in Table 4.3, there was a significant difference ($p \leq .05$) for mixed Black students. These results suggest, as did the *t*-tests, that mixed Black students experienced an increase in their interpersonal self-concept over the

course of their first year; there were no significant differences single race Black, mixed race Asian, or single race Asian students.

Table 4.3 Means, Standard deviations, and Individual and Paired Tests of Significance on Dependent Variables for Entire Sample by Race (Black Total n=2647 and Total Black+ n=485) and (Asian Total n=1927and Total Asian+ *n*=464).

Variable Name	Black/Asian		Black+/Asian+		Mean Difference
Dependent Variables	Mean	S.D.	Mean	S.D.	
Pre-Test					
Interpersonal Self-Concept 04 Pre Black *n* =2586; Black+ *n* =482	-.00	.72	.00	.67	.00
Interpersonal Self-Concept 04 Pre Asian *n* =1907; Asian+ *n* =459	-.01	.76	.04	.73	.05
Post-Test					
Interpersonal Self-Concept 05 Post Black *n* =2601; Black+ *n* =481	-.02	.78	.09	.75	.11**
Interpersonal Self-Concept 05 Post Asian *n* =1920; Asian+ *n* =463	-.01	.80	.02	.82	.03
Paired T-Tests					
Interpersonal Self-Concept 04 Pre	-.00	.71	.00	.67	
Interpersonal Self-Concept 05 Post	-.01	.78	.09	.75	
Black *n* =2544					.01
Black+ *n* =478					.09*
Interpersonal Self-Concept 04 Pre	-.01	.76	.04	.73	
Interpersonal Self-Concept 05 Post	-.01	.80	.02	.82	
Asian *n* =1901					.00
Asian+ *n* =458					.02

Note. *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$.

Summary

The independent sample *t*-tests provided an overview of the significant differences between independent variables and the dependent variable by group. Eight of the seventeen independent variables identified significant differences between mixed and single race Black students (four pre-college, four first-year); differences between mixed race and single race Asian students were seen in six out of the seventeen variables (three pre-college, three first-year). The *t*-tests revealed that four of the independent variables were significant for both Asian and Black students when comparing responses between mixed and single race groups. These variables were related to students' pre-college environment: racial composition of high school, racial composition of neighborhood,

positive ethnic/racial relations, and racial/ethnic composition of environment (college). There were no significant differences in variables related to pre-college attitudes on diversity, campus racial climate, informed citizenship, sense of belonging, and self-assessed cognitive development for either Black or Asian students.

Multivariate Analysis

A blocked hierarchical regression method was employed which allowed similar variables, grouped together, to be explored separately for their impact on the variance of the dependent variable in the model. One model was run separately for Asian and Black students. The model included twenty-one variables sorted into seven themed blocks: pre-test interpersonal self-concept; pre-college variables (characteristics, attitudes on diversity, environment/interaction with diverse peers); and first year variables (diversity experiences, community orientation and self assessment). In the following section, each of the different groups will be discussed in relation to race and interpersonal self-concept.

Interpersonal Self-Concept for First Year Mixed and Single Race Black Students

The dependent variable, interpersonal self-concept, is a factor that measured self understanding and understanding of others; the model used is presented in Table 4.4. In this regression model, 26.6% of the total variance for interpersonal self-concept among Black students is explained. No support for significant differences between being mixed or single race as a contributor to interpersonal self-concept was found.

There were four major significant predictors of interpersonal self-concept for Black students: Pre-College Interpersonal Self-Concept (pre-test) ($\beta = .379$, $p \leq .001$); Self-Assessed Cognitive Development ($\beta = .131$, $p \leq .001$); Leadership and Community Orientation ($\beta = .122$, $p \leq .001$); and Sense of Belonging ($\beta = .098$, $p \leq .001$). Two other

variables had less dramatic results: Positive Ethnic Relations (β = .055, p≤.05) with a positive effect and Racial Interactions of a Negative Quality (β = -.092, p≤.001) with a negative effect.

In this study, none of the pre-college characteristics, attitudes on diversity or the environment/interaction with diverse peers had any bearing on interpersonal self-concept for Black students after first year variables (diversity experiences, community orientation and self- assessment) were taken into account. Earlier in the regression, Blocks 1 thru 4 (all pre-college variables) indicated being mixed race was a significant predictor (β = .044, p≤.05) of interpersonal self-concept; once first year college experiences were included being mixed race lost significance. Prohibit racist speech on campus (β = .037, p≤.05) in block 4 and no more need for affirmative action in college admissions (β = .036, p≤.05) in block 6 were the only variables of any significance throughout the earlier blocks in the regression. The only other variable in the model that was significant prior to the final block was Informed Citizenship (β = .062, p≤.001) in the community orientation block, but this variable also became insignificant once first year variables were added.

There was virtually no change in R^2 over the first four blocks (20.5%). The first year experiences increased the R^2 *by a total of* 6.1% (to 26.6%).

Table 4.4 Standardized beta coefficients for blocked entry regression on Dependent Variable Interpersonal Self-Concept (α=.599) for Entire Sample: Black and Black+ (*n* = 2,434)

Variable name	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7
Pre-Test							
Interpersonal Self-Concept 04	.452***	.453***	.452***	.452***	.442***	.400***	.379***
Pre-College Characteristics							
Student's Gender (male)		-.002	-.001	.000	-.010	-.013	-.014
Black+ (Black only)		.045*	.044*	.044*	.026	.026	.027
Mother's Education Some HS (College Grad)		.013	.014	.014	.016	.017	.016
Mother's Education Some College (College Grad)		-.012	-.011	-.010	-.009	-.012	-.010
STEM Majors (non-STEM)		-.015	-.016	-.015	-.020	-.025	-.032
Pre-College Attitudes on Diversity							
Racial discrimination is no longer a problem			-.016	-.015	-.028	-.012	-.015
Prohibit racist/sexist speech on campus			.037	.037*	.028	.024	.023
No more need for affirmative action in college admissions			.024	.024	.023	.036*	.034
Pre-College Environment/ Interaction with Diverse Peers							
Racial Composition of HS Most/All Minority (50/50 White-Minority)				-.013	-.007	-.010	-.009
Racial Composition of HS Most/All White (50/50 White-Minority)				-.003	-.008	-.013	-.012
Racial Composition of Neighborhood Most/All Minority (50/50 White-Minority)				.009	.014	.017	.013
Racial Composition of Neighborhood Most/All White (50/50 White-Minority)				.004	-.005	-.005	-.010
First Year Diversity Experiences							
Positive Ethnic/Racial Relations					.106***	.081***	.055*
Racial Interactions of a Negative Quality					-.101***	-.105***	-.092***
Campus Racial Climate					-.024	-.038	-.021
Race/Ethnic Composition of the Environment					.028	.018	.017
First Year Community Orientation							
Leadership Orientation						.148***	.122***
Informed Citizenship						.062***	-.002
First Year Self Assessment							
Satisfaction with College							-.035
Sense of Belonging							.098***
Self-Assessed Cognitive Development							.131***
Change in R^2	.204***	.003	.002	.000	.014***	.028***	.022***
Adjusted R^2	.204	.205	.206	.205	.218	.245	**.266**

Note. Parentheses indicate referent group. *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$.

Summary

Being mixed vs. single race did not have a significant impact on interpersonal self-concept for Black students, nor did of the other pre-college; however, first year college experiences did. There are five major factors in the first year that contributed to the development of an interpersonal self-concept for Black students:

- Positive Race/Ethnic Relations including social and academic interactions through intellectual, meaningful and honest discussions; participation in events outside of their own culture; and socialization outside of class had a positive impact on interpersonal self-concept.
- Interactions of a Negative Quality including situations where students felt threatened because of their race or experienced hostile interactions had a negative impact on interpersonal self-concept.
- Leadership and Community Orientation, a student's ability to see community needs and take a leadership role to address them had a positive impact on interpersonal self-concept.
- Sense of Belonging measuring connectedness to the campus had a positive impact on interpersonal self-concept.
- Self-Assessed Cognitive Development, looking at both academic and social ability, both had a significant positive influence on interpersonal self-concept.

Interpersonal Self-Concept for First Year Mixed and Single Race Asian Students

In the second model, interpersonal self-concept was used to measure self-understanding and understanding of others for mixed and single race Asian students. Table 4.6 shows the hierarchical regression model used twenty-two independent variables divided into seven themed blocks accounting for both pre-college and first year college experiences, resulting in an R^2 of 32.3%. Five independent variables emerged as significant positive predictors of the outcome variable, Pre-College Interpersonal Self-Concept (β = .438, $p \leq .001$), Positive Ethnic/Racial Relations (β = .055, $p \leq .01$), Leadership and Community Orientation (β = .145, $p \leq .001$), Sense of Belonging (β = .078, $p \leq .001$), and Self-Assessed Cognitive Development (β = .095, $p \leq .001$). There were also three negative predictors, one pre-college variable (Racial Composition of Neighborhood Most/All White, β = -.063, $p \leq .05$), and two first-year variables (Racial Interactions of a Negative Quality, β = -.066, $p \leq .01$, and Campus Racial Climate, β = -.046, $p \leq .05$).

This study revealed no impact for Asian students of being mixed or single race at any point in the model.

Table 4.5 Standardized beta coefficients for blocked entry regression on Dependent Variable Interpersonal Self-Concept (α=.647) for Entire Sample: Asian and Asian+ (*n* = 2,158)

Variable name	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7

Pre-Test							
Interpersonal Self-Concept 04	.507***	.506***	.505***	.504***	.489***	.450***	.438***
Pre-College Characteristics							
Student's Gender (male)		.001	-.002	-.002	-.025	-.037*	-.035
Asian+ (Asian only)		.005	.003	.005	-.009	-.002	.005
Mother's Education Some HS (College Grad)		-.035	-.036	-.035	-.014	-.020	-.014
Mother's Education Some College (College Grad)		-.034	-.034	-.034	-.032	-.036	-.033
STEM Majors (non-STEM)		-.025	-.022	-.024	-.031	-.024	-.028
Pre-College Attitudes on Diversity							
Racial discrimination is no longer a problem			-.024	-.023	-.027	-.013	-.015
Prohibit racist/sexist speech on campus			.023	.024	.027	.020	.016
No more need for affirmative action in college admissions			-.032	-031	-.036	-.024	-.017
Pre-College Environment/ Interaction with Diverse Peers							
Racial Composition of HS Most/All Minority (50/50 White-Minority)				.014	.012	.009	.009
Racial Composition of HS Most/All White (50/50 White-Minority)				.045	.036	.030	.028
Racial Composition of Neighborhood Most/All Minority (50/50 White-Minority)				-.038	-.028	-.026	-.030
Racial Composition of Neighborhood Most/All White (50/50 White-Minority)				-.069**	-.078**	-.069**	-.063*
First Year Diversity Experiences							
Positive Ethnic/Racial Relations					.126***	.088***	.055**
Racial Interactions of a Negative Quality					-.082***	-.086***	-.066**
Campus Racial Climate					-.038	-.061**	-.046*
Race/Ethnic Composition of the Environment					.033	.023	.007
First Year Community Orientation							
Leadership Orientation						.166***	.145***
Informed Citizenship						.039*	-.013
First Year Self Assessment							
Satisfaction with College							.016
Sense of Belonging							.078***
Self-Assessed Cognitive Development							.095***
Change in R^2	.257***	.002	.002	.003	.022***	.027***	.016***
Adjusted R^2	.257	.257	.258	.260	.281	.308	**.323**

Note. Parentheses indicate referent group. *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$.

There was virtually no change in variance explained as the different pre-college variables were introduced in Blocks 1 through 4 (R^2~ 26.0%). The introduction of the first-year variables increased explained variance by 6.3% (R=32.3%)

Summary

There were no significant differences between single and mixed race Asians for interpersonal self-concept. The major findings were the impact of experiences in the first year that facilitated or hindered the interpersonal self-concept of all Asian college students. The only significant pre-college finding was the negative impact of neighborhoods that were primarily White on Asian students, surprising since being in a primarily White high school environment had no impact.

Looking at first-year experiences, Asian students' interpersonal self-concept was negatively impacted when they had negative racial interactions and experienced campus racial climates that had a high occurrence of racial tension. The positive indicators included Positive Ethnic/Racial Experiences, Sense of Belonging on Campus; and Self-Assessed Cognitive Development (the combination of self-perceived academic ability and social knowledge of diverse others).

. Leadership orientation was the most significant first year variable in the model, which indicated that understanding the needs of their community, promoting racial understanding, taking action, and understanding other cultures had a profound influence on the interpersonal self-concept of Asian students.

Comparison of Interpersonal Self-Concept Between Groups

In addition to understanding the significant independent variables individually for Black and Asian students, it is also important to compare the similarities and differences

in independent variables between each group. These racial groups have unique histories and experiences as ethnic minorities in the United States (Daniels, Taylor & Kitano, 1991; Kitano, 1997), and how they come to understand and develop an interpersonal self-concept (Tatum, 2003). Comparing them provides a backdrop to what is salient and what isn't in terms of first year college experiences and how they influence a student's interpersonal self-concept. While standardized coefficients were used to interpret the results within each group, unstandardized coefficients will be used to compare and contrast the results between each group (Table 4.7).

The majority of the pre-college variables, represented in blocks 1 thru 4, were not significant for either Black or Asian students. Interestingly, for Black students, being mixed race was significant ($p \leq .05$) and had a *b* of.091 through block 4 (in comparison to .010 for Asians) before falling to .056 and below the significance threshold in the final block. The reasoning for this change in significance will be discussed further in Chapter 5. Asian students also had a significant pre-college variable, racial composition of the neighborhood most/all White ($p \leq .05$) and a *b* of -.102 in the final block (for Blacks it was not significant with a *b* of -.017).

The most significant variables for both Black and Asian students were experiences and perceptions in the first year because of their interactions with diverse peers within their college environment. The last three blocks of the regression focused on the experiences of the first year.

Diversity Experience Block. Positive Ethnic/Racial Relations was a positive predictor of interpersonal self-concept for both Black (*b* of .044, $p \leq .05$) and Asian students (*b* of .047, $p \leq .01$). Racial Interactions of a Negative Quality was significant for

both Black and Asian students, with a negative impact on interpersonal self-concept; this was slightly more true for Black (*b* of -.080, p≤.001) than Asian students (*b* of -.060, p≤.01). Campus Racial Climate had a significant negative influence on the dependent variable only for Asian students (*b* of -.046, p≤.05), although it had a negative impact on Black students as well. For both groups, Race/Ethnic Composition of the Environment (college organizations, informal study groups, and social friends) did not have a significant impact on interpersonal self-concept.

Community Orientation Block. Leadership and Community Orientation, like all of the first year experience variables, is a factor. It included the following action-based items: promoting racial understanding, participating in a community action program, improving the health of minority communities, becoming a community leader, improving one's understanding of other cultures and influencing social values. Leadership and Community Orientation was significant for both groups (p≤.001), with the strongest *b* for Asian (.126) and was the second strongest *b* for Black students (.104_. Clearly, the opportunity for leadership and civic engagement is a major part of the first year experience influencing interpersonal self-concept.

Self-Assessment Block. Sense of Belonging was similar for both Black and Asian Students with a *b* of .082 and .068, respectively. Self Assessed Cognitive Development had the largest *b* for Black students (.118) and the second largest for Asian students(.089). Both of these variables was significant for both groups (p≤.001).

Table 4.6 Unstandardized beta coefficients for blocked entry regression on Dependent Variable Interpersonal Self-Concept. Comparison of Black and Black+ (α=.599, *n* = 2,434) and Asian and Asian+ (α=.647, *n* = 2,158).

Variable name	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7
Pre-Test							
Interpersonal Self-Concept 04	.491***	.492***	.491***	.491***	.480***	.435***	.412***
	.542***	.542***	.541***	.539***	.524***	.481***	.468***
Pre-College Characteristics							
Student's Gender (male)		-.006	-.002	-.001	-.018	-.023	-.025
		.002	-.004	-.004	-.042	-.062*	-.060
Black+ (Black only)		.094*	.091*	.091*	.054	.054	.056
Asian+ (Asian only)		.009	.007	.010	-.018	-.005	.011
Mother's Education Some HS (College Grad)		.023	.025	.025	.030	.031	.028
		-.062	-.063	-.061	-.024	-.036	-.024
Mother's Education Some College (College Grad)		-.020	-.019	-.018	-.016	-.020	-.017
		-.078	-.078	-.078	-.074	-.083	-.076
STEM Majors (non-STEM)		-.029	-.029	-.028	-.036	-.047	-.060
		-.043	-.037	-.041	-.053	-.041	-.048
Pre-College Attitudes on Diversity							
Racial discrimination is no longer a problem			-.016	-.016	-.029	-.013	-.016
			-.027	-.025	-.030	-.015	-.017
Prohibit racist/sexist speech on campus			.026	.026*	.020	.017	.016
			.019	.020	.022	.016	.013
No more need for affirmative action in college admissions			.021	.022	.020	.032*	.031
			-.030	-.030	-.034	-.023	-.016
Pre-College Environment/ Interaction with Diverse Peers							
Racial Composition of HS Most/All Minority (50/50 White-Minority)				-.021	-.011	-.015	-.015
				.024	.020	.015	.015
Racial Composition of HS Most/All White (50/50 White-Minority)				-.005	-.013	-.021	-.020
				.076	.060	.051	.046
Racial Composition of Neighborhood Most/All Minority (50/50 White-Minority)				.013	.021	.026	.019
				-.067	-.050	-.047	-.052
Racial Composition of Neighborhood Most/All White (50/50 White-Minority)				.006	-.008	-.009	-.017
				-.112**	-.128**	-.112**	-.102*

Table 4.6 Continued. Unstandardized beta coefficients for blocked entry regression on Dependent Variable Interpersonal Self-Concept. Comparison of Black and Black+ (α=.599, *n* = 2,434) and Asian and Asian+ (α=.647, *n* = 2,158).

Variable name	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7
First Year Diversity Experiences							
Positive ethnic/racial relations					.085***	.064***	.044*
					.108***	.075***	.047**
Racial interactions of a negative quality					-.087***	-.091***	-.080***
					-.074***	-.078***	-.060**
Campus racial climate					-.022	-.035	-.019
					-.038	-.061**	-.046*
Race/ethnic composition of the environment					.025	.016	.015
					.032	.022	.007
First Year Community Orientation							
Leadership Orientation						.126***	.104***
						.144***	.126***
Informed Citizenship						.049***	-.001
						.050*	-.011
First Year Self Assessment							
Satisfaction with College							-.030
							.014
Sense of Belonging							.082***
							.068***
Self-Assessed Cognitive Development							.118***
							.089***
Change in R^2	.204***	.003	.002	.000	.013***	.027***	.022***
	.257***	.002	.002	.003	.023***	.027***	.016***
R^2	.204	.207	.209	.209	.224	.251	**.273**
	.257	.259	.261	.264	.287	.314	**.330**

Note. Parentheses indicate referent group. *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$. Second row are β coefficients for Asian/(+).

Summary of Results

The independent *t*-tests on both the dependent and independent variables identified clear differences between mixed and single race Asian and Black students. The major result was that mixed race Blacks had a significantly higher interpersonal self-concept than their single race peers, although there was no difference for Asians. Neither

group had significant differences in responses to pre-college attitudes on diversity, Campus Racial Climate, Informed Citizenship, Sense of Belonging, nor Self-Assessed Cognitive Development. For both Black and Asian students, variables with significant differences included the pre-college environment (racial composition of high school and neighborhood), Positive Ethnic/Racial Relations and the Racial/Ethnic Composition of (college) Environment.

The multiple regression aimed to identify variables that contributed to an interpersonal self-concept for both Black and Asian students. For each group, Positive Ethnic/Racial Relations, Leadership and Community Orientation, Sense of Belonging, and Self-Assessed Cognitive Development were significant predictors. In addition, Racial Interactions of a Negative Quality had a negative impact on interpersonal self-concept for both groups. The only other negative predictor was campus racial climate for Asians. Surprisingly, the pre-college variables did not have any significant results beyond the pre-college interpersonal self-concept for either group, and the negative impact of living in a primarily White neighborhood for Asian students. First year colleges experiences for good or bad were significant predictors of an individual's interpersonal self-concept, Black or Asian, mixed or single race.

One of the more interesting results was the significance of being mixed Black through block four ($p \leq .05$), all of the pre-college variables. Once first year college experiences were introduced into the model, being mixed Black was no longer significant. This result merits discussion because, based on the independent *t*-tests of interpersonal self-concept at college entry, there were no significant differences between mixed and single race Blacks.

CHAPTER 5

DISCUSSION

This study was developed to explore the factors that contribute to the interpersonal self-concept of single and mixed race Black and Asian students during their first year of college. Mixed race students have been absent from the conversations on race, racial identity development, and experiences in college. Given the emergence of this group and its recognition by Integrated Postsecondary Education Data System (IPEDS), this population must receive more attention in institutions of higher education. Mixed and single race student experiences are interconnected; understanding how students develop an interpersonal self-concept in the college environment will inform new approaches to developing an inclusive learning environment for all students.

This study chose to explore the experiences of mixed and single race Black and Asian students in their first year for several reasons. First, each group is one of the federally designated race categories (as opposed to Latinaa/os who are not considered under current classifications as a racial group, but rather an ethnic group). Second, each group has had a history of racial discrimination and oppression in the United States. Finally, there was enough literature inclusive of both Black and Asian experiences to support the conceptual and theoretical framework of this study.

The model used accounts for independent variables found to be important in both qualitative and quantitative studies (Calleroz, 2003; Sparrold, 2003), theories of racial categories (Starr, 1992), single race identity development (Cross, 1995), mixed race

identity formation (Root, 1990; Renn 2004) and development (Kich 1992), and the impact of first year college experiences (Rendon, Garcia & Person, 2004). Interpersonal self-concept was used as the dependent variable because it is a factor comprised of two items, self-understanding and understanding of others. According to the literature, these two items are connected to identity development and formation; how people understand themselves is inherently connected to the way they understand others. The environmental influences that surround the experiences of first year college students are intensified by the recent departure from, in many cases, a completely different pre-college environment. Based on these assumptions, an interpersonal self-concept may develop differently for mixed race students versus their single race peers. This chapter discusses further the findings derived from the research questions outlined in this study along with implications for practice in higher education, and future research on mixed race and single race Black and Asian students.

Summary of Findings

Several studies contend that mixed race experiences and the path towards identity formation are constructed differently from those of their single race peers (Poston, 1990; Root; 1990; Kich; 1992; Renn, 2004). Renn (2004) posits that for all students the ecological or environmental influences within the college environment are key influencers of racial identity. This theory of ecology (Brofenbrenner, 1979; Renn, 2004) provided a template for exploring the first question posed in this study: What are the factors influencing the interpersonal self-concept of multiracial (Mixed Black and Mixed Asian) college students? The assumption was that being multiracial had a significant impact on interpersonal self-concept. In the models presented for both Black and Asian

students, this was not the case.. Therefore, the factors that influenced the interpersonal self-concept of single race students also influenced mixed race students. The positive factors shared between both groups included Positive Ethnic/Racial Relations, Leadership Orientation, Sense of Belonging and Self-Assessed Cognitive Development; the single negative factor for both groups was Racial Interactions of a Negative Quality. It is safe to assume these factors were similar because to some degree they are connected to the experiences of all students of color experiencing the first year of college.

Asians had two additional factors with a negative impact on their interpersonal self-concept: Racial Composition of Neighborhood Most/All White and Campus Racial Climate. This finding addresses the significant impact of the college environment on the way Asian students in particular negotiate how they understand themselves and others in the first college year. Specifically, because Asian students generally come from neighborhoods that are more White, their perceptions of the campus racial climate mby be more sensitive than their Black peers who tend to be from more diverse neighborhoods and have more frequent interactions with diverse peers.

The second question was: Based on pre-college and first year college experiences how do multiracial students differ in their interpersonal self-concept in comparison to other single race students? The impact of being mixed race turned out not to be a factor, but there were two comparisons which were significant when Blacks were compared to Asians. The first is the differences in significance between Asian and Black students' interpersonal self-concept, primarily around racial/ethnic interactions of either a negative or positive quality. For Black students, negative interactions were more significant (b= -0.80; $p\leq.001$) than for Asian students (b= -.060; $p\leq.01$); however positive interactions

were more significant for Asian (b= .047; $p\leq$.01) than for Black students (b= .044; $p\leq$.05) (Table 4.7). This is likely an indication that negative experiences within the college environment occur at a higher rate for Black students and likely in more impactful ways than for Asians. In contrast, positive racial or ethnic interactions may be happening with less frequency for Black students than for Asian students (Tables 4.1 and 4.2). Both mixed race Asian and Black students experience more positive racial/ethnic interactions than their single race peers. What may be happening is what Binning, Unzueta, Kuo & Molina (2009) found:, mixed race individuals negotiate their environment to facilitate positive interactions by shifting their racial identity to the designated dominant racial group.

To further explore the differences between mixed and single race pre-college and first year experiences, *t*-tests were used to evaluate each of the independent variables in the model. The significant findings between groups revealed that mixed race students come from slightly more White pre-college environments and come from more educated families (Tables 4.1 and 4.2); during college, they have more positive and diverse interactions and are more likely to be involved in leadership and community orientation than their single race peers. Mixed race students are more likely to promote racial understanding, carving out their place within the dialogue on race, and support multiple community needs, probably because they belong to more than one group.

The third question was: Does a significant difference exist between multiracial students and single race students in their racial attitudes? The answer was pursued using an independent sample *t*-test analysis between mixed and single race students. The simple answer is that no significant difference exists between mixed race Black and

Asian students when compared to their single race peers. However, a closer look suggests an alternate conclusion. Two out of the three racial attitude variables suggest that single and mixed race Asian students hold slightly more "conservative" notions of diversity, meaning that they are more likely to agree that Racial Discrimination is No Longer a Problem and Affirmative Action in College Admissions Should be Abolished than single and mixed race Black students prior to college. This second finding is not a surprise, as university admissions policies have openly excluded Asian students from qualifying for consideration under affirmative action.

The last question posed in this study asked: Does being single race or multiracial define a significant difference between how students understand themselves and understand others (interpersonal self-concept)? There was no significant difference in interpersonal self-concept between mixed race and single race Asian students at the end of their first year, but there was for Black students. Mixed race Black students had a higher interpersonal self-concept than their single race peers. This can be attributed to the fact that mixed race Black students had more positive interactions and engaged with more diverse peers in their first year than single race students.

Further analysis (paired sample *t*-tests) was conducted to determine the change in interpersonal self-concept at college entry and at the end of their first year. There was no significant difference for mixed and single race Asians or single race Blacks at college entry or over their first college year. However, mixed race Black students had a similar interpersonal self-concept to their single race Black peers at college entry but had a significant increase by the end of their college year ($p \leq .05$). This finding supports the idea that mixed Black students experience their first year of college differently than their

single race peers, specifically in terms of their positive ethnic/racial interactions, racial/ethnic composition of the environment, leadership and community orientation and their satisfaction with college.

An interesting observation within these findings is the likely impact of hypodescent within the mixed race Asian experience, who experience significantly more negative racial interactions than single race Asian peers ($p \leq .05$). This finding also supports Binning, Unzueta, Huo, & Molina's (2009) classification of races into low-status and high-status categories, where being mixed Asian (hierarchically a lowering of status) would likely lead to more negative experiences than being single race Asian. Depending on the racial composition of the college environment, another explanation for some of these negative interactions is they may come from the single race Asian community. Single race Asians, depending on generational status and ethnic group, historically perceive outmarriage as a loss of the culture, language and values (Uba, 1994; Le, 2010).

The historical impact of race, how individuals have been classified, identified, forced into racial categories for phenotypic, cultural, ethnic or political reasons has implications for students' interpersonal self-concept in their first college year. All of these could not be accounted for in this model; however, clearly these variables are at play within each student's experience. One of the findings within both models as evidence of this was the absence of mixed race being a factor at any point in the Asian subgroup regression. However, a notable finding was that being mixed Black had a significant influence on interpersonal self-concept through the pre-college experience blocks. Based on the identity literature, students in their first year experience

Immersion/Emersion (Cross, 1995) and can potentially adopt an ethnocentric identity. This is part of the resolution approach to identity for mixed students (Poston, 1990; Root, 1990; Kich, 1992; Renn, 2004), where students choose to associate with only one racial identity.

One explanation for the significance of being mixed Black may be explained by the change in their environment, from primarily minority pre-college to primarily White in college and an increase in negative experiences because of their race. Another theory would use the "one drop rule" or hypodescent impacting identity and the interpersonal self-concept for first year mixed Black students. Mixed race Asian students may be experiencing the effects of hypodescent as well and embracing the resolution approach to their racial identification earlier, whereas although they may "mark all that apply" they may, in fact, only identify socially as being Asian, which is also supported by the *t*-test of interpersonal self-concept.

The distinctions between single and mixed race Asian and Black students in this study are most evident in the independent and paired *t*-tests. Mixed and single race Asians are more likely to live in communities and attend high schools that have more Whites than their Black peers; however, both mixed Asian and mixed Black students live in communities with more Whites than their single race peers. I point this out as a frame of reference when considering pre-college diversity attitudes (see Tables 4.1 and 4.2). Despite this variance in the composition of their neighborhoods, there is no difference in attitudes between mixed and single race groups for Blacks or Asians. However, as indicated above, single and mixed race Asians are more likely to believe that racial discrimination is no longer a problem and that there is no need for affirmative action in

admissions than their Black peers. One explanation for this could be the fact that Asians live and go to school in less diverse neighborhoods, and therefore are not exposed to the discrimination and challenges more commonly experienced by their Black peers. Asians in schools are also the beneficiaries of "model minority" stereotypes which may blind their ability to recognize discrimination based on race.

Implications to Practice in Higher Education

Student Affairs

Student affairs as a field is generally concerned with fostering community, positive life experiences, and academic success within the university environment. The implications from the findings of this study for student affairs practitioners include the importance of diversity education and awareness in first year programming, a sense of belonging to the campus, community engagement, and campus peer culture/climate. Addressing these factors will lead to more positive experiences across racial groups for all students including multiracial college students and reduce negative racial experiences, both of which have a powerful impact on interpersonal self-concept.

Student affairs departments first need to evaluate the types of programs and services they already provide to students and the specific areas that focus on students of color. Mixed race Black and Asian students participated in study groups, student organizations and social circles with students of a different race at a significantly higher rate ($p \leq .001$) than their single race peers. Practitioners can encourage all students to join cultural organizations to learn about each other, and evaluate and integrate all students into the mission statements of cultural centers. Developing inclusive environmentsis

important because it encourages positive interactions across race which hs a positive impact on interpersonal self-concept.

In addition, Leadership and Community Orientation ($p \leq .001$) was identified as a factor with positive ramifications for interpersonal self-concept. This finding supports the need to continue and increase opportunities like LeaderShape and service-learning programs that promote racial understanding, improve minority communities, and provide community leadership experience. Students need to have exosystem experiences that challenge their perceptions and influence how they view themselves in relation to others in both the college and community environment.

As found in this study, many of the factors which are part of interpersonal self-concept development are similar across communities of color because of shared histories; however, there are aspects that are unique as well. Practitioners should be aware of these differential factors including challenges to authenticity by minority communities, discrimination based on physical characteristics, hypodescent, and political empowerment or disenfranchisement within the campus environment. Many university psychological counselors may be unaware of these challenges that define unique differences and lead to inaccurate assumptions about multiracial students (Harris, 2002; Nishimura, 1998).

Academic Incorporation

According to the models on multiracial identity development, heritage exploration is an important aspect of identity discovery (Poston, 1990). Developing academic opportunities for multiracial and single-race students to learn about the intersections of race through a mixed race perspective can encourage students to reconsider their notions

of racial identity. There are many ways multiracial experiences can be integrated into academe through course offerings and readings lists, especially in the social sciences and humanities. This recommendation is supported by the finding in this study that all Black and Asian students benefit from and develop a stronger interpersonal self-concept through opportunities for (self-assessed) cognitive development.

Higher Education and Institutional Policy

Higher education has begun to see the inclusion of mixed race as a student group to monitor statistically with the recent changes to IPEDS. Modification of the current race and ethnicity categorization methods in higher education to include multiracial students is an important first step to understanding the complexity of the mixed race educational experience. Currently, IPEDS allows for students to be reported as mixed race; however, institutions have the ability to implement reporting policies and priorities that discern how race and mixed race are aggregated or disaggregated (University of Hawai'i, 2009). Institutional practices regarding how they allow students to racially identify from the beginning of the application process sets a tone for the student as to the type of paradigm the university functions under.

Allowing students to identify with more than one race raises issues regarding affirmative action, scholarships and re-defining what campus racial diversity means for students. To a great extent, these practices promote a sense of belonging, which was found to be a significant contributor to interpersonal self-concept. However, there is much confusion in these categorizations. There are multiracial students who are racially White, as is the case with students who have one White parent traditionally of European heritage (e.g., English, French, German, etc.) and one parent who may be from Spain or

have Arabic or Italian Ancestry from Argentina or Chile, which is considered Hispanic in the United States. However, Italians from Italy or Arabs from the Middle East are not considered Hispanic but White. This leads to different eligibility for affirmative action. This is a policy concern to be dealt with when considering multiracial students and the issues of access. Although reaching beyond the scope of this study, considerations of whether we are measuring students' mental state of racial identity, physical appearance, nationality, generation American or blood quantum connection to a racial group when we categorize them will inform complicated policy discussions on mixed race as a group.

Another policy aspect to consider is that when using single-race options, multiracial students can choose the race that gives them the best opportunities and considerations for funding and admission, regardless of how they identify socially. The flip-side is when, for example, a student who is both White and Asian can only mark one box for race. Many times Asians are not considered underrepresented and therefore not eligible for affirmative action or race-based funding considerations. The purpose of affirmative action is to develop diverse learning environments according to Gurin, Dey, Hurtado and Gurin (2002); this purpose is undermined under these conditions. Policy discussions need to further consider whether or not multiracial students are eligible for affirmative action. Based on the literature and the research presented in this study, I would argue that mixed race students should be considered an underrepresented student population. Mixed race populations have complicated histories and to make assertions of historical privilege, representation or lack thereof based on one category of a student's racial or ethnic background does not take the whole experience into account.

Implications for Research

Theory

The three theoretical approaches defined in this study – linear, resolution and ecological perspectives on mixed race – pinpoint identity as one of the key factors underpinning the experiences of mixed race students in higher education. Root (1990) developed the four resolution approach that re-defined the stage-based, linear approaches to the development of multiracial persons. This approach became the impetus for new theories to emerge allowing for identity to be a choice of the individual rather than a movement toward an ultimate racial identity outcome (Kilson, 2001; Renn, 2004; Rockquemore & Brunsma, 2002; Wallace, 2001). Renn (2004) suggests these theories be considered as new ways to approach the unilateral biases of other linear theories used in student development like moral and intellectual models (Kohlberg, 1976; Perry, 1968).

The significant factors identified in this study (Positive racial/ethnic interactions, negative racial/ethnic interactions of a negative quality, sense of belonging, and leadership and community orientation) suggest that theoretical frameworks for understanding multiracial college student interpersonal self-concept need to integrate linear (Poston, 1990) and ecological approaches (Renn, 2003, 2004) to render more holistic models of interpersonal self-concept. Renn (2004) developed an ecological model inclusive of many college-specific influences, but this model lacks the historical context of the multiracial student. Renn's resolution approach defined multiracial identity solutions, options and patterns. These theories discuss factors that contribute to why students choose a given identity but do not discuss how or what factors mediate movement from one resolution identity to another, which to some degree is answered in

this study: First year experiences, particularly negative ones, have a significant impact on interpersonal self-concept. Inferences from the literature and the findings in this study suggest that a merger of these three approaches (linear, resolution, ecological) is the next step in multiracial theory postulation. In addition, theories may develop to focus on specific mixed race combinations because of the variance in racial histories (aspects of the pre-college or college experience) which lead to a different approach to negotiating interpersonal self-concept.

Design and Methodology

The majority of the current research on multiracial college students is primarily based on qualitative research designs using grounded theory approaches. This study contributes to the much needed quantitative perspective on mixed race. Unfortunately, with statistical models there are still a lot of assumptions as to what is truly being measured, especially with mixed race populations. "A population of races is a statistical concept based on a politically constructed measure"(Zuberi, 2000, p. 176,). The statistical quality of measures that define race as a construct can either preserve or destroy racial stratification.

One of the difficult factors to account for in the development of any research design considering multiracial students is identity choice (resolution theories). Multiracial students have the choice to identify with more than one race or not, whereas single-race students do not have this choice. This presents a number of issues that might affect studies of multiracial students and studies that use single-race identifiers. In longitudinal studies, students could change their racial identity choice making it difficult to accurately make comparisons across time (Harper, 2007). In multiracial studies,

students may only choose one race or change combinations of race over time (Harper, 2007). Some of the variance in choice may be explained by the development of a racial identity manifested in a variety of ways throughout their college experience.

The multiple ways multiracial students are referenced in the literature further complicates the discussion. Determining specific terminology to be used in the research and literature would allow for more accurate portrayals within the scholarship of multiracial students. Currently there is use of both "multiethnic" and "bi-ethnic" in a few studies where a multiracial sample is the true intent of the study. The integration of ethnic/ethnicity as a reference to multiracial groups can be misleading. Many Asians, Blacks, Whites and Latinas/os could be considered multi/bi-ethnic and not considered multiracial (e.g., Chinese and Japanese, Jamaican and African American, Irish and Italian). The terminology in the research needs to be standardized because it can have major ramifications concerning the validity of outcomes and how studies disaggregate data by race and ethnicity.

Future Research

This study is only the beginning of research on mixed race groups in comparison to their single race peers. Future research will need to look at mixed race individuals as an aggregated group to compare to their single race White peers and their peers of color. There is a need to understand subgroups of mixed race that include Native American and Latina/o as base groups. This is complicated by the fact that in the United States, these are considered to be ethnic groups, although treated as a non-White racial group. The census requires Latina/o respondents to mark White for race along with one of the Hispanic categories for ethnicity which, according to definition, is not considered mixed

race. However, Latinas/os are the fastest growing ethnic group in the country and will likely be the largest mixed race subgroup, if they aren't already.

Being mixed race did not have a significant effect on interpersonal self-concept in the first year; however it is unknown whether it will have an impact at some point in the future or by the end of thr college career, which could be explored using the College Senior Survey. For example, based on both independent and paired sample *t*-tests, mixed Black students experienced a growth in their interpersonal self-concept in their first year; however, the entire college experience may yield different results. Other research in this area may include examining other types of self-concept (e.g., social, academic) as interpersonal self-concept was a part of a larger factor in the Your First College Year (YFCY) dataset. Some of the limitations in this study can be addressed in future research. Self-understanding and understanding of others is generally assumed and not explicitly defined for the respondents in this study and could be interpreted a number of ways; future studies could clarify this definition.

In addition, questions could be added to qualify respondents' racial identification with a question that asks, along the lines of Renn's (2004) racial patterns, if students identify as monoracial (e.g., I'm Black and Asian but only identify as Asian), multiple monoracial (e.g. I am Black and Asian), multiracial (e.g., Black and Asian), extraracial (e.g., I check no boxes), or situational (e.g., sometimes I'm Black, sometimes I'm Asian, and sometimes I'm Black and Asian). I believe asking this type of qualifying question would not only provide a stronger measure of mixed race groups, but might also provide a path to determining the different experiences of mixed race students who choose to live a single race experience.

An attempt to measure phenotype could also expand on understanding of how individuals develop an interpersonal self-concept. Future studies could develop metrics to accurately account for phenotypic features clearly defined for each racial group. This attempt to account for phenotype would also have to account for how one perceives oneself and how others perceive them, which could be very inaccurate. As difficult as this may be, it would provide further understanding of two variables in this study, Racial/Ethnic Interactions of a Negative Quality (significant for both Asian and Black students) and Campus Racial Climate (significant for Asian students) on interpersonal self-concept.

Studies on mixed race need to look beyond identity to expand the information available about these students. This knowledge will inform practice and further research and, as was the case in this study, lead to more information about single race students as well.

Conclusion

The intent of this study was to explore and identify the factors that contribute to or compromise the interpersonal self-concept of multiracial students based on their pre-college and first year experiences. These factors are enmeshed in a number of historical, political and personal considerations associated with racial identification. The review of the literature of this study provided a historical backdrop of single-race categories to frame the problematic nature of constructing a multiracial category in research. Factors influencing interpersonal self-concept for multiracial college students were found to be not all that different from those that affect all Black and Asian single race college students.

Based on the three theoretical approaches that emerged from the literature, combinations of ecological (Bronfenbrenner, 1979) and resolution approaches (e.g., Kilson, 2001; Rockquemore & Brunsma, 2002; Wallace, 2001), which depart from more traditional linear theories (e.g., Cross, 1971; Kich, 1992; Poston, 1990), were used to recognize aspects of the multiracial pre-college and college experience. These theories and previous research provided the foundation to develop a model to study interpersonal self-concept within the ecology of the college environment (Renn, 2004). Recognizing this growing population in research and practice is the next step in understanding more than just issues related to identity and interpersonal self-concept, but transition to college, persistence, retention and achievement in the university environment. Higher education will soon be in a catch-up game as increased numbers of students identifying as multiracial drive the inclusion of this new racial group in research and demand a shift by institutions away from a single-race paradigm towards inclusive practices.

In this study, one of the major findings was that mixed race Black students increased their interpersonal self-concept in their first year when none of the other students did. This is significant because it supports the qualitative research through an empirical quantitative study, showing that studies need to consider disaggregation and explore the unique experiences of mixed race students.

At the very heart of interpersonal self-concept for mixed and single race students are their interactions with diverse peers, both negative and positive, in the college environment. More importantly, interpersonal self-concept is constantly developing, changing and being influenced by interactions with diverse peers. How mixed race students are perceived or categorized is interconnected to how they view themselves and

influences how they understand others. Nevitt Sanford (1967) posits that challenge and support must be balanced within the college environment to foster the positive learning and development of students. The campus climate can play a major role in the promotion of interpersonal self-concept by fostering an environment that facilitates the understanding of others (culturally, politically, historically) which encourages students to re-evaluate how they understand themselves and others. Institutions of higher education are presented with the challenge of advancing opportunities for students that support their development of an interpersonal self-concept in their first year.

APPENDICES

APPENDIX A: Office of Management and Budget Information

Selected portion taken from the revisions to the Office of Management and Budget Directive 15, available online at:
http://www.whitehouse.gov/omb/fedreg/1997standards.html

Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity

This classification provides a minimum standard for maintaining, collecting, and presenting data on race and ethnicity for all Federal reporting purposes. The categories in this classification are social-political constructs and should not be interpreted as being scientific or anthropological in nature. They are not to be used as determinants of eligibility for participation in any Federal program. The standards have been developed to provide a common language for uniformity and comparability in the collection and use of data on race and ethnicity by Federal agencies.
The standards have five categories for data on race: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. There are two categories for data on ethnicity: "Hispanic or Latino," and "Not Hispanic or Latino."

1. Categories and Definitions
The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting are defined as follows:
-- American Indian or Alaska Native. A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.
-- Asian. A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
-- Black or African American. A person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black or African American."
-- Hispanic or Latino. A person of Cuban, Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race. The term, "Spanish origin," can be used in addition to "Hispanic or Latino."
-- Native Hawaiian or Other Pacific Islander. A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
-- White. A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Respondents shall be offered the option of selecting one or more racial designations. Recommended forms for the instruction accompanying the multiple response question are "Mark one or more" and "Select one or more."

2. Data Formats

The standards provide two formats that may be used for data on race and ethnicity. Self-reporting or self-identification using two separate questions is the preferred method for collecting data on race and ethnicity. In situations where self-reporting is not practicable or feasible, the combined format may be used.
In no case shall the provisions of the standards be construed to limit the collection of data to the categories described above. The collection of greater detail is encouraged; however, any collection that uses more detail shall be organized in such a way that the additional categories can be aggregated into these minimum categories for data on race and ethnicity.
With respect to tabulation, the procedures used by Federal agencies shall result in the production of as much detailed information on race and ethnicity as possible. However, Federal agencies shall not present data on detailed categories if doing so would compromise data quality or confidentiality standards.

a. Two-question format
To provide flexibility and ensure data quality, separate questions shall be used wherever feasible for reporting race and ethnicity. When race and ethnicity are collected separately, ethnicity shall be collected first. If race and ethnicity are collected separately, the minimum designations are:
Race:
-- American Indian or Alaska Native
-- Asian
-- Black or African American
-- Native Hawaiian or Other Pacific Islander
-- White
Ethnicity:
-- Hispanic or Latino
-- Not Hispanic or Latino

When data on race and ethnicity are collected separately, provision shall be made to report the number of respondents in each racial category who are Hispanic or Latino. When aggregate data are presented, data producers shall provide the number of respondents who marked (or selected) only one category, separately for each of the five racial categories. In addition to these numbers, data producers are strongly encouraged to provide the detailed distributions, including all possible combinations, of multiple responses to the race question. If data on multiple responses are collapsed, at a minimum the total number of respondents reporting "more than one race" shall be made available.

b. Combined format
The combined format may be used, if necessary, for observer-collected data on race and ethnicity. Both race (including multiple responses) and ethnicity shall be collected when appropriate and feasible, although the selection of one category in the combined format is acceptable. If a combined format is used, there are six minimum categories:
-- American Indian or Alaska Native
-- Asian
-- Black or African American

-- Hispanic or Latino
-- Native Hawaiian or Other Pacific Islander
-- White
When aggregate data are presented, data producers shall provide the number of respondents who marked (or selected) only one category, separately for each of the six categories. In addition to these numbers, data producers are strongly encouraged to provide the detailed distributions, including all possible combinations, of multiple responses. In cases where data on multiple responses are collapsed, the total number of respondents reporting "Hispanic or Latino and one or more races" and the total number of respondents reporting "more than one race" (regardless of ethnicity) shall be provided.

3. Use of the Standards for Record Keeping and Reporting
The minimum standard categories shall be used for reporting as follows:
a. Statistical reporting
These standards shall be used at a minimum for all federally sponsored statistical data collections that include data on race and/or ethnicity, except when the collection involves a sample of such size that the data on the smaller categories would be unreliable, or when the collection effort focuses on a specific racial or ethnic group. Any other variation will have to be specifically authorized by the Office of Management and Budget (OMB) through the information collection clearance process. In those cases where the data collection is not subject to the information collection clearance process, a direct request for a variance shall be made to OMB.
b. General program administrative and grant reporting
These standards shall be used for all Federal administrative reporting or record keeping requirements that include data on race and ethnicity. Agencies that cannot follow these standards must request a variance from OMB. Variances will be considered if the agency can demonstrate that it is not reasonable for the primary reporter to determine racial or ethnic background in terms of the specified categories, that determination of racial or ethnic background is not critical to the administration of the program in question, or that the specific program is directed to only one or a limited number of racial or ethnic groups.
c. Civil rights and other compliance reporting
These standards shall be used by all Federal agencies in either the separate or combined format for civil rights and other compliance reporting from the public and private sectors and all levels of government. Any variation requiring less detailed data or data which cannot be aggregated into the basic categories must be specifically approved by OMB for executive agencies. More detailed reporting which can be aggregated to the basic categories may be used at the agencies' discretion.

4. Presentation of Data on Race and Ethnicity
Displays of statistical, administrative, and compliance data on race and ethnicity shall use the categories listed above. The term "nonwhite" is not acceptable for use in the presentation of Federal Government data. It shall not be used in any publication or in the text of any report.

In cases where the standard categories are considered inappropriate for presentation of data on particular programs or for particular regional areas, the sponsoring agency may use:

a. The designations "Black or African American and Other Races" or "All Other Races" as collective descriptions of minority races when the most summary distinction between the majority and minority races is appropriate;

b. The designations "White," "Black or African American," and "All Other Races" when the distinction among the majority race, the principal minority race, and other races is appropriate; or

c. The designation of a particular minority race or races, and the inclusion of "Whites" with "All Other Races" when such a collective description is appropriate.

In displaying detailed information that represents a combination of race and ethnicity, the description of the data being displayed shall clearly indicate that both bases of classification are being used.

When the primary focus of a report is on two or more specific identifiable groups in the population, one or more of which is racial or ethnic, it is acceptable to display data for each of the particular groups separately and to describe data relating to the remainder of the population by an appropriate collective description.

5. Effective Date

The provisions of these standards are effective immediately for all new and revised record keeping or reporting requirements that include racial and/or ethnic information. All existing record keeping or reporting requirements shall be made consistent with these standards at the time they are submitted for extension, or not later than January 1, 2003.

APPENDIX B: Renn's Ecology of College Student Development Model

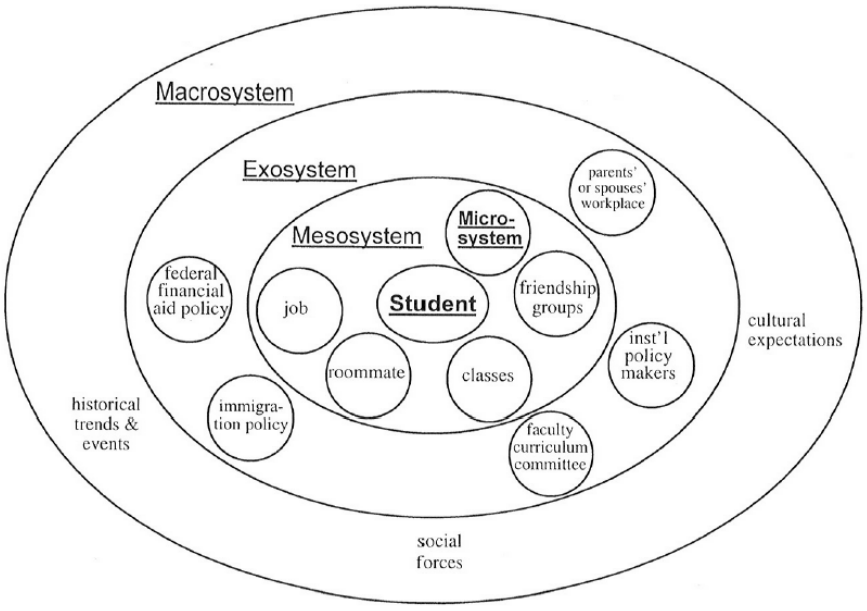


FIG. 1. Bronfenbrenner's Model as Applied to a Postsecondary Environment

Found on pg. 268 in:
Renn, K. A. & Arnold, K. D. (2003). Reconceptualizing research on college student peer culture. *The Journal of Higher Education;* May/Jun 2003; 74, 3.

Also found on pg. 43, labeled Fig. 2.6, The Ecology of College Student Development in:
Renn, K. A. (2004). *Mixed race students in college*: *The ecology of race, identity and community.* Albany, NY: State University of New York Press.

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