

ABSTRACT

Diversity in Students' Personal Networks: An Egocentric Network Analysis of Diversity's Role in Student Thriving

Alyssa Vukelich, M.S.Ed.

Mentor: Rishi R. Sriram, Ph.D.

Racially and ethnically diverse relationships have previously been linked with a multitude of positive benefits in business, K-12 education, higher education, and in communities. Peer interaction has also been shown to influence students' attitudes about life. The Thriving Quotient is a mechanism for better understanding student success and wellbeing from a psychological perspective, and is comprised of five subscales: academic determination, engaged learning, social connectedness, diverse citizenship, and positive perspective. The present research used social network analysis to study how racial and ethnic network diversity of students' networks may play a role in students' psychological thriving outcomes via The Thriving Quotient. The data from this research shows that, while racial and ethnic diversity of students' networks was not predictive of overall thriving, the five thriving subscales were predictive of racial and ethnic diversity variables within peer networks. Specifically, thriving subscales explained racial and ethnic homophily and heterogeneity across student networks.

Diversity in Students' Personal Networks: An Egocentric Network Analysis of
Diversity's Role in Student Thriving

by

Alyssa Vukelich, B.S.

A Thesis

Approved by the Department of Educational Leadership

Robert C. Cloud, Ed.D., Chairperson

Submitted to the Graduate Faculty of
Baylor University in Partial Fulfillment of the
Requirements for the Degree
of
Master of Science in Education

Approved by the Thesis Committee

Rishi Sriram, Ph.D., Chairperson

Natalie Carnes, Ph.D.

Tiffany Hogue, J.D.

Megan Patterson, Ph.D.

Accepted by the Graduate School
May 2019

J. Larry Lyon, Ph.D., Dean

Copyright © 2019 by Alyssa Vukelich

All rights reserved

TABLE OF CONTENTS

LIST OF FIGURES	vi
LIST OF TABLES	vii
ACKNOWLEDGMENTS	viii
DEDICATION	ix
CHAPTER ONE	1
Introduction	1
Why Diversity is Important	2
Diversity in Higher Education	3
Systems and Environment Theory in Relation to Diversity	5
Social Networks as a Way of Analyzing Diverse Experiences	5
Thriving	7
Gaps in the Literature	8
Purpose of Current Study	10
Conceptual Framework	10
Definition of Terms	11
Diversity and Inclusion Terminology	11
Social Network Terminology	12
Thriving Terminology	13
CHAPTER TWO	15
Literature Review	15
Diversity	15
Benefits of Diversity	17
Challenges of Diversity	18
Diversity in Education	19
Diversity in Higher Education	20
Systems and Environment Theories	22
Bronfenbrenner	22
Strange and Banning	24
Systems Theory in Relation to Diversity	25
Social Network Analysis	27
Social Network Analysis as Used to Study Diversity	28
Impact of Social Interactions	30
Peer Influence	30
Interracial Contact	31
Thriving	32
Academic Thriving	33
Intrapersonal Thriving	35
Interpersonal Thriving	35
Gaps in the Literature.....	37
CHAPTER THREE	39
Methodology	39

Instruments for Data Collection	40
Population, Sample, and Participation	41
Variables	42
Independent Variables	42
Dependent Variables	42
Data Analysis	43
CHAPTER FOUR	45
Results	45
Research Questions	45
Descriptive Statistics	45
Ego Characteristic Demographics	47
Alter Demographics	48
Thriving Descriptive Statistics	49
E-Net Analysis	50
Network Diversity Descriptive Statistics	50
SPSS Analysis	51
Multiple Regression	51
Thriving	52
Overall Thriving	52
Engaged Learning	57
Academic Determination	57
Social Connectedness	60
Diverse Citizenship	60
Positive Perspective	65
Predicting Network Sameness and Heterogeneity	65
CHAPTER FIVE	68
Discussion	68
Discussion of the Findings	69
Network Variables	70
Racial and Ethnic Homophily	70
Communication	72
Academic Thriving	73
Academic Determination	73
Engaged Learning	75
Interpersonal Thriving	75
Social Connectedness	75
Diverse Citizenship	78
Intrapersonal Thriving	79
Positive Perspective	79
Implications for the Future	80
Future Research	80
Future Practice	81
Conclusion	83
REFERENCES	86

LIST OF FIGURES

Figure 2.1. Bronfenbrenner's Ecological Model of Human Development	24
Figure 2.2. The five variables of thriving	33

LIST OF TABLES

Table 4.1. Ego Demographic Data	48
Table 4.2. E-Net Variable Descriptions	50
Table 4.3. Regression for Overall Thriving for Whole Sample	54
Table 4.4. Regression for Overall Thriving for White Students in Sample	55
Table 4.5. Regression for Overall Thriving for Female Students in Sample	56
Table 4.6. Regression for Engaged Learning for Whole Sample	58
Table 4.7. Regression for Engaged Learning for White Students in Sample	59
Table 4.8. Regression for Social Connectedness for Whole Sample	61
Table 4.9. Regression for Social Connectedness for White Students in Sample	62
Table 4.10. Regression for Diverse Citizenship for Students of Color in Sample	63
Table 4.11. Regression for Positive Perspective for Students of Color in Sample	64
Table 4.12. Regression for Predicting Homophily in Whole Sample	66
Table 4.13. Regression for Predicting Heterogeneity in Whole Sample	67

ACKNOWLEDGMENTS

I would like to support the many people who have cheered me on, supported me, and helped me process my results during the process of pursuing this research. Thank you most of all to Dr. Rishi Sriram, my thesis chair, for helping me to think through the nuances of this project, for supporting me in and outside of my thesis work, and for supporting my passion for navigating hard subjects (and hard statistics). Thank you also to Dr. Meg Patterson, who has spent countless hours walking me through statistics, helping me think through different ways of looking at my data, commuting to be on my committee, and championing this research from almost the very moment the idea was conceived. Thank you to my committee members Dr. Natalie Carnes and Tiffany Hogue, for asking me difficult questions in pursuit of academic and intellectual excellence. Thank you also to Dr. Allison Ash, who helped light my fire for student care, diversity, and deep, authentic relationships with those around me.

Finally, thank you to my family, my colleagues in the Department of Wellness, my roommate, Natalie, and the many friends who have walked alongside me through this process. This research has not been easy, has often felt overwhelming, and has at times felt like it would never end, but the enthusiasm of the people around me for this project has kept me going through even the most difficult of writing days. Thank you to all who gave me pep-talks, who helped me process, and who brought me coffee when I needed it the most.

DEDICATION

To those who care deeply about the pursuit of
acting justly, loving mercy, and walking humbly.

CHAPTER ONE

Introduction

Justice Thurgood Marshall, in his 1992 Liberty Medal acceptance speech, advocated for building bridges between one another by appreciating differences while also finding the things that make us all fundamentally the same (National Constitution Center, n.d.). The United States is becoming increasingly diverse, with projections of reaching a “majority-minority” population by 2044, meaning racial and ethnic groups currently considered “minorities” are estimated to comprise the majority of the population (Colby and Ortman, 2015). Migration accounts for much of these demographic changes, as the United States has the world’s largest migrant population of more than 40 million foreign-born people living in the country (International Organization for Migration, 2010). In addition to migration, demographics related to bi-racial and multiracial individuals are changing, with interracial marriage increasing and 1 in 7 newborns being multiracial (Livingston, 2017). Organizations such as the Bureau of the Census and the U.S. Department of Education are beginning to accommodate these demographic shifts by implementing surveys that allow individuals to check multiple categories to indicate their racial and ethnic identities (Smith, 2015). When taking into account these demographic shifts, it is becoming increasingly important for education in the United States to consider what it means to understand, value, and appreciate diverse relationships that span racial and ethnic boundaries.

Why Diversity is Important

The concept of diversity is not just an ever-growing statistic. It is also an asset. Numerous studies highlight the importance of diversity within business, education, and society overall. In business, companies that value and promote cultural diversity in addition to innovation and business strategy have a competitive edge over companies with lower levels of diversity (Richard, 2000; Richard, McMillan, Chadwick, & Dwyer, 2003). Additionally, promoting diversity in their organizations helps businesses better connect with the full breadth of their consumer demographics (Adkins, 2003; Cox, 1993, 2001; Wright, Ferris, Hiller, & Kroll, 1995).

Not only does diversity have positive outcomes for business, but it also plays a role in greater society. Interacting with diverse groups of people gives individuals opportunities to be exposed to more ideas and possibilities for thinking about the world. This is demonstrated in research where children with bi-national parents perform better on tests of creativity, flexibility, and originality than children who live in a single-culture home (Chang, Hsu, Shih, & Chen, 2014). Such creativity has also been demonstrated in economic research conducted in diverse neighborhoods, where diverse sets of people are better able to leverage resources and ideas. In their research on ethnically heterogeneous neighborhoods in Bosnia and Herzegovina, Efendic and Pugh (2018) found that people living in ethnically diverse neighborhoods, a rarity in this post-ethnic-conflict society, were less likely to fall into a “low-income” category and more likely to fall into a “medium” or “high income” category. This suggests that, even in a country where ethnic tensions have previously led to extreme conflict, this conflict can be overcome and may actually contribute to positive economic outcomes (Efendic & Pugh, 2018).

Specifically related to education, diversity has strong positive effects on children who attend racially integrated schools. Research conducted within these integrated schools shows that young children exposed to diversity from an early age tend to exhibit reductions in stereotyping and prejudice (Frankenberg, 2013). Additionally, Frankenberg (2013) found that these same students increased in civic engagement as they got older. Academic achievement is also a factor impacted by diverse experiences. Students of Color who attend racially integrated schools have greater academic achievement than those Students of Color in more racially homogenous school settings (Horn & Kurlaender, 2006).

Diversity in Higher Education

Student populations are increasing in diversity on college campuses (Ortiz & Waterman, 2016). This can be seen in the rates at which students of various ethnic backgrounds are pursuing and completing bachelor's degrees. Though substantial gaps still exist in degree attainment between White students and Students of Color, each racial category is seeing an increase in the percent of individuals completing college degrees (U.S. Department of Education, 2016). In 1974, only 6% of Black and 6% of Hispanic U.S. residents obtained college degrees. This is in contrast to 2014, when 22% of Black and 15% of Hispanic residents finished degrees (U.S. Department of Education, 2016).

Not only are demographics changing on college campuses, but institutions are also commonly making diversity a bigger priority. Universities across the U.S. are adding statements of diversity and inclusion to their mission and vision statements, articulating the desire to attract and maintain diverse populations on campus (Wilson, Meyer, & McNeal, 2012). For example, the University of Southern California's (USC)

mission states that “USC is pluralistic, welcoming outstanding men and women of every race, creed and background. We are a global institution in a global center, attracting more international students over the years than any other American university” (University of Southern California, 1993). By making this statement a part of the institution’s mission statement, USC is making clear their commitment to attracting and maintaining a diverse student body.

Many universities also cite the desire to prepare students to go into the workforce and the world (Gitlow & Gitlow, 2013; Sakurai & Pyhältö, 2018). This can be seen through mission statements such as Baylor University’s desire to “educate men and women for worldwide leadership and service” (Baylor University, n.d.). In a world that is becoming increasingly diverse, as forecasted in the U.S. Census Bureau’s Majority-Minority report, institutions seeking to prepare students to enter the workforce and society must account for the diversity they will inevitably encounter (Colby and Ortman, 2015).

Not only is it important to consider diversity as the reality of a changing population, it is also important to consider diversity from a benefits standpoint. In his popular book on the college experience, Light (2001) reports that students who are exposed to diversity, particularly in the first year of college, have greater learning outcomes. Light (2001) observed that students emphasized the importance of interpersonal learning to their college experience. Most notably, he found that 111 out of 120 students interviewed were easily able to name examples of how they had learned from experiencing diversity on their college campuses (Light, 2001). Smith (2015) also

argues that students are able to experience a more well-rounded education when exposed to the wide variety of viewpoints and backgrounds that diverse populations offer.

Systems and Environment Theory in Relation to Diversity

Historically, quantitative student affairs research focuses on students as individuals, looking at descriptive statistics and data on student outcomes and experiences. However, this does not necessarily account for the fact that environments, such as cultures, societies, and other people, all play an integral role in shaping students' lives. Key to understanding how people—and particularly college students—grow and develop is understanding how they are influenced by the environments around them.

The concept that students are impacted by the environment is not new. Multiple person-environment theories propose a variety of ways in which environments impact individuals. Ecological models and theories, such as Bronfenbrenner (1979) and Strange and Banning (2015) discuss the roles other people play in human development. Strange and Banning (2001, 2015) emphasize the notion of “human aggregates” within environments, describing the influence that the majority characteristics in a group influence and impact the various individuals' behaviors. By taking a more comprehensive look at the ways environments influence and shape students, higher education professionals can develop a clearer vision for why students develop in certain ways or how their institution's culture influences student outcomes.

Social Networks as a Way of Analyzing Diverse Experiences

College is a time when a variety of students all come into one central location, the college campus, and begin to pursue similar goals, such as earning a college degree.

Unlike most other environments, students are around one another nearly constantly, studying together, working in on-campus jobs, eating in the dining halls, and living in the same residence halls. This near-constant interaction with one another is unparalleled in nearly any other setting in life.

Students who feel they are well-integrated into the campus community persist at higher rates than those who do not feel well-integrated (Tinto, 1993). Additionally, Newcomb (1962) wrote about the concept of student-peer influence, stating that students in close relationships with one another tend to have an influence over one another's attitude. He calls upon institutes of higher education to learn how to leverage that peer-group influence for the benefit of educational outcomes (Newcomb, 1962).

Social network analysis can be used to investigate the social connectedness of students. A mechanism of systems science, social network analysis has multiple approaches for understanding the networks of people that surround individuals. One approach to social network analysis is full-network analysis, which looks at the entirety of a network by gathering data on every individual in a system (Borgatti, Everett, & Johnson, 2018). This can be done by surveying every member of a student organization, for example.

Another approach to social network analysis is ego-centric network analysis. Ego-centric network analysis looks at individuals, referred to as "egos," and the people in their personal networks, which are referred to as "alters" (Borgatti, Everett, & Johnson, 2018). Personal, or egocentric, networks can be constructed by asking the ego to list the people they feel closest to, for example (Borgatti, Everett, & Johnson, 2018). The respondent provides data on each of their alters. By gathering this data, researchers are

able to see the differences and similarities amongst friend groups and see how different characteristics within students' networks may have an influence on student outcomes.

Homophily is a term used to describe the similarities in characteristics within social networks (Kadushin, 2012). This similarity may be caused either by the idea that people with similar qualities are attracted to one another, or by the idea that groups of people who spend time together will, over time, become more like one another (Kadushin, 2012). Research has found that the old proverb, "birds of a feather flock together" is largely accurate, demonstrating that friend groups often share characteristics with one another (McPherson, Smith-Lovin, & Cook, 2001; Youyou, Stillwell, Schwartz, & Kosinski, 2017). The present study specifically focuses on racial and ethnic homophily within students' personal networks.

While racial and ethnic diversity within networks has been shown to be less common than networks with homophily, there are benefits to seeking out more diverse social networks (Antonio, 2004). Antonio (2004) found that students with more diverse social networks tend to have better intellectual and career aspiration outcomes. This diversity of students' networks plays a significant role in shaping student outcomes (Antonio, 2004).

Thriving

Thriving is also a component of overall college student well-being. Schreiner first wrote about the concept of student thriving in 2010, defining it as optimal functioning in five key domains: (1) Engaged Learning, (2) Academic Determination, (3) Social Connectedness, (4) Diverse Citizenship, and (5) Positive Perspective (Schreiner, 2010, 2012, 2014). This concept of thriving is derived from other research on psychological

well-being and student success. Schreiner (2010, 2012) used these ideas, as well as empirical data gathered both qualitatively and quantitatively, to develop the five-pronged definition of “thriving.”

The Thriving Quotient was developed to address student success from a psychological wellbeing perspective, as opposed to the constructs of student success that are primarily derived from student *behavior* (Schreiner, 2010). The scales used for The Thriving Quotient measure *psychological* constructs, such as determination and perspective, as opposed to typical measures of student success, such as GPA, level of involvement, and retention (Schreiner, 2010). Measuring GPA, involvement, and retention is helpful in understanding student behavior, but these measures do not explicitly account for students’ psychological engagement and wellbeing. The Thriving Quotient examines student success from a more psychological perspective, giving more insight to students’ holistic wellbeing rather than studying what students are achieving through performing certain behaviors.

This concept of thriving is a more holistic approach to student outcomes and what it means to be a well-rounded, successful student in the college environment. Awareness of thriving can better equip higher education professionals to understand why some students seem to do better than others, how the environment around students impacts their success, and what interventions could potentially take place to help enhance students’ success and wellbeing.

Gaps in the Literature

Current research on college students and diversity is not sufficient. Clarke and Antonio (2012) wrote a review of past research on diversity and proposed ideas for new

frameworks and methodologies for studying diversity, explicitly citing a need for more research on the diversity of friendship networks through social network analysis. Past research studying diversity within social networks has focused on the amount of diversity in the network, the types of relationships people have with one another (e.g., close friendship versus acquaintanceships), and the intellectual, civic, and career aspiration outcomes of diverse friend groups (Antonio, 2004; Bowman & Park, 2015). These outcomes have largely been behavioral, demonstrating the influence peers have on student behavior. Additionally, while Clarke and Antonio (2012) advocate for more use of social network analysis among diverse friend networks, much of the existing literature examines diverse interactions without regard for how close the individuals involved are to one another. Based on this recommendation from Clarke and Antonio (2012), more research can be done on the influence close interracial friendships have on students, as well as the influence of diverse interactions on students' psychological outcomes.

While extensive research exists on diversity and various outcomes related to racial diversity and interracial connectedness, there has not been research linking the diversity of college students' social networks to measures of success (Adkins, 2003; Antonio, 2004; Clarke & Antonio, 2012; Cox, 2001; Efendic & Pugh, 2018; Frankenburg, 2013; Horn & Kurlaender, 2006; Light, 2001; Richard, 2000; Richard, McMillan, Chadwick, & Dwyer, 2003; Smith, 2015; Wright, Ferris, Hiller, & Kroll, 1995). The current research investigates how the level of diversity of undergraduate college student networks, as analyzed through social network analysis, impact student success as conceptualized by thriving.

Purpose of Study

Benefits of diverse interactions have been well-documented in past literature (Adkins, 2003; Chang, Hsu, Shih, & Chen, 2014; Cox, 2001; Efendic & Pugh, 2018; Frankenberg, 2013; Horn & Kurlaender, 2006; Light, 2001; Richard, 2000; Richard, McMillan, Chadwick, & Dwyer, 2003; Smith, 2015; Wright, Ferris, Hiller, & Kroll, 1995). While past research exists linking network diversity and behavioral outcomes in students, no such link exists between diversity and psychological outcomes. The Thriving Quotient investigates student success and wellbeing more holistically by getting at the psychological root of these concepts rather than commonly studied behaviors associated with success and wellbeing (Schreiner, 2010). Additionally, social network analysis can be used to study the people surrounding students and, thereby, influencing them (Kadushin, 2012; Borgatti, Everett, & Johnson, 2018). These two concepts, thriving and social network analysis, can be used to study the diversity of students' friend groups and the role that diversity plays in students' psychological success and wellbeing. The present study seeks to utilize this approach to fill the gap in the literature regarding the role diversity of students' friend networks play in students' psychological success and wellbeing. This research is important for student affairs professionals who are working with increasingly diverse college student populations to better understand the role diversity and inclusion efforts play on the health and wellbeing of their students.

Conceptual Framework

In the present study, the term diversity will be defined as structural diversity as it refers to the existence of a variety of different backgrounds in a given population (Pike & Kuh, 2006). More specifically, the present study is examining different racial and ethnic

identities of people within the population that make up the population's racial and ethnic structural diversity (Tatum, 1999). The present study seeks to analyze racial and ethnic diversity within students' personal network through egocentric network analysis (Borgatti, Everett, & Johnson, 2018). While there are multiple approaches to egocentric network analysis, the present study uses the approach that asks students about the five people they feel closest to on campus, which provides data on students' close personal networks (Borgatti, Everett, & Johnson, 2018). The racial and ethnic diversity in students' personal networks, will be analyzed as it relates to students' levels of thriving, which is conceptualized as students' psychological wellbeing and success as measured by Schreiner's (2014) Thriving Quotient. The Thriving Quotient is a method of analyzing students' psychological thriving through the lens of five subcategories: (1) academic determination, (2) engaged learning, (3) social connectedness, (4) diverse citizenship, and (5) positive perspective.

Definition of Terms

Diversity and Inclusion Terminology

Diversity is often used to refer to different characteristics and is used interchangeably with different words, such as inclusion. As such, it is important to note that no one definition of the term will be perfect or all-encompassing. For the purposes of this study, diversity will be defined in terms of structural diversity, which refers to the existence of a number of different backgrounds within a given population (Pike & Kuh, 2006). More specifically, the present study is exploring racial and ethnic diversity,

referring to the different racial and ethnic identities of people within the population (Tatum, 1999).

The term inclusion, like the term diversity, is flawed, often used differently by various people and organizations, and is used interchangeably with other terms. However, for the present study, mentions of the term inclusion will refer to the definition developed by Ekins (2017) in her book on inclusion in schools. Ekins (2017) defines inclusion as dynamic, ongoing, complex processes through which institutions create equitable environments for *all* students, regardless of their background.

Social Network Terminology

Homophily refers to the natural tendency of individuals to have social networks of people who share similar qualities and characteristics (Kadushin, 2012). Propinquity refers to the likelihood that people will build their social networks based on the people who are geographically proximal to the individual (Kadushin, 2012). For example, people who go to the same school are geographically close to one another and, therefore, more likely to become friends than individuals who go to different schools.

Another important term in social network analysis is “ego-centric analysis,” which forms the basis of this study. Egocentric networks are a method of observing people’s connections with others. Specifically, egocentric network analysis asks individual respondents—called “egos”—to provide data on their personal networks (Kadushin, 2012; Borgatti, Everett, & Johnson, 2018). One method of doing this is by asking egos to list the people they feel closest to—referred to as “alters”—in addition to demographic data on those individuals (Kadushin, 2012; Borgatti, Everett, & Johnson, 2018). This network can then be analyzed to better understand the types of people with

whom the individuals (“egos”) are in community (Kadushin, 2012; Borgatti, Everett, & Johnson, 2018).

Thriving Terminology

Schreiner (2010, 2012) describes engaged learning as processing course material in meaningful ways, synthesizing information they are learning, and figuring out new ways to continue learning and applying their knowledge. These students are actively engaging and getting excited about the learning process (Schreiner, 2010, 2012).

The second component of thriving is academic determination, which Schreiner (2010, 2012) describes as being a strong motivation toward academic success. This motivation leads to strong desire and investment in the learning processes in order to do what it takes to pursue academic success (Schreiner, 2010, 2012).

Social connectedness is the third component of Schreiner’s (2010, 2012) concept of thriving. Students are considered “socially connected” when they have healthy relationships with others and are able to effectively maintain those relationships. Additionally, the sense of mattering within relationships and feel cared for by others is a factor that contributes to this aspect of thriving (Schreiner, 2010, 2012).

The fourth component of thriving is diverse citizenship, which Schreiner (2012) describes as being open to the ideas and differences of others. This openness includes valuing the differences found amongst groups and being curious to know and learn more in order to value others (Schreiner, 2010, 2012).

Finally, Schreiner (2010) describes positive perspective as a foundational component of thriving. Students who have a positive perspective have a perspective that allows them to more readily be able to cope with hard situations or challenges. This

coping means staying confident in one's abilities and continuing to persevere toward goals by maintaining an "optimistic explanatory style" (Schreiner, 2010). This optimistic explanatory style is, simply put, maintaining a positive outlook on life by keeping the big picture in perspective (Schreiner, 2010).

CHAPTER TWO

Literature Review

This chapter synthesizes the extensive research that has been done on diversity, specifically in education, and the role ethnic and racial diversity plays in the student experience. Specifically, the present study uses social network analysis to better understand this role diversity plays in student well-being. Thus, this chapter summarizes previous research on diversity, the role environments and systems play in the student experience, social networks, the influence students have on one another, and the concept of thriving as it pertains to students' psychological wellbeing.

Diversity

The term “diversity” has a wide variety of definitions and is relatively ambiguous in nature. Diversity can refer to a range of different backgrounds, characteristics, or beliefs, or, according to the Oxford Dictionary, simply “a range of different things” (Oxford Dictionary, n.d.). Additionally, there are a variety of terms often used interchangeably with diversity, such as multiculturalism and inclusion. However, it is important to note that each of these terms ultimately means something different. Multiculturalism refers to culture and ethnicity more specifically than the term diversity (Oxford Dictionary, n.d.). Structural diversity is, simply put, the existence of a number of different backgrounds within the population (Pike & Kuh, 2006). However, simply having a diverse population does not mean diversity is being embraced or done well, which has led to a shift in how diversity is approached in organizations (Brannon, 2018).

More organizations are shifting toward the idea of “inclusion” in addition to diversity. Inclusion refers to the notion that it is important to not only make space for people from a variety of backgrounds (i.e. provide a path toward more structural diversity) but also to make strides toward enhancing their experience and making them feel welcome and comfortable in the environment by increasing equity across the organization (Brannon, 2018; Ekins, 2017). This was emphasized by former Harvard president Drew Faust when she stated, “Everyone at Harvard should feel included, not just represented in this community [...] Diversity must become belonging (Brannon, 2018). However, the use of the term “inclusion” is also contested, as the term is often, like “diversity,” interpreted differently by various constituencies and is often conflated with or used interchangeably with “diversity” and/or “multiculturalism,” despite each having distinct definitions.

To better understand the terms “racial diversity” and “ethnic diversity,” it is important to consider the concept of identity. Tatum (1999) describes racial identity as a social construction based on the physical features of groups of people, such as their skin color. She describes ethnic groups as being socially constructed as well, stating that they are based on cultural factors rather than physical ones (Tatum, 1999). Therefore, structural diversity as it pertains to racial and ethnic diversity utilizes these concepts of identity to understand the various backgrounds of people within the given population. Understanding these terms are critical to the present study, which will seek to understand the role racial and ethnic identities within friend groups play in students’ thriving.

Language is an important element of diversity conversations due to the nuanced and socially defined nature of diversity, racial, and ethnic identity. In her groundbreaking

book on race, Tatum (1999) states that categories used to describe race and ethnicity are imperfect, with many labels originally intended to exclude and oppress certain groups. Additionally, these labels are ever-evolving, with new categories being routinely added and changed as U.S. Census Bureau demographic options (Tatum, 1999). However, Tatum (1999) also states that imperfect, socially defined and constrained language cannot be changed without being willing to begin a conversation on it. As such, she proposes being willing to use the terms associated with racial and ethnic categories, though imperfect, to begin the dialogue on race. The terms that will be used in the present study will, to the best of the researcher's abilities, preserve the racial and ethnic categories as selected by study participants in order to maintain the integrity of the categories participants feel most comfortable identifying with.

Benefits of Diversity

One prominent theory behind the promotion of diversity is that of Intergroup Contact Theory (Allport, 1954). The original theory states that contact between different groups of people can be helpful in reducing both bias and conflict between groups (Allport, 1954). However, more recent studies have found that intergroup contact must be positive in order to stimulate these reductions in prejudice and conflict (Pettigrew & Tropp, 2006). If diversity is going to be promoted in the workplace and in education, it is important to address the outcomes regarding the reduction of intergroup conflict, as these studies highlight.

One method for arguing the benefit of diversity is referred to as the "business case for diversity," that argues the economic value of diversity in the workplace and in society (Cox, 1993; Richard, 2000; Richard, McMillan, Chadwick, & Dwyer, 2003). This

approach has been used in numerous studies linking diversity with company performance, often stating that increased diversity in the workplace leads to economic gains by the organization (Richard, McMillan, Chadwick, & Dwyer, 2003). Herring (2017) explored the impact of racial diversity in the workplace on several different fronts, finding a correlation between racial diversity and company outcomes across company size, region, and industry. He found that there is a positive relationship between racial diversity in the organization and market share, number of customers, sales revenue, and overall profitability (Herring, 2017).

A series of five different studies concluded that individuals living in racially diverse neighborhoods exhibited more prosocial behaviors, including being more willing to spontaneously offer help to others and being more willing to help after a disaster (Nai, Narayanan, Hernandez, & Savani, 2018). Each of these studies found that exposure to diversity in a residential setting, including even simply *imagining* living in a more racially diverse neighborhood, led to increased willingness to help neighbors in need (Nai, Narayanan, Hernandez, & Savani, 2018). This imagination of cross-cultural interaction has also been documented elsewhere, as Stathi and Crisp (2008) found that simply simulating positive contact with people in various “outgroups”—or groups different from the participant—leads to the projection of positive traits onto the outgroup.

Challenges of Diversity

While diversity is on the rise and is associated with a number of important benefits, it is important to note several challenges associated with increasing diversity. In research done in corporate workplaces, diversity programming has been found to sometimes lead to more tension amongst coworkers (Brannon, Carter, Murdock-Perriera,

& Higginbotham, 2018). This is because many diversity and inclusion efforts have faced backlash from one group or another over their implementation. Brannon et al. (2018) highlight the idea of diversity programming as often being couched as a “zero-sum” effort. In this, organizations open themselves up for backlash from dominant groups who may perceive these efforts as a threat (Brannon et al., 2018). This leads to a common critique of diversity in the workplace: the argument that the tension diversity may cause between groups is detrimental to group functioning and efficiency (DiTomaso, Post, & Parks-Yancy, 2007; Tsui, Egan, & O’Reilly, 1992).

In addition to challenges seen in the workplace when it comes to increasing diversity, there have been challenges in education for certain populations as well. Gurin (1999) found that, while white students tend to have consistently positive results from interacting with diverse peers, African Americans and Latinos tend not to experience the same benefits from diverse peer interaction. This research demonstrates the importance of considering the impact diversity efforts have on all groups, as increasing diverse peer-interactions may not have positive benefits for the marginalized groups seeking inclusion.

Diversity in Education

Diversity within education has long been a contested topic. K-12 schools prior to 1954 were segregated by race, predominantly between African American and White students (Brown v. Board of Education, 1954). During the Civil Rights Movement, efforts were made to desegregate schools such as through the Brown v. Board of Education decision, which declared state laws that established segregated schools unconstitutional (Brown v. Board of Education, 1954). Though these efforts were made, schools have continued to remain largely segregated, as many schools are separated

based on their geographic location and the inhabitants of different neighborhoods (Frankenberg, 2013; Jayakumar, 2008; Reardon & Owens, 2014; Tatum, 1999). Segregation remains a notable feature of residential areas, leading to segregation in school districts as well. Because the schools children attend are largely influenced by the neighborhood in which they live, and neighborhoods are frequently divided by race, segregation of schools continues despite the laws passed in the Civil Rights era (Frankenberg, 2013; Orfield, 2001; Orfield, Bachmeier, James, & Eitle, 1997; Tatum, 1999). This residential and educational segregation has led to higher rates of African American, Latinx, and Native American students attending high poverty schools than White students (Race & Lander, 2014).

Diversity in Higher Education

As previously noted, K-12 education continues to be largely segregated, meaning many incoming first-year students enter college without having extensive experience interacting with those who are different from them (Reardon & Owens, 2014). Upon arriving at college, many students are faced with diverse peers for the very first time. White students, in particular, report growing up in nearly all-White environments prior to entering college (Jayakumar, 2008). Not only may students be experiencing more structural diversity than before simply by being exposed to diverse people, but college is also a period of time where community outside the family is almost constant. Students are going to class, eating, and living together in the same space, leading to more frequent interactions with peers as well.

This newfound exposure to people from different backgrounds has been well-documented, demonstrating the positive impact it has on students in higher education.

Leung and Chiu (2010) found that undergraduate students who have recently been exposed to a culture different from their own display higher levels of creativity, openness to new ideas, and the generation of more innovative ideas. The idea that cross-cultural engagement is linked to increased creativity was also shown in studies with bi-national parents, who demonstrated increased creativity as compared to children raised in single-culture homes (Chang, Hsu, Shih, & Chen, 2014). In addition to creativity and innovation, cross-cultural interaction has been posited to help develop empathy in students. Piaget (1965), in his well-known theory of moral development, discusses the concept of “perspective-taking,” which is described as the ability to understand the feelings that others have, despite having different points of view. However, for students to be able to develop this ability to perspective-take, they must first be actually *exposed* to those individuals with whom they have a different perspective (Piaget, 1965). These studies, while not specifically referencing racial and ethnic diversity, highlight the importance of learning to navigate relationships across different backgrounds, including differences in race and ethnicity.

In addition to these studies on interacting across cultures and other differences, Allport (1954) suggests that students must have positive and meaningful interactions with those from different races and ethnicities. Simply interacting within the context of structural diversity is not enough to gain the benefits that can be developed through cross-racial interactions in higher education (Allport, 1954; Gurin et al., 2002). Gurin et al. (2002) also report the importance of developing content knowledge, or what they term *classroom knowledge*, on race and ethnicity in addition to simply having positive interactions with diverse peers.

Systems and Environment Theories

Systems and environment theories of human development also account for the larger sum of the parts, arguing that the environment directly or indirectly impacts individuals. Two person-environment theories that are particularly salient to the present study are Bronfenbrenner's (1979, 1993, 2005) ecological model and the concept of "human aggregate environments" found within Strange and Banning's (2001) environment theory.

Bronfenbrenner (1979, 1993, 2006)

Bronfenbrenner (1979) emphasized the role of the environment in human development, proposing that:

The understanding of human development demands more than the direct observation of behavior on the part of one or two persons in the same place; it requires examination of multi-person systems of interaction not limited to a single setting and must take into account aspects of the environment beyond the immediate situation containing the subject (p. 21).

To account for this more holistic view of an individual's context within an environment, Bronfenbrenner (1979, 1993, 2006) developed a system of concentric circles to demonstrate the influence the environment has on individuals, as seen in figure 2.1. These concentric circles account for what Bronfenbrenner describes as different levels of the environment and its influence on the individual in the system. Each circle encompasses a broader component of the environment around the person. The level immediately around the individual is the microsystem, which is comprised of the immediate interactions occurring with the individual, such as interactions with close friends, family, and other people the individual is close to. The next level, the mesosystem, is the interaction between microsystems and the impact that interaction has

on the individual (Bronfenbrenner, 1993). For example, different classroom settings are considered microsystems, and those microsystems can work together *or* work against one another to develop the student. One such example of the mesosystem is the concept of military academies, where a variety of microsystems adhere to the same policies and procedures, leading to consistency across the board and the increased chance each microsystem will lead to similar outcomes in the student (Renn & Arnold, 2003). The exosystem is broader than the micro- and mesosystems and includes parts of the environment that influence the more central concentric circles. For example, influences comprised by the exosystem may include the governing bodies that develop financial aid policies, influencing the availability of money for students and, therefore, the demographics of the institution (Bronfenbrenner, 1993). Finally, the macrosystem is the “overarching pattern of [systems] based on a given culture, subculture, or social structure” (Bronfenbrenner, 1993, p. 25). This level of the theory is important because it encompasses the other levels, influencing them through social and historic norms of the culture and society the individual is set within.

Bronfenbrenner’s (1979, 1993, 2005) model serves as a roadmap through which to understand the role the environment has on an individual’s development. This model is helpful for understanding *why* an individual develops in a particular way, not just the outcomes the individual has.

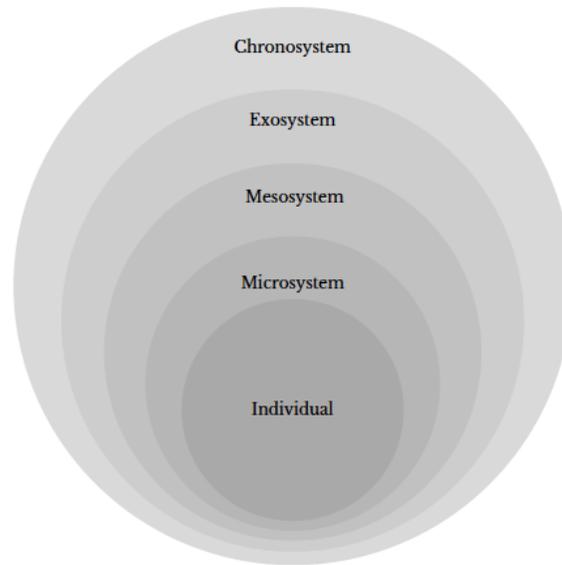


Figure 2.1 Bronfenbrenner's (1993) Ecological Model of Human Development

Strange and Banning (2001, 2015)

Strange and Banning (2001, 2015) also believed that individuals are highly influenced by the environment around them. They developed a model comprised of four components to demonstrate how they believe environments influence individuals: (1) physical environments, (2) organizational environments, (3) human aggregate environments, and (4) constructed environments (Strange & Banning, 2015). The most salient of these influences for the present study on peer interaction is the concept of the human aggregate environment. This aspect of the model suggests that environmental influences are largely propagated through human interactions (Strange & Banning, 2015). Therefore, the ideas most likely to be spread through the environment are those embodied by the most prominent group in the context and that group's dominant characteristics (Holland, 1973; Moos, 1986; Strange & Banning, 2015). This is particularly salient in research on diversity, as the structural diversity shifts the dominant characteristics that

are found or not found within a group, changing the influence the group has on individuals in the environment.

Systems Theory in Relation to Diversity

One concept that is consistently highlighted in research about social networks is that of homophily. Homophily is the theory that people's social networks, the people they surround themselves with, tend to be homogenous in nature (Kadushin, 2012; Meadows, 2008; McPherson, Smith-Lovin, & Cook, 2001; Newcomb, 1961). McPherson, Smith-Lovin, and Cook explore this concept in their research on why "birds of a feather, flock together." They argue that this tendency to naturally segregate and only associate with like-minded peers creates divisions between people groups, particularly on the basis of race and ethnicity.

Another important concept within systems theories is that of propinquity. Propinquity refers to the idea that people develop social networks based on the people who are readily available to them in a particular, physical space (Kadushin, 2012; Newcomb, 1961). This concept is important when discussing diversity in education, as this theory speaks to how and why students tend to have homophilous friend groups. Students in K-12 education tend to not have as much access to people who are different from them, so, in accordance with the concept of propinquity, those students are less likely or even unable to develop relationships with diverse peers. This concept also speaks to why, in the college setting, students may suddenly have more access to relationships with diverse peers, as higher education tends to have more structural diversity than the neighborhoods and schools K-12 students experience (Kadushin, 2012; Vavrus, 2015).

Additionally, thinking about college students in terms of the environment and systems around them is advantageous, as this method helps professionals understand why trends occur over time. For example, a key aspect of systems theory is the concept of feedback. Feedback, simply put, can be described as responses to certain events occurring that then impact the original event again (Meadows, 2008). For example, research has found that being exposed to diversity as children has been linked to the seeking more diverse settings later in life (Vavrus, 2015). This is seen in students who attended integrated schools and grew up in diverse neighborhoods, as these students are more likely to move into diverse neighborhoods as adults. This demonstrates the concept of feedback within systems, because students impacted by diverse experiences (diverse experiences as children being the original event) and more likely to seek out similar diverse experiences later in life. In seeking out more diverse experiences, these individuals will likely also expose their own children to diversity, creating a chain reaction—a feedback system—of individuals who consistently seek out and expose others to diversity. By understanding how systems theories and models work, such as the concept of feedback, it can help higher education professionals understand why certain behaviors occur and persist across time.

Another concept of feedback that is used within organizational systems theories is the concept of loops of liking and interaction. Birnbaum (1988) discusses this concept, as derived from Homans' (1950, 1961) sociological research on social behavior, in his work on the organization and functioning of colleges. This theory states that individuals or groups that spend time together tend to like each other and the more interactions people have with one another, the more their liking of each other increases (Birnbaum, 1988;

Homans, 1950, 1961). Newcomb (1961), in his foundational research on the acquaintance process college students go through, found that students tend to like the people they spend the most time with, confirming this theory for the undergraduate population. If students are being exposed to diverse peers for the first time in the college setting, there will be more opportunities for loops of liking and interaction to take place between diverse peers, building more opportunities for cross-cultural engagement as students become friends with those around them. Bowman and Park (2014) emphasize the concept of loops of liking and interaction by hypothesizing that repeated interaction with students of different races may lead to interracial friendship across time.

Social Network Analysis

A data analysis method within systems theory is social network analysis. This type of data collection and analysis provides information on the networks of individuals within the system and the ways in which various individuals are connected to one another. There are two primary methods of analyzing social network. Whole network analysis collects data from a network of people in its entirety, then analyzes the structure of that group (Borgatti, Everett, & Johnson, 2018). An example of this is a study by Patterson and Goodson (2017) which explores the network found in a college sorority. Patterson and Goodson (2017) surveyed the entirety of the sorority to gauge levels of compulsive exercising amongst members of the group. They were then able to create a visual map of the data that displays how members of the sorority were connected to one another. This visual map allowed the researchers to pinpoint students who exhibited higher levels of compulsive over-exercise and were able to see that these students were more frequently connected to sorority members who were considered “important” or

“powerful” within the group (Patterson and Goodson, 2017). By mapping out the structure of the group, Patterson and Goodson (2017) were able to pinpoint particular students who are more at risk in sorority groups of compulsive over-exercise.

The second method of social network analysis is called “egocentric” network analysis. This method looks more at the connections individuals have in their own personal networks, rather than a full network of people. One method of egocentric studies, as is used in the present research, asks individuals—referred to as “egos”—to name the people they feel closest to—referred to as “alters.” Additionally, data is collected from the ego about each of the alters. This information is typically demographic data such as the alter’s relationship to the ego, the strength of their relationship according to the ego, race/ethnicity, gender, etc. (Borgatti, Everett, and Johnston, 2018). Collecting this data about each of the alters gives insight about the types of people the individual is interacting with routinely. This ego-centric method is the basis for the present ego-centric research.

Social Network Analysis as Used to Study Diversity

A number of recent studies have employed social network analysis in the study of diversity, exploring the diversity of friendship networks and the different types of interactions students have with diverse peers. Clarke and Antonio (2012) wrote a critique of current research on diversity that calls for more research using social network analysis. They raise three critiques on diversity research that has been done to this point: (1) current research methods rely too much on the experiences of the individuals and do not consider the “relational embeddedness” of students (Clarke & Antonio, 2012, p. 31; Coleman, 1958); (2) current research does not adequately address the various types of

interracial interactions between students, such as the strong ties of a close friendship, as compared to the weaker ties of a work acquaintance, and the differing outcomes that may result from each; and (3) the current research does not account for differences in interracial availability that students of different racial or ethnic groups may face (e.g., a Black student on a predominantly White campus will have more opportunities to interact with someone of a different race than a White student at the same institution; additionally, students of different racial and ethnic backgrounds are not distributed evenly across campus, with students congregating in homophilous groups on campus, making it possibly less likely for certain groups to encounter people with which they are able to have interracial interactions; Clarke and Antonio, 2012).

Clarke and Antonio (2012) go on to encourage future research using social network analysis to further study diversity. They state that network studies are a way to “counter the macroscopic characterization of campus diversity that is reflected in much of the early research agenda” and encourage more research that focuses specifically on the diversity of close friend networks (Clarke and Antonio, 2012, p. 45).

Antonio (2004) has also done his own research on the diversity of peer networks, using methods similar to those of social network analysis. In one study, he looked at the racial composition of friend groups to determine if the racial composition changed students’ racial understanding, cultural awareness, and interracial interaction (Antonio, 2001). To do this, Antonio (2004) created four categories into which he separated students: (1) Homogenous, with one racial/ethnic group making up the entirety of the friend group; (2) predominantly one race/ethnicity, with 75-99% of the group being of one race/ethnicity; (3) majority one race/ethnicity, with 51-74% of the group being from

one particular racial/ethnic group; and (4) no majority, with less than 50% of the friend group being comprised of one particular racial/ethnic group. Antonio (2004) then found that diversity in friend groups was correlated with increased interactions with diverse peers. This is important because this finding demonstrates the behavioral feedback loop involved in diverse peer interactions: Students who have diverse friend groups are more likely to continue socializing with those who are different from them (Antonio, 2004).

Impact of Social Interactions

Peer Influence

The influence peers have on one another has long been documented in higher education research. This influence is seen in previously mentioned person-environment models, such as Bronfenbrenner (2005) and Strange and Banning's (2015) concept of the human aggregate environment. In his extensive writing on peer influence and the acquaintanceship process, Newcomb (1962) discusses the role friends and acquaintances have on one another. He describes peer influence as group power that influences individuals within the group (Newcomb, 1962). Newcomb (1962) posits that this group power that influences students comes from the habit-building nature of human beings: People develop habits based on the things they get rewarded or punished for doing. Therefore, if a student gets rewarded or punished by their peer group, that response reinforces a behavior or habit in a student (Newcomb, 1962).

This peer influence has been well-documented in behavioral health studies. Research by Lorant and Nicaise (2014) found that students who are in close relationships with people who frequently binge drink leads to increased likelihood of also being a

frequent binge drinker. Additionally, studies exploring the environmental influences on students' eating choices found that peers influence students' eating behavior, such as their choice to make a meal at home versus buy lunch on-campus (Deliens, Clarys, Bourdeaudhuij, & Deforche, 2014). Finally, students who were exposed to online photos, such as those on social media, of their peers at parties was positively correlated with increased alcohol and tobacco use (Huang et al., 2014).

Interracial Contact

Bowman and Park (2015) found differences between types of interracial connections. Using Social Network Analysis, they investigated two different types of interactions between diverse peers: what they term “cross-racial interaction” and “close interracial friendship.” “Cross-racial interaction” is simply interaction, but not necessarily friendship, between peers of different racial or ethnic groups. “Close interracial friendship,” on the other hand, represents deeper connections between students of different races (Bowman and Park, 2015).

Many different student development theories exist on racial and ethnic diversity and cross-racial interactions. However, one particularly salient theory for the present study is Chavez, Guido-DiBrito, and Mallory's (2003) concept of learning to value the other, as shown in Figure 2.2. This framework offers a concept for how students develop multicultural appreciation and integration across time (Chavez et al., 2003). This particular framework is salient for the present study, as it emphasizes the importance inter-cultural and cross-racial interaction is for student development. At the most basic level of this framework, students have not even been exposed to those that are considered “other,” or different from the students' own culture. Chavez et al. (2003) emphasize that,

at minimum, students must be exposed to diversity in order to know how to engage with those who are different from themselves. From there, students are better able to be self-reflective, inquisitive, and, ultimately, validating of those who come from different racial, ethnic, and cultural backgrounds (Chavez et al., 2003).

Thriving

Schreiner (2010) developed the concept of thriving based on other psychological constructs of college student development and experiences, including research on student flourishing and the psychosocial factors contributing to retention. This framework was developed based on the notion that student success is generally conceptualized as the measureable qualities of academic performance and persistence. However, these qualities are not necessarily accurate indicators of students' overall wellbeing in the college environment. Schreiner (2010) illustrates the concept of thriving by telling the stories of two students, both of whom were retained until graduation and who each performed reasonably well academically. However, one of these students, Angela, took advantage of more opportunities at her institution, seemed to struggle less, and was able to overcome obstacles when she faced them. Carla, on the other hand, seemed unsure of herself throughout her college experience, refraining from campus involvement and merely meeting requirements to make the grade, rather than being invested in her learning. Schreiner (2010) posits that while Carla merely did what was necessary to "survive" college, Angela "thrived" in college. Based on these observations, Schreiner (2010) developed the "thriving" framework and assessment, giving more depth to the notion of college student success and proposing that "success" should not be merely defined by academic performance and retention. Schreiner (2010) developed three

themes of thriving: academic thriving, intrapersonal thriving, and interpersonal thriving. These themes are subsequently made up of more specific sub-variables of engaged learning, academic determination, positive perspective, social connectedness, and diverse citizenship, as demonstrated in Figure 2.2.

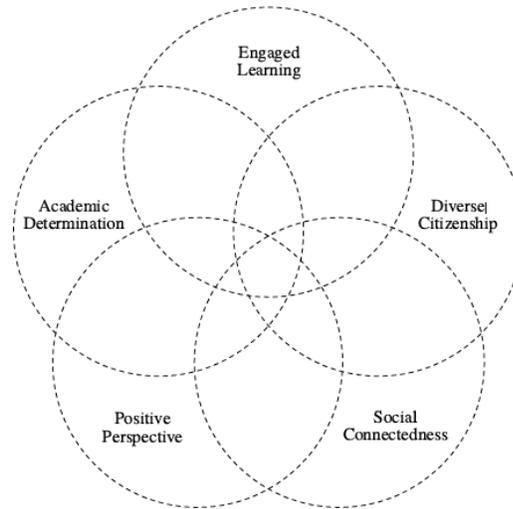


Figure 2.2. The five variables of thriving

Academic Thriving

Academic thriving is composed of two components: engaged learning and academic determination. Engaged learning is the level of psychological engagement the student is demonstrating with regard to the material (Schreiner, 2012). Schreiner (2012) says students who are engaged learners are “meaningfully processing course material, making connections between what they already know, or are interested in what needs to be learned” (p. 42). Additionally, Schreiner (2010) describes these students as “energized by what they are learning” (p. 42). Another important quality of engaged learners is focused attention on what is happening in a given moment, as derived from the concept of mindfulness (Langer, 1997). This mindfulness helps students focus on the

task at hand, rather than get distracted and scattered. Schreiner (2012) assesses this aspect of thriving by asking students questions such as “I feel energized by the ideas I am learning in most of my classes,” and “I find myself thinking about what I’m learning in class, even when I’m not in class.”

In addition to being engaged learners, Schreiner (2012) says students with academic determination are self-regulating by being effective time-managers, setting clear goals, and developing strategies to reach those goals. Schreiner (2010) also describes goal-directed thinking as “academic hope,” describing the optimism and motivation involved in working toward difficult goals. Ultimately, Schreiner (2010, 2012) states that students who are academically determined are able to manage themselves and have an internal locus of control that drives them to be able to accomplish long-term academic goals. Tagg (2003) states that students must be actively engaged in the learning process and be more learning-oriented than grades-oriented. Additionally, McKillip, Godfrey, and Rawls (2013) found that urban high schools that cultivated a culture of academic engagement led to higher levels of college-going for students. Multiple studies in the college setting have also shown the benefits of engaged learning as an aspect of the institution’s culture, leading to students who report higher levels of academic enjoyment, increased learning, and retention (Chickering & Gamson, 1987; Nelson Laird, Chen, & Kuh, 2008). The Thriving Quotient assesses academic determination through survey items asking about confidence in ability to reach academic goals, whether or not respondents know how to apply their strengths, and students’ perceptions of their own resiliency in working through assignments that are less intriguing (Schreiner, 2012).

Intrapersonal Thriving

Intrapersonal thriving is defined by the singular variable of positive perspective, having a positive point-of-view that leads to a realistic perception of issues and a willingness to find effective coping strategies (Schreiner, 2010). Schreiner (2010) bases her concept of positive perspective off the psychological idea of having an “optimistic explanatory style.” Explanatory style is a personality trait that describes “the habitual way in which individuals explain to themselves the cause of the negative events that befall them” (Maier & Seligman, 1976; Maleva, Westcott, McKellop, McLaughlin, & Widman, 2014). More specifically, having an *optimistic* explanatory style is having a positive outlook on challenges (Maier & Seligman, 1976). This is closely related to the concept of positive psychology and the premise that the things that make life worth living ought to be studied as much as problems ought to be studied (Steen & Peterson, 2009). Schreiner (2010) states that students with a positive perspective tend to be more resilient, continuing to work toward a goal despite setbacks or slow progress. This has been corroborated by research linking optimistic explanatory style to reduced risk for suicide attempt in young adults (Hirsch & Rabon, 2015). In education, having an optimistic explanatory style has been positively linked to increased motivation, higher GPAs, and increased retention (Nes, Evans, & Segerstrom, 2009). Schreiner (2012) asks students about their ability to look for the best in difficult situations to assess this characteristic of positive perspective.

Interpersonal Thriving

Finally, the third theme of Schreiner’s (2010) research is interpersonal thriving, which is composed of the variables social connectedness and diverse citizenship. Social

connectedness refers to students' ability to develop and maintain healthy relationships and how strongly they feel a sense of community on campus (Schreiner, 2010).

Schreiner (2010) states that being socially connected to other students through the maintenance of healthy relationships is critical to other aspects of thriving, such as positive perspective and academic determination, as social support helps to cultivate resiliency and ability to persevere through challenges. Additionally, students must feel as if they are a part of a community that is larger than themselves, which contributes to their psychological sense of belonging on campus (Lounsberry & DeNeui, 1995).

In order to feel this sense of community, Cheng (2004) found that students must have four things: (1) Students must feel cared about by others, (2) they must feel valued by their higher education institution, (3) they must not feel a sense of loneliness, and (4) they must feel connected to the mission of the institution. Additionally, Hurtado and Carter (1997) highlight the importance of group membership on student sense of belonging. In order to feel a sense of community on campus, there must be membership in a group where students are able to feel that they belong and where they feel there is a space for them on campus (Hurtado & Carter, 1997). This concept of membership also speaks to efforts to increase inclusion, not just structural diversity, on colleges campuses. To assess students' perceptions of social connectedness, the Thriving Quotient asks questions regarding students' perceptions of number of close friendships, perceived levels of care the respondent receives from friends, and students' feelings of loneliness (Schreiner, 2012).

Diverse citizenship, on the other hand, is comprised of two concepts: openness to diversity and citizenship. Students who are thriving in the diverse citizenship category of

The Thriving Quotient seek out opportunities to learn from those who are different from them and seek to increase their personal cultural maturity through learning about and respecting the cultures of others (Schreiner, 2010). Additionally, students who are considered diverse citizens are committed to “making a difference in the world” through civic engagement and seeking to have a positive influence on the people and environment around them (Schreiner, 2010). This aspect of Schreiner’s (2010) Thriving Quotient corroborates the numerous studies outlining the benefits of diverse interactions (Allport, 1954; Cox, 1993; Light, 2001; Nai, Narayanan, Hernandez, & Savani, 2018; Richard, 2000; Richard, McMillan, Chadwick, & Dwyer, 2003; Smith, 2015; Stathi & Crisp, 2008). Students’ levels of diverse citizenship are assessed using survey items in the Thriving Quotient such as “I spend time making a difference in other people’s lives,” and “I value interacting with people whose viewpoints are different from my own.” (Schreiner, 2012).

Gaps in the Literature

Social network analysis has been used increasingly in diversity research. However, many of the studies focus on the types of relationships being built and on the behaviors social networks create in students. Bowman and Park (2015) explore two types of diverse interactions, cross-racial interactions and close interracial friendships, differentiating between the outcomes for students who report having weaker interpersonal ties with students of other races/ethnicities and the outcomes of students who report having stronger ties to those from other races/ethnicities from themselves. This study explores the differences in outcomes between these types of interactions, rather than focusing on the effects of having explicitly close friendships with students of other races

and ethnicities. Additionally, this study and others focus primarily on the behavioral implications, such as plans to volunteer more in the future and civic engagement, and the students' racial belief systems and biases, such as their ability to get along with those from other races and their beliefs about different racial groups' abilities and attitudes, of having cross-racial interactions, rather than the psychological effects.

Existing literature lacks clear, empirical connections between cross-racial friendships and possible psychological effects. While research has been done on diverse interactions between peers, the study of psychological effects have been minimal, primarily focused on outcomes in student sense of belonging based on race, the type of cross-racial interaction taking place, and the behavioral outcomes of cross-racial interactions (Antonio, 2001; Clarke and Antonio, 2012; Hurtado & Carter, 1997)

Finally, the Thriving Quotient is relatively new and is still being explored as a method of measuring student success and well-being (Schreiner, 2010). Preliminary research by Schreiner on the differences in pathways to thriving for Students of Color as compared to White students is a start, but no research to date measures student thriving based on the number of close cross-racial friendships a student has (Schreiner, 2014, Ash & Schreiner, 2016). Using Social Network Analysis and the Thriving Quotient, the current study attempts to fill the gap in literature linking diverse peer interactions, specifically close cross-racial friendships, with a holistic measurement of student success.

CHAPTER THREE

Methodology

Research on diversity has not extensively examined the role diverse friendships play in students' psychological wellbeing. While past research has gathered data on the *behavioral* influences diverse friendships have on students, little data exists on *psychological* influences. The present study seeks to fill that gap by collecting empirical data on the diversity of students' friend networks and correlating levels of thriving.

The current quantitative research study is characterized by a post-positivist epistemology. This epistemology is a worldview that believes there is an objective reality that exists and that researchers seek understanding and knowledge about that reality. However, this worldview also believes that humans are unable to discover truth in its entirety due to human errors and limits (Creswell, 2014; Sriram, 2017). Based on this epistemology, quantitative research uses empirical data collection and analysis via statistics to learn more about relationships between different variables (Sriram, 2017). The current study uses a quantitative approach to study the relationship between the diversity of college students' friend groups and student levels of thriving based on an existing measurement scale called "The Thriving Quotient" (Schreiner, 2012). The Thriving Quotient scale was developed to more holistically understand factors contributing to student success using quantitative methods.

This study uses a cross-sectional design, meaning data is collected at a specific point in time (Vogt & Johnson, 2016). This approach is useful for network analysis studies, as this type of research seeks to understand the influence of social networks on

students, which is done within the existing social contexts of students. Taking a cross-sectional approach via social network analysis means it looks at how students' networks are at a particular point in time, which is helpful for understanding the *current* context of students' social networks.

Instruments for Data Collection

Social network analysis is a quantitative method used to collect data on the connections between people and the information that passes through those connections (Kadushin, 2012). Two methods exist for collecting social network data: sociocentric data collection—studying the entirety of a network such as all the students involved in an organization, and ego-centric network data collection—studying the connections specific individuals have with others (Borgatti, Everett, & Johnson, 2018). The present study collected ego-centric data, focusing on the students' personal networks rather than focusing on whole networks of students, such as a student group. To collect ego-centric network data, student participants (referred to as “egos”) were asked to report demographic data on the five people they feel closest to on campus (referred to as “alters;” Borgatti, Everett, & Johnson, 2018). Then, egos provided data for each of their alters, including race and ethnicity, gender, and the alter's relationship to the ego (e.g., friend, mentor, roommate, etc.). This method is referred to as name generator and name interpreter data collection, with name generator referring to the generation of names of those the respondents feels closest to (alters) and name interpreter referring to the information collected about each of these nominated alters (Borgatti, Everett, & Johnson, 2018).

Thriving is a concept that seeks to more holistically study student success and flourishing (Schreiner, 2010). To achieve this, Schreiner (2010) developed “The Thriving Quotient” to gather quantitative data on five latent variables comprising “thriving:” engaged learning, academic determination, positive perspective, social connectedness, and diverse citizenship. The Thriving Quotient consists of 24 items and uses a 6-point Likert scale, ranging from 1, indicating “strongly disagree,” to 6, indicating “strongly agree” to measure each of the five variables. The 2016 edition of The Thriving Quotient reported a Cronbach’s alpha—a measurement of internal consistency used to determine scale reliability—of .89. Additionally, Cronbach’s alphas were reported for engaged learning ($\alpha=.87$), academic determination ($\alpha=.82$), social connectedness ($\alpha=.83$), diverse citizenship ($\alpha=.79$), and positive perspective ($\alpha=.78$). For the purposes of this study, a Cronbach’s alpha of .70 or higher is considered reliable (Sriram, 2017).

Population, Sample, and Participants

The population for this research is college students across two different college campuses: a mid-sized, private university in the South; and a large, public, research university in the South. The sample for this research consists of students who received and responded to the survey through the distribution methods employed at each college or university. Surveys were sent out to students through faculty and staff members at each institution. These staff and faculty members then passed along the surveys to the classes and student organizations they teach and advise. This convenience sampling method was used to ensure a broad sample size throughout each of the varying institution

and student types by reaching out to students in a variety of fields and levels of campus-involvement. Data will be collected using the online software Qualtrics.

Variables

Independent Variables

The independent variables in this study were related to the presence of diversity within the student networks. These variables were the racial and ethnic compositions of nominated alters, homophily (the “sameness” between the ego and the alters), and heterogeneity of the network. These independent variables were created by analyzing the data of nominated alters in the software system E-Net (Borgatti, 2006). This software transforms reported network data into compositional egocentric network variables, which are variables that describe the composition of the ego’s network (i.e. the level of structural racial/ethnic diversity of alters in the network; Borgatti, Everett, & Johnson, 2018). These compositional variables on network diversity serve as the independent variables in the analysis.

Dependent Variables

The Thriving Quotient is used to gather holistic data on students’ psychological well-being based on five variables, each measured with its own unique subscale: engaged learning, academic determination, positive perspective, social connectedness, and diverse citizenship (Schreiner, 2016). The engaged learning subscale consists of questions regarding students’ eagerness and enthusiasm for learning (Schreiner, 2016). The academic determination subscale asks questions regarding confidence about reaching educational goals, work ethic, and ability to overcome educational obstacles (Schreiner,

2016). Social connectedness is measured using subscale questions about the ability to make friends, how much students feel cared for by their friends, and how content students feel about their current friendships (Schreiner, 2016). The subscale for diverse citizenship asks questions about students' perceptions of community impact, openness to diversity, and perceived growth and learning based on interactions with diverse peers (Schreiner, 2016). Finally, positive perspective is measured using a subscale of questions asking students' about their optimism regarding life circumstances (Schreiner, 2016).

Data Analysis

In order to analyze the data, the data will first be screened and cleaned so that it meets all assumptions needed for further analysis, such as all necessary survey responses being filled. The data from students' reported networks will then be transformed into compositional, homophily, and heterogeneity variables using the statistical software E-Net (Borgatti, 2006). These newly created variables will then be used to run descriptive statistics and hierarchical regression analyses to determine the role diversity plays in different components of thriving. This method was selected because linear regression analyses allow the researcher to determine the role independent variables (e.g., the percentage of racial/ethnic diversity in a friend group) play in the outcome of a dependent variable (e.g., the overall level of student thriving). Additionally, hierarchical linear regression determines how much specific variance sets of variables account for by analyzing independent variables in groups, as selected in advance by the researcher (Vogt & Johnson, 2016). Independent variables can be tested in groupings (e.g. all demographic variables at once, then all network variables together) to determine the amount of variance each *group* of variables has on the dependent variable (Vogt &

Johnson, 2016). This method is used to determine the extent to which the diversity within students' friend groups predicts the level of thriving in respondents.

CHAPTER FOUR

Results

This study focuses on the role racial and ethnic diversity within students' personal networks plays in students' levels of psychological thriving. The Thriving Quotient is a quantitative scale that helps understand the various components that comprise student wellbeing and success during college (Schreiner, 2014). The purpose of this study is to determine whether or not there is a relationship between these levels of thriving and the diversity of personal networks students have.

Research Questions

The primary question of this research study is whether or not there is any correlation between the racial and ethnic diversity of students' personal networks and those students' levels of psychological thriving. To answer this question, students responded to a survey that asked questions about their own demographics, the five people they feel closest to on their campuses (alters), those alters' demographic information, and a series of questions about their academics, social relationships, and perspective on life. These variables were then analyzed to determine if the composition of racial and ethnic diversity in friend groups plays a significant role in students' levels of thriving.

Descriptive Statistics

First, I cleaned and coded the raw data in Excel, removing any responses that did not answer demographic or thriving questions, such as responses that were left blank by

participants. Responses that did not list all five alters were left in, as composition data can still be determined based on any number of listed alters. Additionally, responses were coded by race/ethnicity and gender, with each category receiving a “dummy code” of either zero or one to indicate a particular category. For example, females were coded as zero, while males were coded as one. For race, a variable was created for each category, such that an African American student received a one for the African American variable and a zero for all other race categories.

Ego Characteristic Demographics

Out of the 362 respondents with complete responses, 13% were first-year students (n=47), 16.1% were sophomores (n=58), 35.7% were juniors (n=129), 32.1% were seniors (n=116), and 3% were graduate students or non-traditional students who did not identify with a classification level (n=11). Respondents who identified as African American/Black made up 1.9% of the sample (n=7), 6.4% identified as Asian/Pacific Islander (n=23), 19.7% identified as Hispanic/Latino (n=71), 6.1% were multiracial (n=22), and 65.9% of respondents identified as White (n=238). It is important to note that some students marked multiple boxes to indicate their race and ethnicity, meaning students could belong to more than one racial and/or ethnic group. When this was the case, these students received a dummy code to indicate their multiracial status, as well dummy codes to preserve their multiple identities. For example, if a student indicated they were White and Hispanic, that student was coded into the White group, the Hispanic group, as well as the multiracial group. Finally, the majority of respondents were women, with 322 women (89.1%) and 38 men (10.5%) completing the survey, with one

respondent who preferred not to answer the response about gender. See Table 4.1 for all sample characteristics.

Table 4.1 Ego Demographic Data

Variable	N	%	M	SD
Gender				
Female	322	89.1		
Male	38	10.5		
Year in School				
First Year	47	13.0		
Sophomore	58	16.1		
Junior	129	35.7		
Senior	116	31.8		
Graduate/Non-Traditional	11	3.0		
Race/Ethnicity				
African American/Black	7	1.9		
Hispanic/Latino	71	19.7		
Asian/Pacific Islander	23	6.4		
White	238	65.9		
Multicultural	22	6.1		
Thriving			115.16	13.18
Engaged Learning			19.39	3.60
Academic Determination			30.27	4.07
Social Connectedness			25.64	6.35
Diverse Citizenship			30.18	3.92
Positive Perspective			9.68	2.05
Network Diversity				
Racial/Ethnic			0.28	0.24
Heterogeneity				
Racial/Ethnic Homophily			66.20	34.42

Alter Demographics

Each of the survey respondents, referred to as “egos,” nominated up to five of the people they felt closest to on their campus, referred to as “alters.” The 362 egos nominated 1796 alters in total. Of these 1796 alters, egos indicated race and/or ethnicity for 1779, with 4.4% of alters being listed as African American/Black (n=79), 7.0%

Asian/Pacific Islander (n=125), 19.4% Hispanic/Latino (n=345), 3.0% multiracial (n=54), 0.5% Native American/Alaskan Native/Indigenous Persons (n=9), 65.3% White (n=1162), and 0.2% were listed as another race. Of the 1796 alters, egos provided information of gender for 1786, with 28.1% being male (n=502) and 71.9% being female (n=1284).

In addition to race and gender demographics, information about the alters' relationship to the egos was also collected. Of the 1796 alters, 66.9% were listed as friends (n=1202), 7% were significant others (n=128), 17.7% were roommates (n=317), 3.1% were siblings (n=56), and 1.5% were parents of egos (n=27), 0.2% were former significant others (n=4), 0.4% were extended family members, such as aunts or cousins (n=9), 2.4% were coworkers (n=44), and 0.2% were mentors of egos (n=3).

Thriving Descriptive Statistics

The survey items used to measure students' thriving levels were summed in SPSS to create the five subscales of the Thriving Quotient, academic determination, engaged learning, social connectedness, diverse citizenship, and positive perspective (Schreiner, 2014). The mean response for total thriving was 115.16 (SD=13.18) with a range of 42 to 144, with a highest possible score of 144. Engaged learning had a mean of 19.39 (SD=3.60) out of a possible 24, academic determination had a mean of 30.27 (SD=4.07) out of a possible 36, social connectedness had a mean of 25.64 (SD=6.35) out of a possible total of 36, diverse citizenship had a mean of 30.18 (SD=3.92) out of a possible 36, and positive perspective had a mean of 9.68 (SD=2.05) out of a possible score of 12.

E-Net Analysis

After the data was cleaned and coded, E-Net software was used to create network variables (Borgatti, 2006). The three primary network variables computed in E-Net were network composition, homophily, as measure by the proportion of sameness between egos and alters, and heterogeneity (Table 4.2). The network composition refers to the structural racial and ethnic diversity of the egos' network (i.e., the races of the individuals nominated). Homophily is the racial and ethnic similarity between the ego and his or her nominated alters, demonstrating the ego's tendency to be connected to those similar to him or her. The proportion of sameness, the measure of homophily used in this research, gives the proportion of the alters that are the same as the ego. Finally, the heterogeneity variable computed demonstrates the overall diversity among the nominated alters.

Table 4.2 E-Net Variable Descriptions

Composition Variable	Definition	Scale Measuring Variable
Network Composition	The various races/ethnicities making up the network	Proportion of each race/ethnicity as represented in the network
Homophily	The similarity between the ego and the nominated alters	Proportion of sameness between the ego and alters
Heterogeneity	Overall diversity among the nominated alters	Blau's index of heterogeneity

Network Diversity Descriptive Statistics

Data on the students' networks was calculated in SPSS. The first network variable calculated via E-Net was homophily, as measured by the proportion of sameness in the network. This variable is measured on a scale from zero to 100, with 100 being a network where alters are most similar to the ego and zero being a network where alters

are not at all similar to the ego. The mean homophily score for the sample was 66.20 (SD=34.42). The other network variable calculated by E-Net is heterogeneity, as measured by Blau's heterogeneity index (Borgatti, Everett, & Johnson, 2018). Blau's index is calculated by squaring the proportion of alters from each category, such as each racial or ethnic categories, and subtracting from one (Borgatti, Everett, & Johnson, 2018). Networks that are closer to zero according to Blau's index have less network diversity, while networks that have higher index scores are more evenly distributed across racial and ethnic categories.

SPSS Analysis

After compositional, homophily, and heterogeneity variables were created in E-Net, data was transferred to SPSS to run descriptive statistics and hierarchical regression tests on overall thriving, as well as each of the individual subscales of engaged learning, academic determination, social connectedness, diverse citizenship, and positive perspective. Each of these scales was tested against the variables of network racial and ethnic composition, heterogeneity, and homophily to determine any possible relationships.

Multiple Regression

Two sets of hierarchical regression analyses were conducted in this study. The first was to determine which variables accounted for variance in egos' thriving levels and the levels of each thriving subscale. Regression analyses predicting overall and subscale thriving scores were conducted on the total sample, as well as each of the racial/ethnic subgroups and genders. Block 1 consisted of demographic variables classification and

gender. Block 2 added contained classification and gender, as well as compositional variables, including alters' genders, races, communication frequency, and relationship type between egos and alters (e.g., significant other, friend, mentor, etc.). Block 3 included variables from the first two blocks, as well as the network heterogeneity variables (heterogeneity based on race and communication frequency). Finally, Block 4 included the variables from the first three models and added homophily variables, including the proportion of racial similarity and the proportion of gender similarity between egos and alters.

The second set of hierarchical regression analyses were conducted to determine which variables accounted for variance in the racial and ethnic diversity in personal networks. These analyses were only conducted on the total sample. The first block contained the five thriving scales, engaged learning, academic determination, social connectedness, diverse citizenship, and positive perspective as predictor variables. The second block contained the thriving variables and added in the gender and classification of students, as well as whether or not they are Students of Color.

Thriving

The first series of regressions used network variables, the data collected on the ego's networks and the ego's demographic information, to predict students' levels of thriving. Regressions were run on overall thriving, then on each of the five subscales to determine any relationships between variables.

Overall Thriving. In predicting thriving as a total variable, the second ($R^2=.080$, $p=.003$), third ($R^2=.085$, $p=.009$), and fourth models ($R^2=.090$, $p=.011$) in the regression

were significant, indicating that the variables comprising the third model accounted for 8.5% of the variance in the dependent variable and the fourth model accounting for 9.0% of the variance (Table 4.3). In each model, the most significant independent variable in predicting overall thriving was having more alters that communicate with the ego daily, showing that consistent communication within personal networks was a significant predictor of higher levels of overall thriving ($\beta=.274$, $t=3.803$, $p<.0001$).

For White students only, the third ($R^2=.102$, $p=.026$) and fourth ($R^2=.107$, $p=.039$) models for overall thriving were also significant (Table 4.4). This regression also demonstrated that communicating every day with alters was a predictor of thriving ($\beta=.272$, $t=3.020$, $p=.003$). Additionally, listing women as alters had a negative correlation with thriving levels for White students ($\beta=-.227$, $t=-1.987$, $p=.048$). None of the regression analyses were significant for Students of Color in these models.

For women in the sample, the second ($R^2=.094$, $p=.001$), third ($R^2=.099$, $p=.003$), and fourth ($R^2=.104$, $p=.005$) models were significant in predicting thriving (Table 4.5). In the third and fourth models, communicating daily was again a significant predictor of thriving (Block 3: $\beta=.331$, $t=4.486$, $p<.0001$; Block 4: $\beta=.314$, $t=4.189$, $p<.0001$).

Table 4.3 Regression for Overall Thriving for Whole Sample

Predictors	Model 1 R ² =.004			Model 2* R ² =.080			Model 3* R ² =.085			Model 4* R ² =.090		
	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Classification	.038	.723	.470	.046	.871	.385	.044	.822	.412	.047	.890	.374
Gender	.037	.689	.491	.082	1.337	.182	.080	1.301	.194	.089	1.411	.159
Person of Color	-.032	-.595	.553	.038	.547	.584	.035	.495	.621	.115	1.259	.209
Everyday Comm.				.268	4.785	<.0001	.294	4.183	<.0001	.274	3.803	<.0001
Composition of Network:												
Female				-.096	-1.499	.135	-.096	-1.485	.139	-.129	-1.58	.115
Friend				.027	.284	.777	-.078	-.584	.560	-.088	-.658	.511
Signif. Other				-.057	-.893	.372	-.044	-.669	.504	-.042	-.633	.527
Roommate				-.017	-.191	.849	-.037	-.400	.689	-.041	-.442	.658
Colleague				.071	1.201	.231	.056	.911	.363	.055	.905	.366
Mentor				.013	.251	.802	.016	.303	.762	.005	.085	.932
White				.012	.056	.956	.001	.004	.997	-.030	-.135	.893
Per. of Color				-.061	-.287	.775	-.068	-.295	.768	-.133	-.565	.572
Relat. Heterog.							-.117	-1.183	.238	-.117	-1.18	.237
Racial Heterog.							-.005	-.077	.939	.080	.890	.374
Comm. Heterog.							.048	.703	.483	.026	.378	.705
Racial Homoph.										.123	1.347	.179
Gend. Homoph.										.047	.637	.525

Note. β =standardized beta; *=model is significant ($p<.05$)

Table 4.4 Regression for Overall Thriving for White Students in Sample

Predictors	Model 1 R ² =.010			Model 2* R ² =.099			Model 3* R ² =.102			Model 4* R ² =.107		
	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Classification	.093	1.425	.155	.102	1.539	.125	.100	1.490	.138	.093	1.387	.167
Gender	-.027	-.417	.677	.084	1.024	.307	.088	1.056	.292	.101	1.112	.267
Everyday Comm.				.259	3.691	<.0001	.283	3.173	.002	.272	3.020	.003
Composition of Network:												
Female				-.185	-2.152	.032	-.187	-2.167	.031	-.227	-1.99	.048
Friend				-.024	-.199	.842	-.091	-.569	.570	-.079	-.484	.629
Signif. Other				-.096	-1.230	.220	-.089	-1.109	.268	-.068	-.824	.411
Roommate				.017	.149	.882	.003	.027	.978	.016	.131	.896
Colleague				.064	.844	.400	.049	.620	.536	.057	.712	.477
White				-.187	-1.040	.300	-.196	-1.060	.290	-.184	-.989	.324
Per. of Color				-.213	-1.182	.238	-.190	-.742	.459	-.497	-1.36	.175
Relat. Heterog.							-.075	-.687	.493	-.075	-.677	.499
Racial Heterog.							-.037	-.220	.826	-.035	-.204	.839
Comm. Heterog.							.039	.449	.654	.025	.285	.776
Racial Homoph.										-.327	-1.17	.242
Gend. Homoph.										.041	.431	.667

Note. β =standardized beta; *=model is significant ($p<.05$)

Table 4.5 Regression for Overall Thriving for Female Students in Sample

Predictors	Model 1 R ² =.003			Model 2* R ² =.094			Model 3* R ² =.099			Model 4* R ² =.104		
	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Classification	.056	1.004	.316	.062	1.113	.267	.058	1.047	.296	.057	1.020	.309
Person of Color	.002	.031	.976	.066	.916	.360	.060	.820	.413	.134	1.347	.179
Everyday Comm.				.293	4.989	<.0001	.331	4.486	<.0001	.314	4.189	<.0001
Comp. of Network:												
Female				-.060	-1.002	.317	-.062	-1.033	.302	.185	.624	.533
Friend				-.080	-.719	.473	-.158	-1.064	.288	-.129	-.853	.394
Signif. Other				-.091	-1.287	.199	-.084	-1.166	.244	-.072	-.976	.330
Roommate				-.090	-.906	.366	-.103	-.982	.327	-.073	-.674	.501
Colleague				.048	.756	.451	.036	.546	.585	.049	.733	.464
Mentor				.004	.068	.946	.008	.144	.886	.001	.021	.983
White				-.083	-.391	.696	-.071	-.315	.753	-.087	-.387	.699
Per. of Color				-.147	-.680	.497	-.124	-.517	.606	-.180	-.735	.463
Relat. Heterog.							-.095	-.931	.353	-.088	-.867	.387
Racial Heterog.							-.022	-.328	.743	.054	.560	.576
Comm. Heterog.							.069	.963	.336	.050	.678	.499
Racial Homoph.										.109	1.090	.277
Gend. Homoph.										-.250	-.846	.398

Note. β =standardized beta; *=model is significant ($p<.05$)

Engaged Learning. After testing for overall thriving, each of the subscales were analyzed via hierarchical multiple regression as well, using the same criteria for models as were used for overall thriving. The first scale tested was that of engaged learning. The first model when testing the whole sample (Table 4.6; n=361) was significant ($R^2=.022$, $p=.048$), showing that being a woman was positively related to engaged learning ($\beta=.136$, $t=2.577$, $p=.010$). This was also true for the models analyzing only White students (Table 4.7; $R^2=.026$, $p=.044$), where gender was positively correlated with engaged learning ($\beta=.144$, $t=2.234$, $p=.026$). No network variables (e.g. homophily or heterogeneity) were significant in explaining engaged learning in this sample.

Academic Determination. Regression analysis using academic determination as a dependent variable had no statistically significant models or variables for the group or subgroups of people sampled.

Table 4.6 Regression for Engaged Learning for Whole Sample

Predictors	Model 1* R ² =.022			Model 2 R ² =.050			Model 3 R ² =.060			Model 4 R ² =.075		
	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Classification	.030	.569	.570	.020	.373	.709	.019	.345	.731	.024	.453	.651
Person of Color	.063	1.207	.228	.026	.362	.718	.022	.306	.760	.140	1.516	.131
Gender	.136	2.577	.010	.163	2.614	.009	.162	2.593	.010	.151	2.383	.018
Everyday Comm.				.087	1.522	.129	.114	1.603	.110	.105	1.451	.148
Composition of Network:												
Female				-.050	-.769	.443	-.049	-.757	.450	-.002	-.020	.984
Friend				-.092	-.951	.343	-.257	-1.901	.058	-.278	-2.06	.040
Signif. Other				-.116	-1.791	.074	-.096	-1.422	.156	-.109	-1.62	.106
Roommate				-.008	-.094	.925	-.044	-.474	.636	-.044	-.476	.634
Colleague				.041	.694	.488	.017	.273	.785	.014	.220	.826
Mentor				-.002	-.034	.973	.001	.025	.980	-.011	-.212	.832
White				-.171	-.808	.419	-.200	-.904	.367	-.224	-1.01	.312
Per. of Color				-.098	-.458	.647	-.130	-.557	.578	-.221	-.931	.353
Relat. Heterog.							-.176	-1.763	.079	-.183	-1.84	.066
Racial Heterog.							.009	.139	.889	.137	1.520	.129
Comm. Heterog.							.049	.714	.476	.025	.353	.724
Racial Homoph.										.191	2.075	.039
Gend. Homoph.										-.074	-.997	.319

Note. β =standardized beta; *=model is significant ($p < .05$)

Table 4.7 Regression for Engaged Learning for White Students in Sample

Predictors	Model 1* R ² =.026			Model 2 R ² =.069			Model 3 R ² =.079			Model 4 R ² =.089		
	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Classification	.088	1.358	.176	.080	1.185	.237	.077	1.141	.255	.075	1.103	.271
Gender	.144	2.234	.026	.170	2.034	.043	.175	2.091	.038	.120	1.306	.193
Everyday Comm.				.120	1.690	.092	.153	1.700	.090	.172	1.893	.060
Composition of Network:												
Female				-.054	-.616	.538	-.059	-.669	.504	.054	.466	.642
Friend				-.081	-.649	.517	-.237	-1.458	.146	-.213	-1.29	.198
Signif. Other				-.125	-1.576	.116	-.105	-1.297	.196	-.124	-1.49	.137
Roommate				-.002	-.019	.985	-.039	-.321	.749	-.013	-.101	.920
Colleague				.047	.608	.544	.015	.182	.856	.023	.281	.779
White				-.325	-1.773	.078	-.350	-1.873	.062	-.337	-1.79	.075
Per. of Color				-.288	-1.567	.118	-.298	-1.149	.252	-.134	-.365	.716
Relat. Heterog.							-.170	-1.531	.127	-.165	-1.49	.139
Racial Heterog.							-.021	-.121	.904	-.028	-.163	.871
Comm. Heterog.							.050	.566	.572	.063	.707	.480
Racial Homoph.										.161	.573	.567
Gend. Homoph.										-.141	-1.47	.143

Note. β =standardized beta; *=model is significant ($p < .05$)

Social Connectedness. For the social connectedness subscale, each of the four models of the regression analysis were significant (Block 1: $R^2=.047$, $p=.001$; Block 2: $R^2=.146$, $p<.0001$; Block 3: $R^2=.149$, $p<.0001$; Block 4: $R^2=.151$, $p<.0001$). Similar to overall thriving, the biggest predictor of social connectedness was having more alters the ego communicated with every day, with a positive correlation between communicating every day and social connectedness ($\beta=.291$, $t=4.178$, $p<.0001$). For White students ($R^2=.171$, $p<.0001$), being connected with men was negatively correlated with levels of social connectedness ($\beta=-.319$, $t=-2.898$, $p=.004$) and having more alters the ego communicated with every day was positively correlated ($\beta=.320$, $t=3.685$, $p<.0001$). None of the models predicting social connectedness in Students of Color were statistically significant.

Diverse Citizenship. The subscales predicting diverse citizenship for the whole sample yielded no significant models. However, for Students of Color, each of the four models was significant. In the third model ($R^2=.208$, $p=.023$), gender was positively correlated with diverse citizenship ($\beta=.216$, $t=2.204$, $p=.030$) and in the fourth model ($R^2=.214$, $p=.043$), nominating a significant other had a positive correlation ($\beta=.252$, $t=2.054$, $p=.042$).

Table 4.8 Regression for Social Connectedness for Whole Sample

Predictors	Model 1* R ² =.047			Model 2* R ² =.146			Model 3* R ² =.149			Model 4* R ² =.151		
	β	<i>t</i>	<i>p</i>									
Classification	.021	.413	.182	.052	1.024	.307	.051	.992	.322	.051	.989	.323
Person of Color	-.191	-3.67	.385	-.102	-1.518	.130	-.107	-1.583	.114	-.104	-1.18	.241
Gender	-.099	.547	.584	-.056	-.945	.345	-.056	-.939	.348	-.045	-.745	.457
Everyday Comm.				.310	5.749	<.0001	.301	4.435	<.0001	.291	4.178	<.0001
Composition of Network:												
Female				-.077	-1.247	.213	-.079	-1.273	.204	-.122	-1.56	.120
Friend				.061	.665	.507	-.008	-.060	.952	-.006	-.043	.966
Signif. Other				-.084	-1.362	.174	-.067	-1.042	.298	-.059	-.917	.360
Roommate				-.042	-.496	.620	-.048	-.546	.585	-.051	-.575	.566
Colleague				-.024	-.421	.674	-.030	-.519	.604	-.029	-.497	.619
Mentor				.018	.346	.730	.021	.413	.680	.019	.362	.717
White				-.039	-.196	.845	-.021	-.097	.922	-.031	-.147	.884
Per. of Color				-.148	-.727	.468	-.119	-.532	.595	-.124	-.543	.588
Relat. Heterog.										-.082	-.866	.387
Racial Heterog.										-.021	-.244	.808
Comm. Heterog.										-.010	-.144	.886
Racial Homoph.										.001	.015	.988
Gen. Homoph.										.064	.906	.366

Note. β =standardized beta; *=model is significant ($p<.05$)

Table 4.9 Regression for Social Connectedness for White Students in Sample

Predictors	Model 1* R ² =.047			Model 2* R ² =.146			Model 3* R ² =.149			Model 4* R ² =.151		
	β	<i>t</i>	<i>p</i>									
Classification	.021	.413	.182	.052	1.024	.307	.051	.992	.322	.051	.989	.323
Person of Color	-.191	-3.67	.385	-.102	-1.518	.130	-.107	-1.583	.114	-.104	-1.18	.241
Gender	-.099	.547	.584	-.056	-.945	.345	-.056	-.939	.348	-.045	-.745	.457
Everyday Comm.				.310	5.749	<.0001	.301	4.435	<.0001	.291	4.178	<.0001
Composition of Network:												
Female				-.077	-1.247	.213	-.079	-1.273	.204	-.122	-1.56	.120
Friend				.061	.665	.507	-.008	-.060	.952	-.006	-.043	.966
Signif. Other				-.084	-1.362	.174	-.067	-1.042	.298	-.059	-.917	.360
Roommate				-.042	-.496	.620	-.048	-.546	.585	-.051	-.575	.566
Colleague				-.024	-.421	.674	-.030	-.519	.604	-.029	-.497	.619
Mentor				.018	.346	.730	.021	.413	.680	.019	.362	.717
White				-.039	-.196	.845	-.021	-.097	.922	-.031	-.147	.884
Per. of Color				-.148	-.727	.468	-.119	-.532	.595	-.124	-.543	.588
Relat. Heterog.										-.082	-.866	.387
Racial Heterog.										-.021	-.244	.808
Comm. Heterog.										-.010	-.144	.886
Racial Homoph.										.001	.015	.988
Gend. Homoph.										.064	.906	.366

Note. β =standardized beta; *=model is significant ($p<.05$)

Table 4.10 Regression for Diverse Citizenship for Students of Color in Sample

Predictors	Model 1* R ² =.072			Model 2* R ² =.191			Model 3* R ² =.208			Model 4* R ² =.214		
	β	<i>t</i>	<i>p</i>									
Classification	-.024	-.273	.785	-.053	-.607	.545	-.038	-.429	.669	-.046	-.511	.611
Gender	.264	2.977	.004	.189	1.98	.050	.216	2.204	.030	.192	1.860	.066
Everyday Comm.				.277	2.92	.004	.218	1.846	.068	.200	1.625	.107
Composition of Network:												
Female				.042	.433	.666	.058	.582	.562	-.041	-.270	.788
Friend				.142	.877	.382	-.096	-.373	.710	-.008	-.029	.977
Signif. Other				.187	1.71	.089	.230	1.952	.054	.252	2.054	.042
Roommate				-.016	-.121	.904	-.052	-.366	.715	-.006	-.042	.966
Colleague				.037	.390	.697	.032	.341	.734	.043	.444	.658
Mentor				.017	.192	.848	.012	.134	.894	.011	.120	.905
White				.346	1.19	.238	.301	.974	.332	.322	1.025	.308
Per. of Color				.266	.897	.371	.257	.836	.405	.255	.773	.441
Relat. Heterog.							-.240	-1.07	.288	-.197	-.851	.397
Racial Heterog.							.090	.886	.378	.095	.826	.411
Comm. Heterog.							-.074	-.641	.523	-.089	-.726	.469
Racial Homoph.										.052	.375	.708
Gend. Homoph.										.129	.834	.406

Note. β =standardized beta; *=model is significant ($p < .05$)

Table 4.11 Regression for Positive Perspective for Students of Color in Sample

Predictors	Model 1* R ² =.054			Model 2* R ² =.164			Model 3 R ² =.181			Model 4 R ² =.186		
	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Classification	-.196	-2.18	.031	-.201	-2.256	.026	-.198	-2.200	.030	-.190	-2.08	.040
Gender	.107	1.197	.234	.008	.082	.935	-.014	-.136	.892	.011	.101	.919
Everyday Comm.				.192	1.993	.049	.266	2.212	.029	.274	2.185	.031
Composition of Network:												
Female				.099	1.009	.315	.102	1.011	.314	.191	1.229	.222
Friend				.352	2.143	.034	.193	.733	.465	.104	.362	.718
Signif. Other				.265	2.391	.019	.267	2.226	.028	.243	1.953	.054
Roommate				.054	.390	.697	.041	.283	.777	-.001	-.007	.994
Colleague				.117	1.229	.222	.139	1.429	.156	.126	1.263	.209
Mentor				.114	1.249	.214	.126	1.342	.182	.122	1.283	.202
White				.327	1.100	.274	.374	1.190	.237	.345	1.078	.283
Per. of Color				.318	1.058	.292	.369	1.181	.240	.341	1.016	.312
Relat. Heterog.							-.188	-.822	.413	-.224	-.954	.342
Racial Heterog.							-.035	-.335	.739	-.025	-.216	.829
Comm. Heterog.							.160	1.366	.175	.164	1.320	.222
Racial Homoph.										-.013	-.090	.718
Gend. Homoph.										-.122	-.774	.054

Note. β =standardized beta; *=model is significant ($p < .05$)

Positive Perspective. Finally, first and second models testing positive perspective were statistically significant when analyzing the Students of Color. The second model tested demographic and ego-alter relationships on the outcomes of positive perspective ($R^2=.164$, $p=.039$), and showed that nominating either a friend ($\beta=.352$, $t=2.143$, $p=.034$) or a significant other ($\beta=.265$, $t=2.391$, $p=.019$) was related to positive perspective for Students of Color, as well as having more alters with whom one communicated daily ($\beta=.247$, $t=2.185$, $p=.031$). Additionally, classification was negatively correlated with positive perspective in the model ($\beta=-.201$, $t=-2.256$, $p=.026$).

Predicting Network Homophily and Heterogeneity

Additionally, hierarchical multiple regression analyses were run to predict homophily between egos and their nominated alters and the heterogeneity of egos' networks using each of the thriving variables as predictors. The first model in this analysis used the five thriving subscales as predictors, and the second model used the thriving subscales while also adding in the gender and classification of egos, as well as whether or not the egos are Students of Color.

The first regression of this series, using thriving subscales as predictors, analyzed the variables predicting racial and ethnic homophily in students' networks. Both models in this regression were statistically significant. In the first model ($R^2=.055$, $p=.001$), academic determination ($\beta=.147$, $t=2.421$, $p=.016$) and social connectedness ($\beta=.146$, $t=2.698$, $p=.007$) were positively correlated with homophily in the network, whereas diverse citizenship was negatively correlated ($\beta=-.182$, $t=-2.972$, $p=.003$). In the second model ($R^2=.356$, $p<.0001$), network variables and ego demographic data accounted for 35.6% of the variance in network homophily. In this second model, being a Person of

Color ($\beta=-.566$, $t=-12.755$, $p<.0001$) and diverse citizenship ($\beta=-.131$, $t=-2.561$, $p=.011$) were negatively associated with the homophily in the network, while academic determination was positively associated with homophily ($\beta=.131$, $t=2.590$, $p=.010$).

Table 4.12 Regression for Predicting Homophily in Whole Sample

Predictors	Model 1* R ² =.055			Model 2* R ² =.356		
	β	t	p	β	t	p
Engaged Learning	.035	.602	.548	.060	1.240	.216
Academic Determination	.147	2.421	.016	.131	2.590	.010
Social Connectedness	.146	2.698	.007	.019	.404	.686
Diverse Citizenship	-.182	-2.972	.003	-.131	-2.561	.011
Positive Perspective	-.034	-.578	.564	.018	.373	.710
Person of Color				-.566	-12.755	<.000
Gender				.019	.436	.663
Classification				-.009	-.201	.841

Note. β =standardized beta; *=model is significant ($p<.05$)

The second regression that used thriving variables to predict the heterogeneity of networks. Both models in this regression were also significant. In the first model ($R^2=.034$, $p=.029$), social connectedness was negatively correlated with network heterogeneity ($\beta=-.142$, $t=2.590$, $p=.010$), while diverse citizenship had a positive correlation ($\beta=.122$, $t=1.980$, $p=.049$). In the second model ($R^2=.080$, $p<.0001$), being a Person of Color was positively correlated with heterogeneity in the network ($\beta=.204$, $t=3.845$, $p<.0001$).

Table 4.13 Regression for Predicting Heterogeneity in Whole Sample

Predictors	Model 1*			Model 2*		
	β	t	p	β	t	p
Engaged Learning	.026	.441	.660	.022	.389	.698
Academic Determination	-.091	-1.490	.137	-.080	-1.333	.183
Social Connectedness	-.142	-2.590	.010	-.100	-1.790	.074
Diverse Citizenship	.122	1.980	.049	.106	1.742	.082
Positive Perspective	-.012	-.209	.835	-.036	-.622	.534
Person of Color				.204	3.845	<.000
Gender				-.052	-.996	.320
Classification				-.043	-.830	.407

Note. β =standardized beta; *=model is significant ($p<.05$)

CHAPTER FIVE

Discussion

There is currently extensive literature supporting the notion that building and maintaining relationships with those who are different from oneself can have positive benefits. This has been shown in business, education, and within communities (Adkins, 2003; Chang, Hsu, Shih, & Chen, 2014; Cox, 2001; Efendic & Pugh, 2018; Frankenberg, 2013; Horn & Kurlaender, 2006; Light, 2001; Richard, 2000; Richard, McMillan, Chadwick, & Dwyer, 2003; Smith, 2015; Wright, Ferris, Hiller, & Kroll, 1995). Allport (1954) provided foundational literature demonstrating the importance of cross-racial interactions between people in higher education. Additionally, Piaget's (1965) foundational theory on moral development suggests that students must be exposed to those they are different from in order to be able to take their perspectives and empathize with them. More recent literature also supports this notion that cross-racial and cross-cultural interaction is important within the context of higher education and how these interactions can help students better be able to take the perspectives of others (Gurin et al., 2002). The present research seeks to emphasize this relationship between interacting with those whom one is different from and students' psychological outcomes.

Literature has also demonstrated the influence peers have on one another, speaking to the important role personal networks play in student outcomes (Newcomb, 1962; Deliens, Clarys, Bourdeaudhuij, & Deforche, 2014; Huang et al., 2014). This is important, as peer influence may change depending on the characteristics and habits of the peers students surround themselves with. Past research on peer influence has not

extensively considered the role racial or ethnic differences between peers may play in the influence students have on one another, as the present research seeks to do.

In addition to the literature on diversity and peer influence, literature on thriving presents an expanded concept of student wellbeing and success (Schreiner, Louis, & Nelson, 2012). The Thriving Quotient gives a comprehensive image of psychological thriving in students through five components: (1) academic determination, (2) engaged learning, (3), social connectedness, (4) diverse citizenship, and (5) positive perspective (Schreiner, Louis, & Nelson, 2012). Research using the Thriving Quotient suggests a variety of ways in which students can be better supported in transitions, as well as the idea that Students of Color need different support systems than White students (2014). However, little to no research has been conducted on the diversity of personal networks and the role they may play in student thriving. Studying the possible connections between personal networks and student thriving can give more insight into the ways students' backgrounds may play a role in how they influence one another in the five subcategories of thriving: academic determination, engaged learning, social connectedness, diverse citizenship, and positive perspective. This research sought to increase the amount of research available on the diversity of students' personal networks and the influence that may have on students' psychological outcomes using social network analysis and The Thriving Quotient (Schreiner, 2010).

Discussion of the Findings

Overall, few variables were statistically significant in predicting overall thriving in this study. This demonstrates that the original research question, whether or not network diversity plays a role in students' levels of thriving, ultimately shows no

correlation between the independent network variables related to diversity, homophily, or heterogeneity and the dependent variable of overall thriving in this particular study. This remains true of most of the five subscales that comprise thriving as well when tested using network racial and ethnic diversity variables. When the subscale variables are tested, however, other network variables, such as communication frequency amongst alters, do correlate with thriving subscale outcomes.

Network Variables

Racial and Ethnic Homophily. Past research highlights the tendency for individuals to surround themselves with people similar to themselves, also called homophily (McPherson, Smith-Lovin, & Cook, 2001). Homophily in this study was measured in terms of “proportion of sameness” in a network. This refers to the proportion of nominated alters in the network who have the same characteristics, such as gender, race, or ethnicity, as the ego who nominated them (Borgatti, Everett, & Johnson, 2018).

The present research sought to discover how racial and ethnic homophily in personal networks may play a role in students’ thriving outcomes. This research supports the tendency amongst college students to primarily build relationships with those who are racially and ethnically similar to themselves, with the mean homophily score for race and ethnicity being 66.20 (SD=34.42). This means that students in this sample also have a relatively high tendency to be connected to people who are racially similar to them, as homophily is reported using proportions ranging from 0 to 100, with 66.20 being in the upper half of this range. This homophily could be explained in a number of ways, such as the availability of people who are racially or ethnically different for students to interact

with and befriend in the first place. Certain areas of campus may have more opportunities for building relationships with people from different races or ethnicities, such as within an on-campus center for diversity and inclusion or multiculturalism. However, certain groups of students, particularly White students at predominantly White institutions such as the ones where data was collected for this sample, may have fewer spaces in which students from differing racial and ethnic groups may be present to interact with. This is in alignment with literature that discusses the concept of propinquity, which suggests that people connect with those that are geographically proximal to them (Kadushin, 2012).

As students may have fewer opportunities to interact with those whom they are different from in the settings they naturally find themselves in, particularly these White students on predominantly White campuses, opportunities to interact with those they are different from may need to be intentionally sought out. However, as past research indicates, students often do not take this intentional step and tend to maintain the homophilous groups they are already a part of (Kadushin, 2012; McPherson, Smith-Lovin, & Cook, 2001; Youyou, Stillwell, Schwartz, & Kosinski, 2017). As previous research highlights some of the positive benefits of interacting across racial and ethnic groups, more opportunities for students to seek out these opportunities can be created by institutions, as well as providing training and resources for students to know *how* to better interact across differences.

Additionally, it is important to note that the present sample is comprised of students from predominantly White institutions. It may be possible that, as students from this particular setting, participants in this particular sample have historically been

influenced by the predominantly White cultures and institutions around them.

Bronfenbrenner (1993) suggests that the environment around an individual, from the close network environment to the larger societal environment, plays a role in human development. This concept is portrayed via a set of concentric circles demonstrating how each layer of the environment influences others (Figure 2.1). While the present research studies the close personal network around individual students, it does not necessarily investigate the larger societal influences on students *or* the historical environmental contexts from which students are coming. These are important factors, as students who grew up in more diverse settings, regardless of current personal network diversity, may have different thriving outcomes than those who have always been in homophilous settings. This is also an area for potential future research, where the differences in students' networks across time or their pre-college networks, including environments at a broader level than personal networks, may be studied to better consider the environmental influences that may be at play in students' outcomes.

Communication. The most consistent predictor of thriving levels was the number of alters whom the ego stated they spoke to daily. This daily interaction with people in their personal networks was the only variable measured that was related to higher overall thriving for the whole sample ($\beta=.274$, $t=3.803$, $p<.0001$), as well as for White students ($\beta=.272$, $t=3.020$, $p=.003$) and female students ($\beta=.314$, $t=4.189$, $p<.0001$). Additionally, daily interaction with more nominees in a network was also related to increased perceptions of students' social connectedness ($\beta=.291$, $t=4.178$, $p<.0001$) within the whole sample and positive perspective for Students of Color ($\beta=.247$, $t=2.185$, $p=.031$).

A past study by Dias, Geard, Campbell, Warr, & McVernon (2018) found no link between actual, recorded, personal encounters and perceived social support, indicating, per this study, the quantity of social interaction has no influence on perceptions of feeling socially supported. However, this present research demonstrates a clear connection between speaking to individuals in the network and levels of social connectedness, positive perspective, and overall thriving. This research, however, did not contain questions measuring the perceived quality of social interactions, only the frequency of interactions. Students did report their closest contacts on their campuses, indicating a degree of connection quality, but future research could include measures of interaction quality to further investigate this link. As past research done by Dias et al. (2018) found no correlation between frequency of interaction and perceived social connectedness, more research can be done on the possible role the quality of interactions may play in students' perceptions of social connectedness in addition to the frequency. Allport's (1954) contact theory highlights the perceived quality of students' interactions with those from different backgrounds, stating that cross-group interactions must be *positive and meaningful* in order to successfully build relationships across different groups.

Additionally, the present research did not analyze the *type* of communication used. The method of communication could have implications for the quality of communication students have with their alters. While communication was consistently notable in the data, more research could be done to understand the role communication mediums may play in student thriving outcomes.

Academic Thriving

Academic Determination. Racial and ethnic homophily or heterogeneity was not correlated with predicting academic determination in the sample. However, academic determination, when used as a predictor of racial and ethnic homophily, is statistically significant and has a small effect on predicting racial and ethnic homophily ($\beta=.131$, $p=.010$). Past research highlights the role that campus climate for diversity plays in students' academic and social wellbeing on campus (Hurtado, Carter, & Spuler, 1996). Additionally, negative perception about certain groups of people and their academic performance has been previously linked to withdrawal of effort in academics as means of protecting self-esteem (Newman, Keough, & Lee, 2009). This past research could perhaps be an explanation of the correlation between academic determination and racial and ethnic homophily. As individuals in the sample are more likely to surround themselves with a network that is more like them, the perceptions about the campus climate or perceptions about people from that particular groups' academic abilities may impact the egos' own academic determination. This hypothesis is supported by research linking cross-race interactions with greater sense of belonging for Students of Color and decreased academic motivation when colorblind attitudes were present in the academic culture (Byrd, 2015). Students who perceive colorblind attitudes of teachers and peers in schools tend to be less academically engaged or motivated, placing emphasis on the importance of cross-racial interaction and cultural humility within academic settings (Byrd, 2015). While the present research shows a positive correlation between academic engagement and racial and ethnic homophily, this study did not seek to understand the *types of messages* students from different racial groups receive pertaining to perceptions

about their academic ability or perceived racial climate on campus. These perceptions of academic ability students feel from those around them may play a role in the academic determination of students and, therefore, those they have an influence on within their network.

Engaged Learning. Ultimately, no network variables were correlated with engaged learning levels for students in the sample. However, both being female in the whole sample ($\beta=.136$, $t=2.577$, $p=.010$) as well as specifically being a White woman ($\beta=.144$, $t=2.234$, $p=.026$) were positively correlated with engaged learning. In addition to research linking academic determination with perceptions people have of racial and ethnic groups' academic abilities, past research by Booker (2006) has also shown the role sense of belonging has in school engagement. This finding is supported by research showing that White students tend to have higher levels of satisfaction with their campus environments as compared to students from others racial and ethnic groups (Harper & Hurtado, 2007). Therefore, as White students tend to have higher levels of satisfaction with their academic environments, this may also lead to higher levels of engagement with material. Additionally, for Students of Color, research shows a tendency to feel disengaged when course material does not feel culturally relevant or relatable to them, or when curricula are used that exclude their cultural experiences altogether (Sampson & Garrison-Wade, 2011). This is important for the present research in understanding why being White is correlated with higher levels of engaged learning, while being a Student of Color is not significantly related to engaged learning. In planning educational materials, the experiences of Students of Color should be incorporated into curricula and students should feel represented in order to promote more engagement with the materials.

Interpersonal Thriving

Social Connectedness. In the first model of the regression predicting heterogeneity in the sample (Table 4.12), social connectedness was negatively correlated ($\beta=-.142$, $t=2.590$, $p=.010$), indicating that feeling more socially connected meant having lower heterogeneity in one's network. Although the correlation between social connectedness and heterogeneity in this model is notable, ultimately each of the models predicting heterogeneity had small effect sizes (Block 1: $R^2=.034$; Block 2: $R^2=.080$), indicating these models explain only 3.4% and 8% of the variance in network heterogeneity in each block, respectively (Mayhew et al., 2016; Sriram, 2017).

In addition to the negative correlation between social connectedness and heterogeneity in the sample, social connectedness was also correlated with having more alters whom the egos communicated with every day ($\beta=.291$, $t=4.178$, $p<.0001$). While having a more diverse network was related to lower social connectedness scores, being connected to alters with whom one communicates daily is positively correlated. This distinction could possibly be linked to the frequency of interactions between alters of different racial or ethnic groups, where egos spend more time communicating with those who are overall more similar, or it may be related to the quality of interactions egos are having with similar alters. The present research did not specifically ask about *quality* of interactions, only *quantity*, as the survey asked students to list the five people they felt closest to on campus, assuming a more tightly-linked connection between egos and alters. However, more exploration could be done on the quality of interactions between egos and alters of different races to better investigate how closely linked students of different races

and ethnicities are and the impact this quality of interaction may have on student racial and ethnic personal networks. Additionally, Granovetter's (1973) foundational research on the "strength of weak ties" suggests the importance loosely linked social connections have for different groups of people, which provides support for the need to further study racially and ethnically diverse interaction beyond just the five people students are closest to on campus. Further investigation between the quality of diverse interactions, whether or not there is a correlation between the quality and the frequency of interactions, and the diversity of people having those interactions could all give further insight into why social connectedness may be negatively correlated with network heterogeneity.

Past research has supported the idea that, for Students of Color in particular, having ego-networks comprised of same-race/same-gender alters is key for student transitions to college and student retention (Grier-Reed & Wilson, 2015; Kim, 2009). Additionally, Gurin (1999) found that increased interactions with diverse peer networks may not have positive benefits for marginalized racial and ethnic groups. While the present research did not find racial or gender homophily to be predictive of social connectedness for Students of Color specifically, the results showing a negative correlation between social connectedness and racial heterogeneity in the whole sample may be supportive of this past research that emphasizes the importance of more homophilous social connections for certain groups of students, such as Students of Color.

Another consideration is the positive role that diverse relationships have been shown to have for students, particularly White students who are being introduced to diverse peers for the first time in college (Hall, Cabrera & Milem, 2011; Jayakumar, 2008). Previous studies have shown the importance of connecting across racial and

ethnic groups, as these diverse relationships have been shown to have positive implications for students' academic, intellectual, career, psychological outcomes and more (Adkins, 2003; Chang, Hsu, Shih, & Chen, 2014; Cox, 2001; Efendic & Pugh, 2018; Frankenberg, 2013; Horn & Kurlaender, 2006; Light, 2001; Richard, 2000; Richard, McMillan, Chadwick, & Dwyer, 2003; Smith, 2015; Wright, Ferris, Hiller, & Kroll, 1995). However, it is important to consider the paradox this research creates when also considering the past research demonstrating the benefits of more homophilous networks for Students of Color (Grier-Reed & Wilson, 2015; Gurin, 1999; Kim, 2009). Both these findings must be considered in recommending practices at colleges and universities that both challenge students, particularly those who have not previously interacted much with those they are different from, to develop cultural humility and to learn how to interact with different racial and ethnic groups, while also having practices that respect the needs of and that care for historically marginalized groups, such as Students of Color, and the resources they need to navigate the challenges they may face at predominantly White institutions.

Diverse Citizenship. Unsurprisingly, diverse citizenship was negatively correlated with homophily ($\beta = -.131$, $t = -2.561$, $p = .011$) and positively correlated with heterogeneity ($\beta = .122$, $t = 1.980$, $p = .049$). This means the higher the diverse citizenship score, the less homophilous and the more heterogeneous the students' network. Diverse citizenship is a variable comprised of students' willingness and desire to understand the different perspectives of others. This demonstrated positive correlation between diverse citizenship and network heterogeneity and the negative correlation between diverse

citizenship and homophily supports students' reported assertions that they do indeed desire to be connected to and get to know those that are different from them.

The two important aspects of diverse citizenship are openness to and desire to learn about diverse perspectives and experiences and a desire to serve one's community. Past research has highlighted the positive role that demographically diverse populations have on students' openness and agreeableness to the experiences of those who are different from them (Roberge, Xu, & Rousseau, 2012). Additionally, this research demonstrated that openness to the diverse experiences of others and group extraversion were positively correlated with the groups' attitudes toward interpersonal citizenship behavior (Roberge, Xu, & Rousseau, 2012). This research emphasizes the role that diversity in a group has on positive interactions with both aspects of diverse citizenship: students' openness and agreeableness when it comes to understanding the experiences of those from whom they are different, as well as willingness to engage in citizenship behaviors such as serving those in their group or community.

Intrapersonal Thriving

Positive Perspective. Students of Color in the sample showed a positive correlation between nominating a friend ($\beta=.352$, $t=2.143$, $p=.034$) or significant other ($\beta=.265$, $t=2.391$, $p=.019$) and having higher levels of positive perspective. Additionally, Students of Color had a positive correlation between positive perspective and nominating more alters with whom they say they communicate every day ($\beta=.247$, $t=2.185$, $p=.031$). Both social connectedness and positive perspective were correlated with nominating alters with whom the egos communicated with every day. Previous research supports this

connection between positive perspective, social connectedness, and being connected to friends, as it has shown a correlation between having a pessimistic outlook on life with also having a perception of lower levels of feeling supported by friends (Ciarrochi & Heaven, 2008). Students who nominate friends and significant others as individuals they feel close to and with whom they are frequently in contact with, therefore, may play a role in whether students have a positive or pessimistic outlook on life.

Implications for Future Research and Practice

Future Research. While this particular research study did not indicate strong connections between racial and ethnic friend groups and student thriving, more research can be done on this particular topic. This study yielded relatively low sample sizes within individual races for People of Color, making it difficult to run analyses on individual racial and ethnic groups' data. Future research could further explore potential connections between friend group diversity and thriving by gathering a larger, more diverse population large enough to test within individual racial and ethnic categories.

In addition to gathering larger sample sizes for various racial and ethnic groups, a significant limitation of this research was the relatively similar culture between the two institutions where data was collected. Both institutions, though one was private and one was public, are relatively conservative, Southern, predominantly White institutions. This similarity in culture between the two institutions leads to limitations in the types of students available to sample and the perspectives of those students. Future research should sample students from a wider diversity of institutional types and cultures to get a more heterogeneous perspective on students' experiences across institutional cultures.

Another limitation of this study is the convenience sampling used to recruit students for this study. While efforts were made to survey students across classification and area of study, the surveying was ultimately still done via convenience sampling, surveying students from only certain groups that were easily accessible to contact. Ultimately this makes the data less generalizable to the entire population. Future research sampling should strive to be more generalizable by using random sampling to gather student data from across student experiences and backgrounds.

Additionally, this research was cross-sectional in nature, meaning it only looks at students' experiences at one point in time. Future research could be done to analyze changes in students' experiences across time by using longitudinal methods. This could give more insight to how networks develop over time, such as how they changed from the beginning of the college experience to the end.

In addition to expanding this research to compensate for some of the limitations of the present study, other research could be done to more thoroughly investigate students' cross-racial and ethnic relationships with others beyond just those in students' closest personal relationships and networks. As previously stated, the perceived *quality* of interactions between racially and ethnically diverse students would provide more insight into the ways in which students are interacting with those who are different from them, rather than simply gathering data on whether or not diverse individuals make up close personal networks. Future research could focus on the ways in which diverse populations of students interact with one another beyond those people in close personal networks.

Additionally, the present research focuses on qualitative measures linking diversity in networks to thriving outcomes in students. Future research could use

qualitative or mixed methods to further investigate how students may feel diverse interactions may influence their outcomes in the college setting or what they feel they are learning through interacting with those they are different from.

Future Practice This study showed that, overall, students tend to have high homophily, meaning they tend to be closely tied to those who are racially and ethnically similar to them. While this data, as well as past research, shows students' tendency to build networks of people who are similar to them, there is a correlation between having a more heterogeneous network and being a Student of Color ($\beta=.204$, $t=3.845$, $p<.0001$). This correlation shows that Students of Color at predominantly White institutions are more likely to have networks of people who are of different races and ethnicities. However, as noted in the literature review, extensive research has shown the role diverse interactions have on various, positive outcomes (Adkins, 2003; Chang, Hsu, Shih, & Chen, 2014; Cox, 2001; Efendic & Pugh, 2018; Frankenberg, 2013; Horn & Kurlaender, 2006; Light, 2001; Richard, 2000; Richard, McMillan, Chadwick, & Dwyer, 2003; Smith, 2015; Wright, Ferris, Hiller, & Kroll, 1995). Additionally, however, research has shown safe spaces for Students of Color to have positive influences on their wellbeing and on their levels of classroom engagement (Museus, 2008). Harpalani (2017) argues that safe spaces are particular places or groups on a campus devoted to the needs of marginalized groups of people, as well as miniature "marketplaces for ideas," where ideas can be shared and discussed amongst a particular group of students that would not otherwise be able to take place on campus. Museus (2008) supports the notion that spaces need to exist on campuses where marginalized voices can be shared and supported, and that these environments help to promote the social connectedness of Students of Color.

Additionally, Harpalani (2017) argues that these spaces are created for marginalized voices to feel heard. Students can share cultural connections with one another in spaces that serve as a protective factor against the social isolation many Students of Color feel on predominantly White campuses.

As it is important to have both culturally diverse interactions, including those interactions with people from different races and ethnicities, as well as have spaces for safe dialogue amongst Students of Color and other marginalized groups, institutions must seek out opportunities for both of these pursuits. Research supports providing spaces for Students of Color to be able to engage with one another in a space where they can share mutual experiences of life on a predominantly White campus and feel comfortable and safe having those conversations (Harpalani, 2017). However, research also supports the benefits that diverse interactions can have for students, especially for those students who are White and who may not have been exposed to diverse networks prior to attending college (Allport, 1954; Antonio, 2004; Gurin, 1999; Light, 2001; Smith, 2015). On one hand, Students of Color need spaces in which to build relationships with those who understand their experiences on predominantly White campuses in order to feel more socially connected. However, on the other hand, White students may not have had to navigate diverse relationships prior to college and need to be challenged to get outside their comfort zone to gain experience and knowledge to do this well. These two competing needs for different groups create a paradox institutions must learn to navigate. To pursue this goal, colleges and universities can seek to educate and equip their students with regard to cultural humility, teaching them how to better engage across races, ethnicities, and cultures with respect and care for people and for differences, while also

providing spaces for Students of Color to build healthy relationships with one another and pursue social connectedness.

Conclusion

Ultimately, this research found little correlation when predicting thriving with the variables of racial/ethnic homophily and heterogeneity in students' networks. However, thriving variables were predictive of both homophily and heterogeneity, albeit at a small level. Past research supports the notion that having diverse relationships has other positive benefits for students (Adkins, 2003; Chang, Hsu, Shih, & Chen, 2014; Cox, 2001; Efendic & Pugh, 2018; Frankenberg, 2013; Horn & Kurlaender, 2006; Light, 2001; Richard, 2000; Richard, McMillan, Chadwick, & Dwyer, 2003; Smith, 2015; Wright, Ferris, Hiller, & Kroll, 1995). The small correlation in the present research supports these past studies linking group diversity to possible benefits for students. This is important, as colleges and universities can use this information to encourage students to engage across racial and ethnic differences, while also teaching them *how* to do this well by creating spaces for positive and meaningful interactions across different groups, as recommended by Allport (1954).

The present research also highlights several factors, aside from racial and ethnic diversity, that may contribute to aspects of students' thriving that are still important for student affairs professionals to be aware of. These factors include the frequency of communication with alters and the positive correlation it has with various aspects of the thriving subscales. This finding emphasizes the importance of consistent contact with those in the social network for feeling socially connected and, ultimately, having higher levels of thriving for students overall.

This research ultimately does highlight the role thriving may have in students' networks, as students with higher levels of thriving on various subscales also have varying levels of homophily and heterogeneity. Ultimately, this data can be used to further support claims that positive student outcomes may be correlated with the diversity or the homophily within their networks. Programs and initiatives can be designed to further promote thriving with these correlations in mind. At the same time, however, it is important to consider the differing needs of various student groups and the necessity of taking a nuanced approach to diversity on campus. While it is important to provide students with the skills and resources needed to build diverse relationships well, it is critical to do so in a way that empowers marginalized groups of students and gives them spaces in which they feel safe and free to process their college experiences with those who understand them and can support them well. Colleges and universities seeking opportunities to grow and engage diverse relationships on their campuses must be willing to take this nuanced approach in order to best equip, challenge, and support the variety of students' needs on their campuses.

REFERENCES

- Adkins, G.Y. (2003). *Diversity beyond the numbers: Business vitality, ethics and identity in the 21st century*. Long Beach, CA: GDI Press.
- Allport, G. W. (1954). *The nature of prejudice*. Garden City, NY: Doubleday.
- Antonio, A.L. (2004). The influence of friendship groups on intellectual self-confidence and educational aspirations in college. *Journal of Higher Education*, 75(4), 446-471.
- Ash, A. N., & Schreiner, L. A. (2016). Pathways to success for students of color in Christian colleges: The role of institutional integrity and sense of community. *Christian Higher Education*, 15(1-2), 38-61.
- Birnbaum, R. (1988). *How colleges work: The cybernetics of academic organization and leadership* (1st ed.). San Francisco: Jossey-Bass
- Booker, K. C. (2006). School belonging and the African American adolescent: What do we know and where should we go? *The High School Journal*, 89(4), 1-7.
- Borgatti, S.P. (2006). E-NET Software for the Analysis of Ego-Network Data (Version .41). Needham, MA: Analytic Technologies.
- Borgatti, S.P., Everett, M.G., Johnson, J.C. (2018) *Analyzing Social Networks*. Los Angeles, CA: SAGE Publications.
- Bowman, N. A., & Park, J. J. (2015). Not all diversity interactions are created equal: Cross-racial interaction, close interracial friendship, and college student outcomes. *Research in Higher Education*, 56(6), 601-621.
- Brannon, T. N. (2018). Reaffirming King's vision: The power of participation in inclusive diversity efforts to benefit intergroup outcomes. *Journal of Social Issues*, 74(2), 355-376.
- Brannon, T. N., Carter, E. R., Murdock-Perriera, L. A., & Higginbotham, G. D. (2018). From backlash to inclusion for all: Instituting diversity efforts to maximize benefits across group lines. *Social Issues and Policy Review*, 12(1), 57-90.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

- Bronfenbrenner, U. (1993). The ecology of cognitive development: Research models and fugitive findings. In R.H. Wozniak & K.W. Fischer (Eds.), *Development in context: Acting and thinking in specific environments* (pp. 3-44). Hillsdale, NJ: Erlbaum.
- Bronfenbrenner, U. (2006). The bioecological model of human development. In W. Damon & R.M, Lerner (Eds.), *Handbook of child psychology* (6th ed.). pp. 793-828. Hoboken, NJ: Wiley.
- Brown v. Board of Education, 347 U.S. 483 (1954).
- Byrd, C. M. (2015). The associations of intergroup interactions and school racial socialization with academic motivation. *The Journal of Educational Research, 108*(1), 10-21.
- Chang, J., Hsu, C., Shih, N., & Chen, H. (2014). Multicultural families and creative children. *Journal of Cross-Cultural Psychology, 45*(8), 1288-1296.
- Chavez, A. F., Guido-DiBrito, F., & Mallory, S. L. (2003). Learning to value the "other": A framework of individual diversity development. *Journal of College Student Development, 44*(4), 453-469.
- Chickering, A.W., & Gamson, Z.F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin, 39*(7), 3-7.
- Ciarrochi, J., & Heaven, P. C. L. (2008). Learned social hopelessness: The role of explanatory style in predicting social support during adolescence. *Journal of Child Psychology and Psychiatry, 49*(12), 1279-1286.
- Clarke, C. G., & Antonio, A. L. (2012). Rethinking research on the impact of racial diversity in higher education. *The Review of Higher Education, 36*(1), 25-50.
- Colby, S.L. & Ortman, J.M. (2015). *Projections of the size and composition of the U.S. population: 2014 to 2060*. Washington, DC: United States Census Bureau.
- Coleman, J. (1958) Relational analysis: The study of social organizations with survey methods. *Human Organization, 17*(4), 28-36.
- Cox, T.H. Jr. (1993). *Cultural diversity in organizations: Theory, research, and practice*. San Francisco: Berrett-Koehler.
- Cox, T.H. Jr. (2001). *Creating the multicultural organization: A strategy for capturing the power of diversity*. San Francisco: Jossey-Bass.
- Creswell, J.W. (2014). *Research design* (4th ed.). Thousand Oaks, CA: Sage.

- Deliens, T., Clarys, P., De Bourdeaudhuij, I., & Deforche, B. (2014). Determinants of eating behaviour in university students: A qualitative study using focus group discussions. *BMC Public Health, 14*(1), 1-12.
- Dias, A., Geard, N., Campbell, P. T., Warr, D., & McVernon, J. (2018). Quantity or quality? Assessing relationships between perceived social connectedness and recorded encounters. *PLoS ONE, 13*(11), e0208083.
- DiTomaso, N., Post, C., & Parks- Yancy, R. (2007). Workforce diversity and inequality: Power, status, and numbers. *Annual Review of Sociology, 33*, 473–501.
- Diversity. (n.d.) In *Oxford Dictionaries*. Retrieved from <https://en.oxforddictionaries.com/thesaurus/diversity>
- Efendic, A., & Pugh, G. (2018). The effect of ethnic diversity on income - an empirical investigation using survey data from a post- conflict environment. *Economics, 12*(17), 1-35.
- Ekins, A. (2017). *Reconsidering inclusion: Sustaining and building inclusive practices in schools*. New York, NY: Routledge.
- Frankenberg, E. (2013). The role of residential segregation in contemporary school segregation. *Education and Urban Society, 45*(5), 548-570.
- Galinsky, A. D., Todd, A. R., Homan, A. C., Phillips, K. W., Apfelbaum, E. P., Sasaki, S. J., & Maddux, W. W. (2015). Maximizing the gains and minimizing the pains of diversity: A policy perspective. *Perspectives on Psychological Science, 10*(6), 742-748.
- Gitlow, A. L., & Gitlow, H. S. (2013). The globalization of america's research universities: Does the globalization mission pose a moral dilemma? *Journal of Leadership, Accountability and Ethics, 10*(4), 11.
- Granovetter, M.S. (1973). The strength of weak ties. *American Journal of Sociology, 78*(6), 1360-1380.
- Grier-Reed, T., & Wilson, R. J. (2016). The african american student network: An exploration of black students' ego networks at a predominantly white institution. *Journal of Black Psychology, 42*(4), 374-386.
- Gurin, P. (1999). Expert reports in defense of University of Michigan: Expert report of Patricia Gurin. *Equity and Excellence in Education, 32*(2), 36-62.
- Gurin, P., Dey, E.L., Hurtado, S., Gurin, G. (2002). Diversity and higher education: Theory and impact on educational outcomes. *Harvard Educational Review, 72*(3), 330-366.

- Hall, W. D., Cabrera, A. F., & Milem, J. F. (2011). A tale of two groups: Differences between minority students and non-minority students in their predispositions to and engagement with diverse peers at a predominantly white institution. *Research in Higher Education*, 52(4), 420–439.
- Harpalani, V. (2017). "Safe spaces" and the educational benefits of diversity. *Duke Journal of Constitutional Law & Public Policy*, 13(1), 117.
- Harper, S.R., & Hurtado, S. (2007). Nine themes in campus racial climates and implications for institutional transformation. In S.R. Harper & L.D. Patton (Eds.), *Responding to the realities of race on campus* (New Directions for Student Services No. 120, pp. 7-24). San Francisco, CA: Jossey-Bass.
- Herring, C. (2009). Does diversity pay?: Race, gender, and the business case for diversity. *American Sociological Review*, 74(2), 208-224.
- Herring, C. (2017). Is diversity still a good thing? *American Sociological Review*, 82(4), 868-877.
- Hirsch, J. K., & Rabon, J. K. (2015). Optimistic explanatory style and suicide attempt in young adults. *International Journal of Mental Health and Addiction*, 13(6), 675-686.
- Holland, J. L. (1973). *Making vocational choices: A theory of careers*. Englewood Cliffs, NJ: Prentice Hall.
- Horn, C. L., & Kurlaender, M. (2006). *The end of Keyes: Resegregation trends and achievement in Denver Public Schools*. Cambridge, MA: The Civil Rights Project at Harvard University.
- Homans, G.C. (1950). *The human group*. San Diego, CA: Harcourt Brace Javanovich.
- Homans, G.C. (1961). *Social behavior: Its elementary forms*. San Diego, CA: Harcourt Brace Javanovich.
- Huang, G. C., Unger, J. B., Soto, D., Fujimoto, K., Pentz, M.A., Jordan-Marsh, M., & Valente, T. W. (2014). Peer influences: The impact of online and offline friendship networks on adolescent smoking and alcohol use. *Journal of Adolescent Health*, 54(5), 508-514.
- Hurtado, S., & Carter, D.F. (1997). Effects of college transition and perceptions of the campus racial climate on Latino college students' sense of belonging. *Sociology of Education*. 70, 324-345.

- Hurtado, S., Carter, D., & Spuler, A. (1996). Latina/o student transition to college: Assessing difficulties and factors in successful college adjustment. *Research in Higher Education, 37*(2), 135-157.
- International Organization for Migration. (2010). *World Migration Report 2010*. Geneva Switzerland: Author.
- Jayakumar, U. M. (2008). Can higher education meet the needs of an increasingly diverse and global society? *Harvard Education Review, 78*(4), 615–651.
- Kadushin, C. (2012). *Understanding social networks*. New York, NY: Oxford University Press.
- Langer, E. J. (1997). *The power of mindful learning*. Reading, MA: Addison-Wesley.
- Leung, A. K., & Chiu, C. (2010). Multicultural experience, idea receptiveness, and creativity. *Journal of Cross-Cultural Psychology, 41*(5–6), 723–741.
- Light, R. J. (2001). *Making the most of college: Students speak their minds*. Cambridge, Mass: Harvard University Press.
- Livingston, G. (2017). *The rise of multiracial and multiethnic babies in the U.S.* Washington, DC: Pew Research Center.
- Lorant, V., & Nicaise, P. (2015). Binge drinking at university: A social network study in Belgium. *Health Promotion International, 30*(3), 675-683.
- Lounsbury, J. W., & DeNeui, D. (1995). Psychological sense of community on campus. *College Student Journal, 29*(3), 270-277.
- Mayhew, M.J., Rokenback, A.N., Bowman, N.A., Seifert, T.A., Wolniak, G.C., Pascarella, E.T., & Terenzini, P.T. (2016) *How college affects students: 21st century evidence that higher education works* (Vol 3). San Francisco, CA: Jossey-Bass.
- Maier, S. F., & Seligman, M. E. (1976). Learned helplessness: Theory and evidence. *Journal of Experimental Psychology: General, 105*(1), 3-46.
- Maleva, V., Westcott, K., McKellop, M., McLaughlin, R., Widman, D., & College, J. (2014). Optimism and college grades: Predicting GPA from explanatory style. *Psi Chi Journal of Psychological Research, 19*(3), 129-135.
- McKillip, M. E. M., Godfrey, K. E., & Rawls, A. (2013). Rules of engagement: Building a college-going culture in an urban school. *Urban Education, 48*(4), 529-556.

- McPherson, M. Smith-Lovin, L., & Cook, J.M. (2001). Birds of a feather: Homophily in social networks. *Annual Review of Sociology*, 27, 415-444.
- Meadows, D. H. (2008). *Thinking in systems: A primer*. White River Junction, VT: Chelsea Green Publishing.
- Moos, R. (1986) *The Social Climate Scales*. Palo Alto, CA: Consulting Psychologists Press.
- Multiculturalism. (n.d.) In *Oxford Dictionaries*. Retrieved from <https://en.oxforddictionaries.com/thesaurus/multiculturalism>
- Museus, S.D. (2008) The role of ethnic student organizations in fostering African American and Asian American students' cultural adjustment and membership at predominantly White institutions. *Journal of College Student Development*, 49(6), 568-586.
- Nai, J., Narayanan, J., Hernandez, I., & Savani, K. (2018). People in more racially diverse neighborhoods are more prosocial. *Journal of Personality and Social Psychology*, 114(4), 497-515.
- National Constitution Center. (n.d.). Retrieved September 25, 2018, from <https://constitutioncenter.org/liberty-medal/recipients/thurgood-marshall>
- Nelson Laird, T.F., Chen, D., & Kuh, G.D. (2008). Classroom practices at institutions with higher-than-expected persistence rates: What student engagement data tell us. In J.M. Braxton (Ed.), *The role of the classroom in student persistence* (New Directions for Teaching and Learning No. 115, pp. 85-100). San Francisco, CA: Jossey-Bass.
- Nes, L., Evans, D., & Segerstrom, S. (2009). Optimism and college retention: Mediation by motivation, performance, and adjustment(1). *Journal of Applied Social Psychology*, 39(8), 1887-1912.
- Newcomb, Theodore M. (1961). *The acquaintance process*. New York: Holt, Rinehart and Winston.
- Newcomb, T.M. (1962). Student peer-group influences. In Sanford, N. (Ed.), *The American college: A psychological and social interpretation of the higher learning* (469-488). Hoboken, NJ.
- Newman, M.L., Keough, K.A., & Lee, R.M. (2009). Group identification and college adjustment: The experience of encountering a novel stereotype. *The Journal of Social Psychology*, 149(6), 694-708.

- Orfield, G. (Ed.). (2001). *Diversity challenged: Evidence on the impact of affirmative action*. Cambridge, MA: Harvard Education Publishing Group.
- Orfield, G., Bachmeier, M., James, D.R., & Eitle, T. (1997). Deepening segregation in American public schools: A special report from the Harvard Project on School Desegregation. *Equity and Excellence in Education, 30*(2), 5-24.
- Ortiz, A. M., & Waterman, S.J. (2016). The changing student population. In G.S. McClellan, J. Stringer, & Associates (Eds.), *The handbook of student affairs administration* (4th ed.; pp. 267-285). San Francisco, CA: Jossey-Bass
- Patterson, M., & Goodson, P. (2017). Using social network analysis to better understand compulsive exercise behavior among a sample of sorority members. *Journal of Physical Activity & Health, 14*(5), 360-367.
- Peterson, C., & Steen, T.A. (2009). *Optimistic explanatory style*. (2nd ed.) New York, NY: Oxford University Press.
- Pettigrew, T. F., & Tropp, L. R. (2000). Does intergroup contact reduce prejudice: Recent meta-analytic findings. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 93–114). Mahwah, NJ: Lawrence Erlbaum.
- Piaget, J. (1965). *The moral judgment of the child*. New York, NY, US: Free Press.
- Pike, G.R., & Kuh, G.D. (2006). Relationships among structural diversity, informal peer interactions, and perceptions of the campus environment. *The Review of Higher Education*
- Race, R., & Lander, V. (2014). *Advancing race and ethnicity in education*. Basingstoke: Palgrave Macmillan.
- Reardon, S. F., & Owens, A. (2014). 60 years after brown: Trends and consequences of school segregation. *Annual Review of Sociology, 40*(1), 199-218.
- Renn, K. A., & Arnold, K. D. (2003). Reconceptualizing research on college student peer culture. *The Journal of Higher Education, 74*(3), 261-291.
- Roberge, M., Xu, Q. J., & Rousseau, D. M. (2012). Collective personality effects on group citizenship behavior: Do diverse groups benefit more? *Small Group Research, 43*(4), 410-442.
- Richard, O.C. (2000). Racial diversity, business strategy, and firm performance: A resource-based view. *The Academy of Management Journal, 43*, 164-177.

- Richard, O., McMillan, A., Chadwick, K., & Dwyer, S. (2003). Employing an innovation strategy in racially diverse workforces: Effects on firm performance. *Group & Organization Management, 28*(1), 107-126
- Sakurai, Y., & Pyhältö, K. (2018). Understanding students' academic engagement in learning amid globalising universities. (pp. 31-38) Emerald Publishing Limited.
- Sampson, D., & Garrison-Wade, D. F. (2011). Cultural vibrancy: Exploring the preferences of African American children toward culturally relevant and non-culturally relevant lessons. *The Urban Review, 43*, 279–309.
- Schreiner, L. A. (2010). *The “Thriving Quotient”*: A new vision for student success. *About Campus, 15*(2), 2-10.
- Schreiner, L. A. (2014). Different pathways to thriving among students of color: An untapped opportunity for success. *About Campus, 19*(5), 10-19.
- Schreiner, L.A., Louis, M.C., & Nelson, D.D. (Eds.). (2012a). *Thriving in transitions: A research-based approach to college student success*. Columbia, SC: University of South Carolina, National Resource Center for the First-Year Experience and Students in Transition.
- Schreiner, L. A., Primrose, B., Kammer, R., Quick, D., & Petridis, H. (2012b). *Thriving in college: A new future for higher education*. Presentation at NASPA, Phoenix, AZ.
- Stathi, S., & Crisp, R. J. (2008). Imagining intergroup contact promotes projection to outgroups. *Journal of Experimental Social Psychology, 44*(4), 943-957.
- Smith, D.G. (2015). *Diversity's promise for higher education: Making it work*. Baltimore, MD: Johns Hopkins University Press.
- Sriram, R. (2017). *Student affairs by the numbers: Quantitative research and statistics for professionals*. Sterling, VA: Stylus Publishing, LLC.
- Steele, L. G., & Perkins, K. M. (2018). The effects of perceived neighborhood diversity on preferences for redistribution: A pilot study. *Societies, 8*(3), 82.
- Strange, C. C., & Banning, J. H. (2001). *Educating by design: Creating campus learning environments that work* (1st ed.). San Francisco: Jossey-Bass.
- Strange, C. C., & Banning, J. H. (2015). *Designing for learning: creating campus environments for student success* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Tagg, J. (2003). *The learning paradigm college*. Boston, MA: Anker Publishing Company.

- Tatum, B. D. (1999). *"Why are all the black kids sitting together in the cafeteria?" And other conversations about race*. New York: BasicBooks.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago: University of Chicago Press.
- Tsui, Ann S., Egan, T.D., & O'Reilly, C.A. (1992). Being different: Relational demography and organizational attachment. *Administrative Science Quarterly*, 37, 549–79.
- University of Southern California Board of Trustees. (1993, February). *The role and mission of the University of Southern California*. Retrieved from <https://about.usc.edu/files/2018/07/University-Role-and-Mission-2018.pdf>
- U.S. Department of Education. (2016). *Advancing diversity and inclusion in higher education: Key data highlights focusing on race and ethnicity and promising practices*. Washington, DC: U.S. Department of Education.
- Vavrus, M. J. (2015). *Diversity & education: A critical multicultural approach*. New York, NY: Teachers College Press.
- Vogt, W. P., & Johnson, B. (2016). *The SAGE dictionary of statistics & methodology: A nontechnical guide for the social sciences* (Fifth ed.). Los Angeles: SAGE.
- Wilson, J., Meyer, K., & McNeal, L. (2012). Mission and Diversity Statements: What They Do and Do Not Say. *Innovative Higher Education*, 37(2), 125-139
- Wright, P., Ferris, S.P., Hiller, J.S., & Kroll, M. (1995). Competitiveness through management of diversity: Effects on stock price valuation. *Academy of Management Journal*, 38(1), 272-287.
- Youyou, W., Stillwell, D.H., Schwartz, A., & Kosinski, M. (2017). Birds of a feather do flock together: Behavior-based personality assessment method reveals personality similarity among couples and friends. *Psychological Science*, 28(3), 276-284.