Foreword

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The Missing Link Targeting Non-traditional Students: A Descriptive Content Analysis of University Websites

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Abstract

Non-traditional students are a rapidly growing segment of the non-traditional student (NTS) population attending U.S. colleges and universities. A content analysis was used in this study to examine the availability of information designed for these students on universities’ websites. Focal areas are Orientation, Career Counseling, Academic Advising, Financial Aid, and Childcare. Most of the universities researched do not have links (programs) that focus on these services intended for NTS. The findings of this study should motivate universities to develop and implement programs that functionally support the needs of this population and communicate their existence on their web pages.

Enrollment at colleges and universities has been progressively rising since the 1970s (Lewin 2011; Munday 1976). Non-traditional students (NTS) are a significant segment of this growth in the United States (Wyatt 2011). A factor contributing to this population’s enrollment increase is the number of laid-off employees who return to college (Kenner and Weinerman 2011; Powell 2009). A second factor involves the increased educational requirements those in the job market face (Jones 1996). Third, enrollments increase with veterans of the Iraq and Afghanistan wars who pursue university education degrees (Rumann and Hamrick 2010). Finally, research suggests that on average a person’s higher education level is related to lower probability of unemployment, and a higher earning potential (Doyle and Gorbunov 2010; United States Department of Labor 2012). These factors are even more evident and important during times of economic crisis. One of the consequences of these factors and the current economic crisis is that more NTS are enrolling in colleges and universities (Doyle and Gorbunov 2010), which Munday (1976) documented as a common occurrence. For the purpose of this study, a NTS is defined as an individual who is over the age of 25.

The estimates of the NTS population’s size vary from source to source. The variance is attributable to the elasticity of the criteria used when defining or describing NTS. For example, in 2002 The United States Department of...
One troubling trend reported in the research is that less than one in five NTS completes a degree (Lewin 2011). This low completion rate is noticeable especially if compared to the growth of their enrollment. The NTS’s drop-out rate is much higher than that of the traditional student population and their completion rate does not measure up to their enrollment (Doyle and Gorbunov 2010; Jones 2011).

According to USDE-NCES (1992), NTS can be ranked based on possible characteristics, such as age, family and financial responsibilities, work responsibilities, race and gender, and enrollment patterns. Based on how many of these characteristics and others are present, NTS are classified from one as minimal, two or three as moderate, and four or more as highly non-traditional. This method of classification makes the identification of their needs or the spotting of trends within their population difficult. A college and university support service program designed for NTS, classified by age, would facilitate serving NTS for schools. The broad programs that colleges and universities currently offer imply that, regardless of age, all students have the same needs and face the same difficulties; this idea seems counterintuitive. In other words, contrary to current belief, and based on completion records, providing the traditional programs or making minor adjustments to the existing programs, does not meet the needs of NTS.

The NTS, while being encouraged to return to colleges and/or universities, can easily get discouraged while navigating through the channels of higher education organizations (Wyatt 2011). Because colleges and universities are designed to meet the needs of traditional students, they lack the services and support programs designed with NTS’s needs in mind (Gilardi and Guglielmetti 2000; Kenner and Weinerman 2011; Rau 1999). This deficiency in services and support contributes to the poor completion record of this group (Powell 2009).

One of the ways colleges and universities can help NTS to succeed is to provide them with support programs and services tailored to their needs. The availability of these programs should be properly communicated (Wyatt 2011). Colleges and universities develop Websites with the intention of making information available, and accessible for the use of its stakeholders. Increasingly, the data indicate that the Web is the first place where people search when looking for information, including information about colleges and universities. As Wyatt (2011) concluded, accessibility of university Websites is important in communicating support services and program information designed for NTS.

The State of California has implemented the Intersegmental General Education Transfer Curriculum (IGETC), which serves as a comprehensive statewide model. This program provides the information needed about the general education requirements for any California public post-secondary institution (USDE-CACSFA 2008). In addition to IGETC, California has a statewide database system (ASSIST), accessible to all students. ASSIST offers course and program requirements to students, under the transfer agreement between the California Community Colleges, the University of California (UC), and the California State University (CSU). Another important collaborative program to assist with the student transfer process is the Transfer Admission Guarantee (TAG), by which community college students transferring to a four year university have priority over other applicants (University of California 2012). These programs increase the NTS’s enrollment at the university, given that 70 percent of university students transfer from community college; and three quarters of the community college population is considered non-traditional (Gonzalez 2001).

The present study used a descriptive content analysis to examine California State University schools’ Web pages, in an effort to answer the following question: Do the Web pages of California State University schools identify support programs and services aimed at non-traditional students?
Literature Review

Non-traditional student enrollment in both colleges and universities has surpassed historical records (Kimbrough and Weaver 1999). Recently, the economic decline directly affected the job market, and many older individuals without a college degree found themselves once again searching for employment or a way to make themselves more employable (Doyle and Gourbunov 2010). These conditions motivated many individuals to go back to college, complete a specialty or technical certificate, or for many, earn a four year university degree that they assume will better equip them for the competitive job market (Doyle and Gourbunov 2010; Ely 1997; Kenner and Weinerman 2011; Lake and Pushchak 2007; USDE 2000; USDE-NCES 2002). Military veterans are a second source of NTS. Many of them delayed their college educations while they were in service. Students 25 years or older, usually have four or more non-traditional characteristics: 1) 25 years or older; 2) financial independence; 3) full-time employment; and 4) dependants (their own children or other family members). Thus, a large number of NTS are considered highly non-traditional.

Non-traditional Student Population

A traditional student is defined as one that enrolls immediately after graduating from high school and completes the degree by age 24 (Kimbrough and Weaver 1999; Philibert, Allen, and Elleven 2008). Also, the conventional or traditional student can be described as one who is 18-24 years old, resides on university grounds, and attends school full time as a product of the support afforded by the parents, economic assistance from grants and scholarships or both (Kimbrough and Weaver 1999; Philibert, Allen, and Elleven 2008). As previously stated, for the purpose of this study, the NTS is an individual over the age of 25 (Ely 1997; Kenner and Weinerman 2011; Powell 2009). NTS are identified and referred to in numerous ways. NTS are also called adult learners, re-entry students, returning students, recyclers, OTAs or older than average students, mature-aged students, new students, and members of the new majority (Cross 1980; Ely 1997; Kenner and Weinerman 2011; Tones et al. 2009).

In contrast, NTS are identified by a number of specific characteristics. Some of these characteristics include age, employment, family (in many cases NTS are parents and/or caregivers), and financial responsibilities associated with it (Kimbrough and Weaver 1999). Some studies have included characteristics of inadequate representation in their definition of NTS: these characteristics include gender, race, ethnicity, national origin, education, religion, finances, language, and lack of information, disability, and socio-economic status (Schuetze and Slowey 2002; Taylor and House 2010; USDE 2011). For the intention of the study, these characteristics of underrepresentation will not be considered.

Non-traditional Student Success Rates

Data indicate that the non-traditional student population continues to grow. Based on statistics reported by the USDE (1996), the proportion of NTS increased from 28% in 1970 to over 44% in 1994. The USDE-CPES (2010) and the USDE-NCES (2011) project that non-traditional student enrollment will continue to grow faster than that of traditional students. Unfortunately, this growth has not, as noted by Lewin (2011), resulted in increased levels of achievement.

Non-traditional students arrive on college campuses with varying levels of preparedness. Preparedness refers to a student’s level of education (Levine 2011). In many NTS cases, their academic background is observed as weaker (Monroe 2006). O’Donnell and Tobbell (2007) noted that NTS are not a homogenous group. Clinton (2004) argues that NTS deal with many hurdles; cultural, social and academic. In addition, factors such as family circumstances, financial responsibilities, and work responsibilities are typical causes of interference with NTS preparedness (Clinton 2004). According to Wyatt (2011), an additional challenge faced by both this student population and colleges and universities is that many of these students are not psychologically prepared for higher education level work.

In fairness to higher education institutions, it is necessary to acknowledge that the NTS population is not an easy demographic to serve (Williams and Japzon 2005). Their needs are difficult to address because of their in-group differences and complexity. Typically, the NTS embodies many characteristics combined, resulting in multiple classifications (Williams and Japzon 2005).

A student over the age of 25 can benefit from programs designed with age-based needs in mind. However, they might also benefit from support programs that account for a need to balance parenting, care giving, and employment. It is clearly less challenging to create a program for a student with no more than one non-traditional characteristic. Creating programs for students with multiple characteristics (which is the case with many NTS) is more difficult (Williams and Japzon 2005). All of these factors create a multilevel challenge for schools, if they wish to carefully develop programs that facilitate their successful transition to college and degree completion.

Non College and University Variables that Influence Non-traditional Student Success Rates

The job market demands and tough economic times motivate people to pursue a college education. People do so with the anticipation that obtaining a college degree will both expand their education and it will equip them for the job market (Lake and Pushchak 2007). Another reason for NTS returning to colleges and universities is the desire of completing an education for self-fulfillment, and personal satisfaction (Powell 2009). Many of the challenges and conflicts faced
by NTS are beyond the control of higher education organizations. Significant barriers are student finances, work, and family responsibilities.

**Student Finances**

The Congress Advisory Committee on Student Financial Assistance or USDE-CACSFA (2008) discussed the consequences and challenges faced by those seeking higher education when dealing with the increases in tuition, fees, and expenses associated with earning a college degree. USDE-CACSFA (2008) acknowledges in their report the difficult financial situation faced by the average working non-traditional student, which includes the burden of forgoing a portion of their income in order to attend school. The financial barriers faced by NTS are well documented. An independent congressional committee that met in 2009 reported on the negative results that increasing college and university fees and tuition have on the enrollment and persistence of traditional students as well as NTS.

According to Powell (2009), financial aid policies for grants and loans hurt working NTS in a number of ways. For example, federal education grants and loans are only available to students who enroll at least half time, provided they are not working full time. Many students who are enrolled half-time are working full time; thus they do not qualify for the assistance. Powell (2009) indicates that a large number of NTS need to fund the expenses associated with higher education by borrowing from costly private financing institutions and/or fund their college education using credit cards.

Family, finances, and work obligations are entwined. NTS, especially those who are single parents, must work to support their families. Working more hours reduces the time they can spend with their families. Family time gets compromised even further when attending school is added to the mix (Chartrand 1992).

**Family**

Non-traditional students’ priorities become: 1) work, 2) family, and then 3) school (Chartrand 1992). The NTS is more likely to encounter family obligations and work responsibilities; these responsibilities create conflicts with the student’s educational efforts (Clinton 2004). Research indicates, that family is one of the biggest challenges NTS face (Kimbrough and Weaver 1999; Lansdown 2009; USDE-NCES 1992). Chartrand (1992) went so far as to claim that NTS’ high dropout rate can be directly attributed to conflicts resulting from family and work obligations.

Parents, especially single parents, seek out a safe, convenient, and affordable day care (Schuetze and Slowey 2002). Day care centers have been established by many colleges and universities, to provide the support needed for students with children while attending school. However, most day care centers are open during regular business hours, usually Monday through Friday from 7:30 am to 5:00 pm. This schedule leaves NTS who are enrolled in evening and weekend courses without the use of on-campus day care services. These students must make other arrangements that can increase their cost of attending school, and decrease the quality of care their children receive.

**Work**

Combining school and work is not easy. The USDE reported in 2002 that two thirds of NTS consider themselves employees first. Generally, employers do not want to invest in training or promoting education for temporary workers (Lansdown 2009). Thus, a significant conflict with work and school schedules is created, and constraints of necessary funds needed to attend school are experienced by NTS as a consequence of lack of support from the workplace.

Research supports that work, family responsibilities, and financial limitations are not the only barriers faced by NTS (Clinton 2004). The NTS population is faced with multiple other barriers, which only the universities and colleges have the control of implementing or modifying. These barriers are related to student support services such as modified orientation, career counseling, academic advising, financial aid, and family support services.

**College and University Actions that Influence Non-traditional Student Success Rates**

Problems arise when colleges and universities do not modify, or develop support service programs in the following areas: admissions orientation, career counseling, academic advising, financial aid, and childcare. Most institutions’ support services programs do not meet NTS needs (Frost 1980; Jones 2011; Schuetze and Slowey 2002).

**Student Support Services**

Colleges and universities have support services that are usually available during traditional business hours, making it difficult for students who attend school at night, on weekends, and/or online to access these services. According to Luzzo’s (1993) research results, NTS display higher levels of career decision making. Therefore, he emphasized the importance of counseling programs with the main goal of meeting the career development needs of NTS. In particular, colleges and universities should design career counseling methods that provide transparency and reassurance in the area of career decision making.

At the same level of importance as career counseling, NTS also need other support programs and services such as orientation, academic advising and child care (Frost 1980; Schuetze and Slowey 2002). Schuetze and Slowey (2002) argue that strategic programs in these areas, designed for NTS, should be provided by university staff with special training and understanding of the NTS’s needs. Tones et al. (2009) add, that it is disconcerting that higher education institutions are not providing support services tailored to the needs of all students. Providing
these services creates stability and promotes success for the NTS population (Chartrand 1992; Frost 1980).

Numerous studies about NTS (Ely 1997; Kimbrough and Weaver 1999; O’Donnell and Tobbell 2007; USDE-CPES 2011; USDE-NCES 1993, 2003) suggest an array of labels, definitions, characteristics, needs, and predictors as well as statistics of how to better understand and serve this population of students. A number of scholars have looked at how to understand and better serve NTS (Chartrand 1992; Luzzo 1993; Schuetze and Slowey 2002). Research has also been conducted by the U.S. government, education agencies, and school boards across the nation, with the goal of designing programs with NTS in mind (Jones 2011). Some programs have been implemented, but for many programs support and services for evenings and weekends are excluded. According to Schuetze and Slowey (2002), the revolution of higher education has made it available not only to the privileged, but to the masses as well. At present, there is one important element of this change; little or no planning to integrate NTS as part of the masses has been addressed.

**Orientation**

The proper orientation is a vital exercise for prospective students, prior to a career decision and scheduling of classes (Tones et al. 2009). Communicating essential information to assist incoming students in making the appropriate decisions is as important as the availability of adequate financial aid. To accomplish this goal, it might be necessary to provide an in-depth orientation presented by multiple individuals with expertise in different areas of the school. It might also be advantageous to conduct the orientation in more than one 75-minute session.

Disappointingly often, educational institutions are not making the information concerning services offered available in a timely and accurate manner (Jones 2011). An appropriate orientation should assist the incoming student in understanding their options and help them maximize the opportunity in the areas of career, curriculum offered by the school, financial aid, and scholarships available (Lake and Pushchak 2007; USDE 2008). Moreover, higher education institutions should provide a support staff that is reachable, with a facilitator’s attitude, and willingness to make necessary adjustments to better serve non-traditional and traditional students as well (USDE 2008).

**Attrition and Incompletion**

Survey research demonstrates that NTS are at higher risk of withdrawal (Gilardi and Guglielmetti 2011; Levin 2011; Monroe 2006). According to Doyle and Gorbunov (2010), 48% of these students drop-out, and only 28% complete a baccalaureate degree. Monroe’s (2006) research findings reaffirm that institutional communication is a key factor that affects student attrition. Schatzel et al. (2011) found that in the United States about eight million people have attended college, and have given up prior to completion. President Barack Obama made an announcement in February 2009, in which he expressed his clear objective to obtain the highest percentage of college graduates in the world by the year 2020 (Jones 2011). According to Jones (2011) President Obama’s plan includes the NTS population as a target to achieve this goal.

USDE-CACSFSA has considered NTS as a fast growing population in higher education (Jones 2011). This committee is concerned with NTS’s graduation records, which have been consistently lower than those of traditional students. USDE-CACSFSA also recognizes that financial aid is only one factor in promoting the success of NTS, and the committee argues how vital it is to control the price of higher education, in an effort not to price out NTS from obtaining their degrees. Another session meeting of this committee was planned for the summer 2011, with the goal of identifying the obstacles faced by NTS as well as the necessary steps the federal government is required to take, in order to mitigate such obstacles (Jones 2011). The outcome of this follow-up meeting has not yet been released.

Monroe (2006) believes that students (including many NTS) transferring from community colleges to universities have needs that are not addressed with urgency, because the universities do not consider them ideal students. Monroe (2006) also argues that the complexity of NTS and the statistics available demonstrate high attrition experienced by this population. This problem deserves a closer look. According to Doyle and Gorbunov (2010), NTS face challenges in making the transition from high school into higher education institutions; however, many more challenges for NTS exist such as financial limitations, work, and family responsibilities. Subsequently, institutions need to assist NTS to have an easier integration and to increase the probability of success.

In summary, the NTS population is growing. This growth is fueled by many factors including economic situations (Lake and Pushchak 2007; Kenner and Weinerman 2011; Powell 2009), and returning veterans (Kenner and Weinerman 2011; Rumann and Hamrick 2010). Non-traditional students have both a low success rate (Gilardi and Guglielmetti 2011; Levin 2011; Monroe 2006) and a high attrition rate (Chartrand 1992; Schatzel et al. 2011). Numerous factors contribute to the low success rate such as financial uncertainty (Powell 2009; Rau 1999; USDE-CACSFSA 2008), work-related concerns (Chartrand 1992; Kimbrough and Weaver 1999; Lansdown 2009; USDE-NCES 1992), family commitments (Chartrand 1992; Rau 1999; Schuetze and Slowey 2002), and academic preparation (Kimbrough and Weaver 1999; Levine 2000). Colleges and universities are contributing to this problem by not providing the appropriate orientation (Jones 2011; Tones et al. 2009; USDE-CACSFSA 2008), and students support services (Frost 1980; Gilardi and Guglielmetti 2000; Jones 2011; Rau 1999; Kenner and Weinerman 2011; Schuetze and Slowey 2002). The student support services aspect of the problem is the focus of this research effort.
Method
This study used a descriptive content analysis of 22 California State University (CSU) Websites, specifically information regarding programs and support services offered to NTS found on these Websites. The CSU is one of the nation’s largest public university systems open to all applicants, with over 400,000 students enrolled. As such, its actions and programs can potentially become practices followed by other school systems. The CSU is a classic and interdependent system; it promotes an all-inclusive education program. The primary focus is providing undergraduate education to the state’s diverse population of students (John Williams, pers. comm.). At present, approximately 70% of CSU’s enrollment is community college students that transferred to a CSU school or students that previously attended a community college (Gonzalez 2001).

Currently, the World Wide Web is the most common tool used to find information. Going paperless has become an integral component of a green and sustainable way of conducting business (Gordon and Pathak 1998). Universities are building Websites with the intent of making it the point of contact for those inquiring; while making information available at all times. The following categories were considered and guided the research: A) Time (used to determine how long it takes to find the information); B) Admissions orientation; C) Career planning and placement; D) Academic advising (general and discipline); E) Financial aid programs; F) Office of Financial aid operating hours; and G) Family support services (such as childcare). The questions for each area were formulated to create a code book (see Appendix A).

The CSU system is comprised of 23 schools. This study reports on the findings from 22 campuses, excluding the California Maritime Academy. The Maritime Academy, while technically recognized as a part of the CSU system, is a nautical specialty training school and does not offer the conventional four year education program as the other 22 campuses (see Appendix B).

Results
This study examined Websites maintained by 22 of the 23 schools that comprise the largest state university system in the nation (based on enrollment). The results reported involve the coding outcomes of seven variables intended to describe specific aspects of a school’s Website. Specifically, the coding was used to gather data about the support services offered by each school in the areas of: Orientation, Career Counseling, Academic Advising, Financial Aid and Childcare availability. The amount of time it took to code each Website was also measured. The findings demonstrate that programs designed to support and service NTS are not highlighted or easy to find on the Websites maintained by these 22 universities.

The outcome is reported on a variable-by-variable basis. All the data are contained in a single table (see Appendix C).

Support Service Areas
Time
This variable focused on how long, in minutes, it took for the coder to search each school’s Website. Search times ranged from as short as 12 minutes to as long as 34 minutes. The mean search time was 24.18 minutes.

Orientation
This variable measured the absence or presence of orientation programs for NTS. Based on the coding, five (22.7%) of the 22 schools conduct orientation programs for NTS.

Career Counseling
The career counseling and planning variable measured the absence or presence of services and programs (such as job fairs and workshops) offered by the school to NTS. The goal was to identify such programs intended for NTS. Only two (9%) of the 22 schools that were coded offered career counseling programs designed for NTS.

Academic Advising
This variable was used to determine if academic advising (general and discipline) for NTS could be found. This information targeting NTS was available in one (4.5%) of the 22 schools coded.

Financial Aid
Two variables were used to describe the support service of financial aid. The first variable examined the availability of financial aid programs directed at NTS. The variable of program availability was measured in terms of the presence or absence of financial aid programs aimed for NTS. None (0%) of the 22 Websites coded had language or links indicating that the school had financial aid programs intended for NTS.

The second variable measured the Financial Aid Office hours of operation. The variable could be coded in one of four ways as described in the code book. The results indicate that seven (31.8%) of the schools offered evening hours. Two (9%) of the schools had Financial Aid Offices that offered both evening and weekend service hours. Thirteen (59%) of the schools did not offer evening or weekend hours.

Family Support Services
The family support services (childcare) variable looked at the hours that childcare service was offered. The key objective was to identify if this service was offered during the evening and/or weekend hours. A considerable number of NTS have
young children that need care while parents attend school (Rau 1999; Schuetze and Slowey 2002). Twenty (90.9%) of the schools coded, offered this service during the day Monday to Friday, but only one (4.5%) of those 22 coded schools offered that service during the evenings and/or weekends.

Discussion

The goal of this study was to describe the information aimed at NTS on Websites maintained by 22 of the 23 schools that comprise the largest state university system in the nation. Availability of important information, such as Orientation, Academic Advising, Career Counseling, and Financial Aid, is viewed as essential to assisting the NTS population in its efforts to complete their degree objectives. This study found weak points in these school's Websites regarding the support services offered to the NTS population. In today's busy society, time is highly valued; finding information quickly is useful and imperative. It is important to note that 12 minutes spent searching for information is not considered a short time. NTS are not immune to the frustrations that many people feel at having to spend more than five to ten minutes searching for what they need/want. Frequently, the first source of information for prospective students, including NTS, is the university's Website (Gordon and Pathak 1998).

In addition, this study's outcome confirms findings from other studies, which indicate that colleges and universities need to be more proactive in implementing programs to better address the needs of this significant student population. Drucker (1995) promotes what he calls “management of change” which means that organizations ought to be in a state of constant improvement in order to cope with the fast changing pace of consumers. This management approach, if implemented in higher education organizations, can benefit the fast changing student population.

Given the increased numbers of NTS attending colleges and universities, it is unsatisfactory to find that 100 percent of the schools coded did not provide Website information about financial aid programs targeting NTS and that 95.5 percent of the schools coded did not offer information about academic advising and childcare programs for them. Given previous research, it is entirely possible that the lack of Website information signals a lack of these programs. This outcome does not confirm that such programs do not exist at these schools. However if they exist, the results suggest that NTS who use the school's Website will have trouble locating them, and/or would not find them at all.

On the more positive side of the findings, 31.8 percent of schools coded, had financial aid office hours extending into the evening, and 22.7 percent have orientation programs available for NTS. No patterns were detected based on the geographical location of a school, or the size of the schools' student population.

Limitations

It is possible that the coding scheme used did not capture important support programs and services presently offered to NTS. This study examined information contained on 22 campuses of one state's public university system's Websites. The information obtained may not be used to generalize to other states. Furthermore, this sample is not representative of other universities and colleges such as private institutions, for profit schools, schools that primarily offer their classes on line, trade schools, or other professional universities that target non-traditional students. It is also important to note that these support programs and services may be offered but not promoted on school Websites. Although all 22 schools are part of one large university system, they did not have identically designed Websites. The lack of a uniform design produced its own set of navigational issues which complicates the interpretation of the time variable. Thus, the school that earned shortest time spent on a Website was not necessarily the one with the easiest search. In the same manner, longer time spent on a particular Website may be equivalent to poor design. The possibility exists that poorly designed Websites simply hide or make it impossible to find programs intended for the NTS population.

Further Research

Further studies may examine the same questions addressed here, but applied to a wider category of universities would generate a larger set of data. Luzzo (1993) suggested additional research in the areas of career and academic advising to identify the needs of non-traditional students in higher education. Although this present study was conducted almost 20 years after Luzzo’s suggestion, the results today are consistent with what Luzzo (1993) found in the area of career counseling. These results demonstrate that progress in career counseling, academic advising, and orientation is still inadequate, and further research is necessary.
References


Adults.” *International Journal of Adult Vocational Education and Technology* 32 (8): 582-596.


APPENDIX A

Code Book
1. Time to find information: The number of minutes the researcher needed to search university’s Web pages for answers to the other items in the code book.

   Using the computer time application, noted the time searching _____Time started, _____Time ended, _____ and Time total

2. Admissions Office Orientation: Any orientation programs identified as intended for NTS, this would include any program (hyperlink) that uses the phrase “non-traditional student” or a recognized synonym for NTS.

   Recorded as yes if the Website featured NTS admissions orientation _____Yes, or _____No

3. Career Counseling Programs: Career counseling program such as job fairs, or workshops identified as intended for NTS, including any program (hyperlink) that uses the phrase “non-traditional student” or a recognized synonym for NTS.

   Recorded as yes if the Website featured career counseling programs for NTS _____Yes, or _____No

4. Academic Advising Programs: Academic advising programs (hyperlinks) identified as intended for NTS, including any program (link) that uses the phrase “non-traditional student” or a recognized synonym for NTS.

   Recorded as yes if the Website included academic advising programs for NTS _____Yes, or _____No

5. Financial Aid Programs: Financial aid programs (hyperlinks) identified as intended for NTS, including any program (link) that uses the phrase “non-traditional student” or a recognized synonym for NTS.

   Recorded as yes if the Website featured financial aid programs for NTS _____Yes, or _____No

6. Financial Aid Office Availability (Hours): Financial aid office operating hours, paying special attention to whether the office was open during the evenings (after 5:00 p.m.) or on weekends.

   Recorded the financial aid office operating hours as being open on _____ (A) Yes evenings only, _____ (B) Yes weekends only, _____ (C) Yes both evenings and weekends, _____ (D) No hours on either evenings or weekends

7. Childcare Options (Evenings/Weekends): Childcare availability during the evenings or on the weekends.

   Recorded childcare services as available on _____ (A) Yes evenings only, _____ (B) Yes weekends only, _____ (C) Yes both evenings and weekends, _____ (D) No hours on either evenings or weekends, _____ (E) No child care available

APPENDIX B

Universities included are:
1. California State University, Bakersfield
2. California State University, Channel Islands
3. California State University, Chico
4. California State University, Dominguez Hills
5. California State University, East Bay
6. California State University, Fresno
7. California State University, Fullerton
8. Humboldt State University
9. California State University, Long Beach
10. California State University, Los Angeles
11. California State University, Monterey Bay
12. California State University, Northridge
13. California State Polytechnic University, Pomona
14. California State University, Sacramento
15. California State University, San Bernardino
16. San Diego State University
17. San Francisco State University
18. San Jose State University
19. California Polytechnic State University, San Luis Obispo
20. California State University, San Marcos
21. Sonoma State University
22. California State University, Stanislaus
**Table 1**  
**Summary Data**

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**Variables key:**  
Time (minutes), Admissions Office Orientation (AOO), Career Counseling Programs (CCP), Academic Advising Programs (AAP), Financial Aid Programs (FAP), Financial Aid Office (FAO), and Childcare Options (CCO). The ✓ indicates that the correspondent support service is available at that particular school and the x signifies that the service is not available. The letters (A-E) within the table refer to the following: A= Evenings only; B= Weekends only; C= Both evenings and weekends; D= No hours on either evenings or weekends; and E= No childcare available (under CCO only).

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**What Influences Some Black Males to Sell Drugs During Their Adolescence?**

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Dr. Jennifer Murphy, Faculty Mentor

**Abstract**

This research study examined participants' individual interpretations of the processes, experiences, and contexts of selling drugs in adolescence. The research exposed common themes emerging from the participants' own words. Individuals discussed exposure and ease of access to the drug market, how and at what age they began selling drugs, their reliance on the activity, and motives for remaining in the life. This study will contribute to existing research by informing programs and policies focused on community and youth development and diminishing and preventing the drug trade.

Black males selling drugs in their adolescence is intertwined with many other social problems, such as poverty (Leviton, Schindler, and Orleans 1994; MacLeod 1995; Okundaye 1999; Parker, Stults, and Rice 2005), violence (Black and Hausman 2008; McLennan et al. 2008; Stanton and Galbraith 1994), parental drug use (Little and Steinberg 2006), single parent/absent father homes (Okundaye, Cornelius, and Manning 2001), high school dropout rates, and disproportionate rates of black males in overpopulated jails and prisons (Garrison 2011; Livingston and Nahimana 2006; Provine 2011). As Moore (1995) points out:

> [a] black male’s environment (i.e., socioeconomic situation) can play a major role in his choice to use or sell drugs. All too often the victim is blamed for his condition without any further investigation of the factors that influenced his decision to participate in the behavior. (114)

Therefore, perspectives that involve blaming young black males for selling drugs will only perpetuate marginalization because they fail to address the root of the issue. Instead, youth that sell drugs should be considered a serious social problem that requires informed research and collective action to understand it. By doing so, researchers can expand their understanding of what can be done to eliminate such contextual factors that influence the behavior. Moreover, once this information is obtained, it can then inform future research that is needed in the areas of designing and running productive and efficient adult and youth drug treatment programs focused on preventing and recovering from the selling of drugs. Unfortunately, these programs practically do not exist (Centers and Weist 1997). In general, minimal research exists on the topic of black males that sell...
drugs in their adolescence. Personal accounts from the perpetrators themselves are also minimal. Thus, there will never be a good understanding of this social problem if we do not attempt to learn from the dealers themselves. We need to find out what they believe to be causing them to participate in the selling of drugs. Currently, existing research highlights common demographic characteristics shared by black males, such as residing in urban inner city areas, where economic hardship, meager wage opportunities, and few resources exist (Black and Ricardo 1994; Freisthler et al. 2005; Dickson-Gomez 2010; Little and Steinberg 2006; McLennan et al. 2008; Okundaye, Cornelius, and Manning 2001; Ricardo 1994; Stanton and Gailbraith 1994; Valdez and Kaplan 2007; Whitehead, Peterson, and Kalijee 1994). While the typical characteristics of youth who sell drugs provide useful information, specificity on the obstacles youth face when deciding to engage in the activity is still needed. This is why more qualitative research is necessary to provide more insight on this topic.

By conducting qualitative interviews from a grounded theory approach, the interviews were guided by open-ended questions that allowed an examination of the processes, the experiences, and the dealers’ own interpretations of the contexts surrounding selling drugs in their adolescence. The data that emerged from the interviews aided in answering the research question: Why do some black males begin selling drugs in their adolescence? Answering this question effectively can ultimately uplift the black community, because black males who sell drugs are not the only people who are affected by their behavior. Their families, friends, and communities must also face the consequences of their behavior. One of the consequences is that these people have to endure a community plagued with drugs, death, and violence. We as researchers have the ability and opportunity to obtain necessary information from those that are closely affected by this problem. In doing so, we move one step closer to diminishing the social problem of black males selling drugs in their adolescence.

This research fits into the existing literature on the “careers” of deviant individuals. This study identifies the context of how some individuals begin to engage in illegal behavior (in this case selling drugs). Currently, there is a lack of research on this topic, likely due to the difficulty of accessing drug-selling individuals who are willing to discuss their experiences. It is the researcher’s objective to use this valuable information to create and inform youth and drug treatment and community development programs for underprivileged communities focused on using and selling drugs.

**Literature Review**

There is a lack of existing research on the topic of black males that sell drugs in their adolescence. Existing studies also fail to identify the age in which these youth generally began selling and the specific drug(s) that they initially sold (Black and Ricardo 1994; Freisthler et al. 2005; Dickson-Gomez 2010; Leviton, Schindler, and Orleans 1994; Little and Steinberg 2006; Okundaye 1999; Okundaye, Cornelius, and Manning 2001; Parker and Maggard 2009; Parker, Stults, and Rice 2005; Ricardo 1994; Sandberg 2008; Stanton and Gailbraith 1994; Valdez and Kaplan 2007; Web et al. 2008; Whitehead, Peterson, and Kalijee 1994). It would be beneficial to research these aspects of adolescent selling as it would tell us the age that black youth are at risk of entering into the drug market and the type of drug they are likely to start selling.

**Economics**

Most of the studies on youth selling drugs identify their participants as being economically disadvantaged or living in poverty, and they found that participants dealing drugs in their adolescence considered it as a means to seek economic gain in order to supplement meager wage opportunities or resources (Black and Ricardo 1994; Freisthler et al. 2005; Dickson-Gomez 2010; Leviton, Schindler, and Orleans 1994; Little and Steinberg 2006; Okundaye 1999; Okundaye, Cornelius, and Manning 2001; Parker and Maggard 2009; Parker, Stults, and Rice 2005; Ricardo 1994; Sandberg 2008; Stanton and Gailbraith 1994; Valdez and Kaplan 2007; Web et al. 2008; Whitehead, Peterson, and Kalijee 1994). This general finding supports the notion that youth who are involved in selling drugs perceive their involvement in the activity as a means for economic survival.

When the crack epidemic first hit the black community in the 1980s, MacLeod (1995) had already identified this same general finding. MacLeod (1995) took a qualitative approach by conducting ethnographic fieldwork and immersing himself in two groups of juveniles at an inner-city high school. He followed “the brothers” and “the hallway hangers” for a year. In the first edition, the researcher made an attempt to understand the two groups from the inside; MacLeod (1995) “discovered social issues about the nature of poverty, opportunity, and achievement in the U.S.” (xi). When he followed up 8 years after the first study, MacLeod revealed in detail what happened to the students (through narratives from the subjects themselves). He identified drug dealing as an alternative to low wage jobs and the lack of other opportunities, as well as mistreatment in the workplace. After underscoring multiple experiences from different subjects of discrimination and being underpaid in the workplace, his readers have a clear understanding of the subjects’ motivations to enter the drug market. A strength in this study is the personal narratives because they not only support the claim that subjects dealt drugs as an economic alternative, but they also reveal valuable contextual information surrounding the process of selling drugs. For instance, consider the narrative from MacLeod’s interviewee Jinks:

> I was runnin’ with this guy. I was sellin’ for him. I had five pounds of pot.
> I had it in three different houses. I would go with him to pick up a kilo of
cocaine. Go with him, break it up on the scale into ounces. I was making money. It was a quick cash flow.

Researcher: During that time, how much would you bring in on a good week?

Jinks: On a good week a couple of thousand dollars, easily. (1995, 172)

In this quote, the process of dealing from the perspective of the dealer as well as the perceived profit and the ease involved in attaining that profit is revealed. The detail in this narrative is a strength in this study.

Sandberg (2008) also used a qualitative approach, conducting ethnographic fieldwork and interviews with minorities that provide explicit support evidence (narratives/life stories) for his claim of economic motivation for selling cannabis. Though the research was conducted in Norway and it is not focused on adolescent dealers, this study relates because it focuses on minorities and drug selling. Moreover, its methodology is strong because it captures what was occurring in the subjects’ lives surrounding their involvement in the drug trade. For instance, a narrative from a Somali refugee that was denied asylum in Oslo, Norway depicts the financial hardship he experienced prior to entering the drug market. After being denied, he spoke of sleeping at bus stops and eventually residing in a homeless assistance program where he first entered the drug market (Sandberg 2008). Therefore, even in countries other than the United States, financial hardship is still a prevalent factor in individual decisions to engage in selling drugs. As a youth’s income is often dependent on the socio-economic status of the parent, it is logical that we next identify what existing research claims about parental/familial influence in adolescent dealing.

Parental/Familial Influence

Past research has also found an association between parental or familial influence and drug dealing (Black and Ricardo 1994; Hsing 1996; Little and Steinberg 2006; Okundaye, Cornelius, and Manning 2001; Ricardo 1994; Stanton and Gailbraith 1994; Valdez and Kaplan 2007; Whitehead, Peterson, and Kaljee 1994). Stanton and Gailbraith (1994) identified this same general finding in a quantitative study. However, this study is limited in its methodology as the sample was selected from four different surveys (administered in two different years). Okundaye, Cornelius, and Manning (2001), on the other hand, showed how familial involvement related to the onset of drug selling. He was able to identify familial characteristics of youth who were and were not involved in the selling of drugs. For instance, he found that involved youth expressed weaker familial relationships than uninvolved youth. He also found that involved youth expressed stronger sentiments of anger when discussing their mother or father in the interview. Ultimately, there is an abundance of research that identifies an influence of parents and family on youth’s decision to sell drugs.

Peer Influence

Peer influence is another significant factor associated with drug dealing in adolescence (Little and Steinberg 2006; Ricardo 1994; Stanton and Gailbraith 1994; Whitehead, Peterson, and Kaljee 1994). Stanton and Gailbraith (1994) reviewed the results of various school and community-based studies, and they concluded that youth perceived pressures from their family and peers to become involved in the drug market. Little and Steinberg (2006), also supported this general finding. However, their sample selection of only serious juvenile offenders is not representative of youth in the general population. Ultimately, existing research has identified peer influence as just as significant of a factor in adolescent drug dealing as parental or familial influence.

Guns

Carrying or accessing guns was also identified in existing research as being correlated to drug dealing in adolescence. Though the objectives of these studies were different, a significant association was found between drug dealing and carrying or accessing guns (Black and Hausman 2008; Lizotte et al. 2000; McLennan et al. 2008). For instance, McLennan et al. (2008) found that involvement in drug trafficking was significantly related to easier access to guns. While their research was in San Paolo, Brazil, other researchers have found a similar relationship in the United States. For example, Black and Hausman found that “protection during drug dealing” was a pertinent factor that tempted inner-city youth to carry a gun (2008, 592). Therefore, studies are highlighting the social influence and the possible risk factors that need to be addressed to diminish the social problem of drug selling in adolescence.

Methods

This study was conducted as part of the McNair Scholars Program. It examined the processes, experiences, and the individual male’s own interpretations of the context surrounding selling drugs in his adolescence (at least two years prior to the interview). The interviews took place via telephone. Any participants that were uncomfortable with this option were excluded from the study to ensure the safety of every participant and the researcher. The participant read the interview question before answering. The researcher wrote down the interviewee’s response to each interview question after verbally confirming an accurate repetition of their response. No identifying information was ever requested or written. Immediately following the interview, the researcher returned home, read, and re-typed the written record of the interview verbatim. Once each interview was re-typed, the hand-written copies were destroyed.
This research design is qualitative and used a “grounded theory” approach to data analysis after each interview to code for themes. That is, this researcher did not have preconceived hypotheses before conducting the study. Instead, this researcher looked for common themes in the interviews themselves and let all findings emerge from the participants’ own words. The interviews usually lasted approximately ten to twenty minutes. This researcher conducted interviews that were guided by the attached interview questions (see Appendix).

Ten black males, aged between 18 and 40, were interviewed about their careers as past drug sellers. The participants were past sellers of illicit drugs for at least 2 years while they were under the age of 18. Also, to be classified as a past seller, and included in the sample, the participant could not have sold illicit drugs for at least two years prior to the interview. All participants were required to read the consent form prior to participating in this study.

The participants for this study were recruited from multiple locations, such as churches, mosques, community development programs, and homeless shelters that help people find work or get off the streets. The researcher found a contact that worked or volunteered at each of the above organizations; this person recommended possible interviewees. The researcher stated verbatim:

I am a CSU student looking to recruit participants for my study. I am looking to conduct phone interviews with adults from this community who sold drugs in their childhood, which also has to be at least two years ago. I am hoping to identify possible factors that are related to the activity, so youth and community development organizations can be created and implemented effectively in the future. For my safety and my subjects, it is important that we do not know one another personally. This is why I am coming to you as a contact for this organization. So, should you know of any adults that sold drugs as a child and it was at least two years ago, can you please give them my number and one of these consent forms and interview questions? Please advise them to read them, and if they wish to help to please call me at this number.

To ensure the privacy and safety of everyone, none of the participants were related to the researcher, and the sample that was included in the study lived in a different city than the one where this researcher resides.

The researcher considered everyone typical research participants who needed to be fully informed of the research protocol and what possible risks were involved. Before scheduling the interviews, the researcher discussed the project in great depth with the possible participants over the phone. The research objectives and the purpose of the study were also explained. Participants were also made aware of the extent to which their confidentiality was being ensured. Prior to the interview, the researcher confirmed that they had read a copy of the consent form and interview questions from the contact that referred them to the researcher initially. Implied consent was given as they were not required to sign or return the consent form to the researcher. No incentive or compensation to participate was offered. No conflict of interest arose for the researcher. All participants weighed the costs and benefits of participating and confirmed that they understood that no persons were profiting in any way from the research.

Results

Typical Characteristics

The average age that participants started selling drugs was thirteen, and the majority of them started selling crack cocaine. These two typical characteristics provide existing research with an approximate age that black youth are at risk of entering the drug market, and the type of drug that they may be in danger of starting to sell. These factors will help programs and policies target specific age groups prior to their at risk age. Also, by knowing that crack cocaine is the drug that these teens usually started selling, research can be conducted to understand why and how crack cocaine is the initial drug sold when teens in the black community enter the drug market.

Motivations to Start

This qualitative study and grounded theory approach produced an overwhelming amount of evidence for these participants’ motives to start and continue selling drugs in their adolescence. Table 1 provides a synthesized overview of the evidence based on themes that highlight one or more factors in bullet form below each theme in bold. In regards to motivations to start selling drugs, participants revealed who and what they were exposed to in their childhood and its influence on their decision to engage in the market.

<table>
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<th>Table 1</th>
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<tr>
<td>Motives to Start Selling Drugs</td>
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<td>Exposure</td>
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<tr>
<td>Ease of Access to Market</td>
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<td>Normality of Exposure</td>
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<td>Exposure to Parental/Familial Drug use</td>
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<td>Exposure to Familial/Peer Selling</td>
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<td>Exposure to people who had more than participant (Likely due to selling)</td>
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<tr>
<td>Money</td>
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<tr>
<td>Survival</td>
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<td>No necessities needed, respondent just wanted more money and things it could buy</td>
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<td>Resources and Siblings</td>
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Exposure
Exposure refers to whom and what the respondent saw that influenced his decision to start selling drugs. There are various factors related to the theme of exposure, including ease of access to market, exposure to familial and peer selling, normality of exposure, and parental and familial drug use.

Ease of access to market
The ease of access to market refers to how accessible the drug market was to the participant based on his exposure to it as a child.

Researcher: How did you get involved with drug selling?
TM: It was my idea. I knew someone with it, but I was taking it. I wasn't purchasing it. It was really like hands on, so I knew who in my family had it. So all I had to do was take it without them knowin'. They wasn't with me. They were on their own. They just didn't know I was taking it.

Another subject also reveals how easy it was for him to access the market with this comment:
MH: The money was good and hard to let pass by you. Some days I would leave school, I didn't have to go nowhere. The drugs was happenin' on the street I stayed on.

Discovering that an easily accessible drug market is influential in youth's decision to start selling is useful information that can inform programs and policies. For instance, with this information preventative measures to minimize exposure to the drug market through afterschool programs, summer programs, and weekend camps, could be a viable avenue in deterring youth from exposure to the illegal activity of drug selling.

Normality of exposure and parental/familial drug use
Normality of exposure refers to how common and/or frequent it was for the participant to be around drug transactions as a child. This normality and frequency of exposure also had an influence on the participants' decision to start selling. Moreover, participants also identified parental/familial drug use as influential in their decision to sell.

Researcher: Why do you think you began selling drugs?
TL: My mom was on drugs, so I was the man of the house at a very young age.
Researcher: How did you get involved with selling drugs?
TL: Just been around it everyday.

In regards to the normality of exposure to the drug market, this information can benefit programs and policies in the same way as they will benefit from knowing about the ease of access to the market—by taking preventative measures and attempting to reduce the amount of exposure with extracurricular activities and incentives. Regarding parental drug use, these narratives explicitly state their parents' drug use as influential in their decision to start selling. Based on this finding, further research on the adverse effects of parental drug use on child behavior is recommended in order to discover the best way to aid drug using parents and their children. This may help some children who feel compelled to start selling because of their parents' drug use.

Familial and peer selling
Another factor related to the participants' decision to start selling drugs was if their family members or friends sold drugs.

Researcher: How did you get involved with drug selling?
MH: Everyone was doin’ it, friends, family, it was the thing to do at the time.
Researcher: Why do you feel you began selling?
PN: Everybody else was doing it, ya know.

These narratives provide support for the necessity of a program of positive role models and/or mentors to help balance or minimize the negative influences of family members and/or friends who engage in the drug market.

Exposure to others with more than participant
Participants stated that being exposed to others with more resources or valuables than they had as children also was influential in their decision to sell.

Researcher: How did the process of you actually starting to sell occur?
HD: A friend suggested it to me because he seen how I was living. They'd go to the movies, I don't have no money, they go to eat—I ain't got nothing. They got to ya know, pay for it for me. And you know that get kind of like embarassin’ after a while ya know...You hangin’ with people and they shob dressin’ and you ain’t got nothin’. Ya know, yo mind start to work then.
PN: The people that was around me was doin’ it. They was lookin’ real nice. They always had money, and I wanted the same thing.
AD: I just wanted what everybody else had.
Researcher: Like what?
AD: Videogames, mopeds, etc.

These narratives illustrate the participants’ desire for what they saw others with, and its influence on their decision to start selling. Here, we see how people that the participants were exposed to can play a very influential role in their decision to engage in the deviant activity of drug selling.

**Money**
Respondents explicitly stated that money was a motive to start selling. There were various motives identified by participants as to why they wanted or needed to attain money through dealing—survival and a desire for more valuables.

**Survival**
Survival refers to resources that the money from selling provided (i.e. food, housing, clothes, transportation) and its influence on the participant to start selling.

Researcher: Why did you begin selling?
FB: To have a roof over my head, and I did it so I could pretty much survive.
Researcher: I just want to clarify was it something that enticed you to sell?
HD: It wasn’t something I wanted to do. It was something I had to do to survive.

These quotes illustrate the participants’ perception of engaging in the activity as a means of continuing to provide resources/necessities for themselves.

**Resources and siblings**
Participants spoke of their responsibilities to provide resources such as transportation, food, and clothes for themselves and/or siblings as a motive to start selling drugs.

BD: I had to make sure my sister and I had money for lunch, school clothes and transportation.

TL: I was the man of the house at a very young age, so I had to take care of my brothers and sisters at a real young age.

These quotes highlight how responsible these individuals were in their teenage years as they decided to take on the job of providing resources for their siblings. Discovering the maturity level of these individuals at age thirteen implies that they may be responsible and mature enough for conventional means of earning income through employment.

More valuable, no necessities needed
Participants identified their desire for more than their parents provided to them. Many participants stated that they sold drugs because they just wanted more material goods; they did not actually need many of the goods that they bought with their earnings.

Researcher: So it was not necessarily things that you needed at that age it was more of things you wanted?
MN & TM: Yup (for both participants)
MN: I started because I was trying to keep up with the Joneses. (Here he implies that he was trying to have nice things in order to keep up with the latest trends and fashion.)

TM: I wanted to be like people. They had the money, cars, and clothes.

In contrast to those who started selling as a means of survival, these participants reveal that not all motivations to start selling are to supply necessities. Future research on programs that provide stipends for youth and its effect on preventing them from entering the drug market is suggested.

**Motives to Continue**
In regards to motivations to continue selling, participants revealed money/power of finance, addiction, and emotional fulfillment as reasons they did not want to leave the drug business.

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<td>Motives to Continue Selling Drugs</td>
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<td><strong>Money</strong></td>
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<tr>
<td>Lifestyle/Power of finance</td>
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<tr>
<td>Resources/Survival</td>
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<tr>
<td>Addiction</td>
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<td><strong>Emotional Fulfillment</strong></td>
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<tr>
<td>Expressing feelings of content</td>
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**Money/Power of Finance**
Respondents explicitly stated money was a motive to continue selling. This theme still refers to survival and desire for more, however, the power of finance emerged as a motive to continue. More simply, the young dealers professed a sense of power attainment after entering the drug market. They realized that
with the money they profited from their selling came power to afford valuables and necessities at their leisure.

Researcher: Anybody ever tell you to get out?
TJ: I had people who care about me advising me to leave the drug business alone. But I enjoyed the power of finance.
Researcher: Did you ever want to get out?
HD: Yeah, I got to a point where I wanted to stop. But when you get to makin’ all that money and there’s no rules, you content with it. You fine, ya know, you can do anything that you want to do, you can go eat what you want to eat, you can buy what you want to buy. That’s the...the game. Ya know, you can afford stuff that you couldn’t afford then.

Programs geared at providing financial rewards for participation, or the age of employment being lowered is suggested, as this may prevent individuals from feeling the need to continue selling.

Addiction
Addiction refers to some participants’ own belief that they did not remove themselves from the drug market (even if they wanted to) because of some inward compulsion to sell drugs. This often was related to the excitement and material benefits of selling drugs. Still, the participants generally did not come to this realization until adulthood.

Researcher: Do you feel you were ever addicted in your childhood?
HD: Yes. I even sold to an undercover one time and I knew he was. But I so much wanted the money that I didn’t care.
FB & TM: I was addicted to the lifestyle.

Based on these findings, future research on identifying characteristics that signify addiction to selling is recommended. Rather than merely punishing drug sellers, the criminal justice system may need to explore alternatives to incarceration like counseling and job training.

Emotional Fulfillment
Emotional fulfillment refers to statements from the subjects in which feelings of happiness and pleasure are expressed as a result of selling drugs.

Researcher: Would you say that you ever felt addicted?
PN: No. I was enjoyin life.
Researcher: Did you ever want to stop, but felt like you couldn’t?
MH: I wanted to stop, but at that time that’s all I knew. The whole family was into it. Money brought happiness, clothes, and friends. It was a good feelin’ people brought on you. No money you see who your true friends are, so that kinda kept me in it.
Researcher: Why do you feel that you were not addicted?
AD: I enjoyed my lifestyle. I didn’t think I would ever stop. I was livin’ life.
PN: Because, I could have quitted if I wanted to. I just didn’t want to. I enjoyed the money. Plus all the extra stuff that came along with it. All the fun and I was just enjoying myself. I was enjoyin life.

Based on these findings, future research on the overall happiness of involved and uninvolved black youth at the ages they are most vulnerable to entering the market is suggested. Such research may provide support for the finding in this current study of an emotional void being filled as a result of selling drugs.

Discussion
Anomic and Strain Theory
My original research question was why are some black males selling drugs during their adolescence? Information regarding participants’ motives to start and continue selling drugs emerged as well as insight on possibly viewing drug selling as an addictive behavior after partaking in the activity long enough. Pertinent information that is minimal in existing research, but was identified in this study, was the age they started selling drugs, personal narratives, recollections, and perspectives from the dealers themselves. In this current study, the motivations for starting and continuing to sell drugs in adolescent years included economic gain (in terms of money and materials), resources, exposure to parental/familial drug use, exposure to peer and familial selling, exposure to valuables that others had unlike themselves, addiction, and emotional fulfillment. These generalizations provide support for Merton’s strain theory. Merton (1938) asserts that there is a cultural overemphasis on all people attaining the American Dream, yet our society does not avail all resources and opportunities that are necessary for everyone to attain the cultural goals conventionally (or legally). Consider in this study the narratives of participants being influenced to sell drugs because of their exposure to others with money and valuables (as a result of selling). Their experiences exemplify an overemphasis on cultural goals. Money, whether for survival or more material objects, was identified as one of the most obvious motives for starting or continuing to sell drugs. This implies that a general consensus exists on the societal value of material wealth. Therefore, because selling drugs is a criminal behavior, and money was a motivation to start and to continue selling drugs, this finding supports the same notion outlined by Merton (1938), in which deviance results from an overemphasis on the American Dream (wealth and happiness). Moreover, when participants also mentioned
that they did not have the available means to attain such wealth from parents, it underscores the discrepancy that Merton (1938) mentions between aspirations of attaining wealth and not having the “legitimate” means available to achieve it. Ultimately, the findings in this study contribute to existing research on this topic by supporting notions outlined in Merton’s Anomie and Strain theory. This study provides specific experiences on the opportunities or resources that individuals lacked when desiring to attain the American dream in their adolescent years. This information can be valuable to community and youth development programs as they can provide a direct resource (e.g., employment, school, training, and internships) necessary to attain money that will ultimately afford individuals what they need and desire if they work hard enough.

Parental Drug Use

Parental drug use also emerged as an influential component in some participants’ decisions to start selling drugs. This finding supports research by McKeganey, Barnard, and McIntosh (2002), in which they interviewed drug-using parents and found that the children of these parents on drugs were exposed to “drug use and drug dealing, and they were at risk of...criminal behavior” (233). The current study supports their finding as participants revealed experiences of exposure to their parents’ drug use, exposure to peer and familial dealing, and its influence on their decision to start selling—which implies criminal behavior referenced by McKeganey, Barnard, and McIntosh (2002).

McKeganey, Barnard, and McIntosh (2002) suggest radical developments in providing services to parents on drugs and their children. The mentioning of drug-using parents by participants in the present study provides specific details on how or why their parents’ drug use influenced their decision to engage in the criminal behavior of drug selling. This information is valuable as it will help inform such programs in which there is need for a “greater flow of information between services, many more family oriented drug services and [a need for] safe havens that can be easily accessed by vulnerable children” (McKeganey, Barnard, and McIntosh 2002, 244). Future research that focuses on identifying effective solutions to deterring youth from adolescent drug selling shared by past perpetrators themselves may also be an informative avenue for effective outcomes as they provided insightful information already on their motivations to start and continue selling drugs. They might have just as much valuable information on motivations to refrain from or stopping involvement in the drug market.

Strengths in this study include the utilization of a retrospective from adult males reflecting on their childhood and the age that participants started. An additional strength of the study was the use of open-ended questions that allowed for participants to answer with whatever information they felt was pertinent to the topic. However, this study is limited in that the sample size is only 10 participants, a rather small sample size. In addition, there will always be error in self-reporting because one’s memory is not always accurate.

Conclusion

That many black males sell drugs in their adolescence is a social problem that is related to many other social problems faced by black males in America, including poverty, disproportionate incarceration and conviction rates, and single parent/absent father homes. The attempt to answer the research question aids in uplifting the black community as it is not only the dealers themselves who are affected by their involvement in the drug market. Existing research provides typical demographics for these individuals such as their low socioeconomic status and the tendency of the individuals to reside in low-income or urban inner-city communities in which few economic or employment opportunities exist. However, qualitative studies, including knowledge from the perpetrators themselves, are also minimal in the body of existing research on this topic. In the current study, the information discovered from the interviews provided insight for common motivations for starting and continuing to sell drugs in adolescent years. This information contributes to areas where qualitative research is minimal. Moreover, suggestions for future research in which the perpetrators themselves provide insight on motivations to start, continue, stop, or refrain from entering the drug market are recommended. Lastly, the finding on parental drug use and its influence on participants’ decision to start selling warrants future research that addresses the issues and conjures up solutions for drug-using parents and their children as suggested by McKeganey, Barnard, and McIntosh (2002).


APPENDIX

Interview Questions
To help protect your confidentiality on the recorded interview, I will not directly ask you some of these questions. I will ask you to read a specific question to yourself and respond (I will give you the number of the question). I may then ask follow-up questions to clarify your answer.

1. How old are you now?

2. Tell me about your life at the point when you decided to start selling drugs? What was going on?

   [Possible probes: Were you currently working? Were you in school? How old were you? How much time in your daily life would be taken up with selling?]

3. Why do you think you began selling drugs?

4. [if not revealed in above questions] How did you get involved with drug-selling?

   [Possible probes: Were family members/friends involved? Did you work on your own or with others?]

5. Did you ever want to stop selling drugs but felt like you couldn’t for one reason or another?

   [Possible probes: Enjoy the lifestyle? Ever felt like you were “addicted” to selling drugs? Anybody ever tell you to get out?]

6. Did you ever stop selling drugs for a period of time? Why?

7. Was there a lot of drug activity in your home or neighborhood when you were growing up?
Turn the Music on!: The Usefulness of Non-Commercial Background Music as an Effective Learning Tool for Higher Education Students

Alexzander R. Gaither
Dr. Ernie Hills, Faculty Mentor

Abstract

Academically successful students need a variety of effective learning tools to help maximize their study skills (e.g., assimilation and retention). Music is one such tool. Research suggests that music is both useful for and a distraction from studying. A survey from a convenient sample of Sacramento State students was distributed to ascertain which school of thought is supported and to determine if and how Sacramento State students use music as an effective learning tool. Of the 250 students surveyed, 201 reported that they usually study with music in the background. While there are limitations to the results, overall this study demonstrates that music can be an effective learning tool, and that more research is required to better implement music in study environments.

Research Premise

Education, as a process, requires college students to manage and assimilate more information from more academic resources than ever before. With the increase in information volume and the academic demand to comprehend said material, new learning tools and study methods must be identified and developed to meet this demand. Academic study skills that assist in the assimilation and retention of required academic coursework must be maximized in order to increase academic success. New learning tools must be combined with existing study skills methods, to maximize study effectiveness that leads to improved academic success and retention of higher education students. The effectiveness of non-commercial background music as an effective learning tool has been the subject of research examination for many years. New technologies have made a variety of new devices, resources, and methods available to students for storage, recall, and recording of information and music. These devices are affordable and available in a variety of formats, subjects and languages. When utilized appropriately, this technology can be an effective learning tool by diminishing the variable of such resources being too expensive, unavailable and inaccessible. Music, as a learning tool, may assist many undergraduate students improve their study skills by creating study environments that complement the learning experience. Technology elevates the usefulness of this important learning tool. Students maximize what is studied by maximizing how it’s studied.

This researcher has found that music not only creates an environment that increases study effectiveness but also aids in the recall of learned information during examination or other performance evaluations. The researcher has further found that appropriate use of background music (e.g. a music source not blaring) can increase concentration and evoke a productive learning environment. The research conducted numerates the occurrence of using music as a learning tool among a sample segment of undergraduate students at Sacramento State and compares these values against the evidence of existing bodies of research regarding the use of background music as an effective learning tool. How undergraduate study skills can be improved through the use of background music from a non-commercial resource is the focus of the present study. This researcher hypothesizes that music is an effective learning tool that can be used by higher education students to enhance their academic study skills performance and environments.

Literature Review

A scholarly review of literature was conducted utilizing the following areas of study as search parameters: the correlations between music and learning, sound and learning, and the use of music as a background resource during study. The scholarly literature reviewed was extracted from both electronic and hard copy resources. The research questions attempt to fill the gap between the scholarly bodies of evidence that both oppose and support the points of view regarding the use of non-commercial, background music as a useful learning tool that can be used by students in higher education to improve academic study skills. The research question addresses the differences between two opposing bodies of evidence and therefore attempts to draw conclusions based on the relevance of existing research against the findings of this research.

Music and Learning

The link between music and learning has generated much discussion and research. This information is part of a growing body of evidence that suggests that music and learning are correlated however; fact-based research exists that reveals findings that support and refute such a conclusion. A research study published in the Psychology of Music Journal (Piro and Ortiz 2009) found that children who were exposed to music training performed better on vocabulary and reading comprehension tests than those who were not. The researchers hypothesized that studying music helped the children develop the mental coding systems necessary to learn language. When studying, focus is essential. External distractions such as cellular telephones, computers, family/friends and physical needs compound with
internal distractions such as self-doubt, anxiety, fear, anger and ego to diminish study focus. Distraction-free study locations and a positive study mood are effective learning tools that improve study skill performance (Bradley 2001, 26). Findings from fact-based research both support and refute the correlation between music and learning (Smith 1985, Pearall 1989, Bradley 2001). Each research resource supports their conclusion with sound rationale but many times fail to address the influence of direct and indirect variables, which undermine confidence in repeatability and reliability. Rationale for this research is founded in a passionate pursuit of evidence, which will clarify the effectiveness in these findings with a survey-initiated discussion regarding the appropriate use of non-commercial music as a learning tool for higher education students.

Sound and Learning
Research has demonstrated that academic comprehension, retention, and recall can be improved through the use of background, non-white noise (Smith 1985, 591-603). The research further states that music as background noise acts, in an environmental context, to complement the learning environment. Music can be described as a facilitative retrieval scheme that, when used as a background study environment may improve or maximize academic performance. Memory can be enhanced, within a musical environmental context, to modify the learning experience through contextual cuing. Cuing can be generated through either visual and/or sound stimuli but the result of this cuing is a heightened context-dependent memory. A study by the Stanford University School of Medicine (Levitin and Cook 1996, 927-935) found that listening to music can help the brain focus and organize information. During this study, which was designed to measure how the brain sorts out different events, researchers stumbled upon a concrete physiological link between the acts of listening to music and learning. The researchers played short symphonies by obscure 18th-century composers to human subjects while scanning their brains with functional magnetic resonance imaging, or fMRI. The research group found that music ‘lights up’ areas of the brain involved with making predictions, paying attention and committing details to memory. Under certain conditions, listening to music helps the brain focus and respond in a tightly synchronized manner.

For decades, researchers have been studying the link between learning and listening to music. The concept was first introduced in the early 1990s, when Dr. J.S. Jenkins coined the phrase ‘the Mozart effect.’ The term referred to Dr. Jenkins’ finding that listening to music composed and performed by Mozart could temporarily improve performance on certain spatial-temporal reasoning tasks, such as the Stanford-Binet IQ test (Jenkins 1993, 170-172).

Research suggests that listening to background music prior to task performance increases cognitive processes, such as attention and memory, through the mechanism of increasing arousal and positive mood (Perham 2010, 625-631). However, according to Perham, the best music for studying is none at all. He recommends complete quiet or ambient noise, like soft conversation or muted traffic for the optimal study background. Listening to some tunes while studying does not necessarily help one’s recollection of material however there is no proof that listening to music is an automatic hindrance. Traditional values render the notion that if you want to concentrate on work one must remove all distractions. Conclusions under these research conditions considered music to be a distraction.

Background Resource Study
University of Wales Institute in Cardiff, United Kingdom researchers examined students’ ability to recall information in the presence of different sounds. The researchers instructed 25 participants between ages 18 and 30 to memorize a list of letters in order (Peerham and Vizard 2010, 625-631). Participants were tested under five listening conditions: no music, music that they said they liked, music that they said they didn’t like, a voice repeating the number three, and a voice reciting random single-digit numbers. The results of the research were obtained by the researchers quantifying the participants recall ability via post-test examination.

Research findings revealed that individuals who listened to music; those who liked or disliked the music, recorded the lowest recall assessment figures. Those participants that heard a voice reciting random numbers also recorded low post-test recall values. The highest recall values were recorded equally between the no music and the while listening to the repeated number three test groups. The researchers concluded that when the background “music” is a repeated number that this audio sequence may impair cognitive abilities because if one is trying to memorize things in sequence, another numerical sequence would cause confusion, internal distraction, and disorientation via additional indirect variables and on-going cerebral attempts to discern between important, to be remembered numbers, and those considered as background (Boltz and Kantra 1991, 593-606). The researchers further speculated about the direct variable of the external distraction of voice inflections and monotony of a repeated number sequence. The presence of such variables reduced confidence in post-test examination.

Problem Statement
Which of these two schools of thought is correct? Is there some middle ground of understanding that incorporates a combination of understanding from both camps of thought? This research seeks to answer the following questions: Is the playing of background music an effective learning tool or a study distraction? Has technology improved the availability, accessibility and affordability of music devices that can be utilized as effective learning tools? Can findings derived from a survey of higher education peers at Sacramento State provide clarity regarding whether the use of
music is an effective learning tool when compared to results derived from the review of existing literature. Literature review quantifies examination results of research that tests pre, post and the absence of background music conditions but does not give consideration as to how the use of such tools make students feel while studying.

Methodology

To ascertain the impact of listening to music while studying has on higher education students, a hand-distributed, hard copy survey of Sacramento State undergraduates was undertaken in May 2011. Assisted by McNair faculty mentor, Ernie Hills, Ph.D., the researcher implemented a ten-question survey to 250 volunteer students on campus on five separate occasions. The surveys were distributed at different times of the day and in different locations across campus. The survey was conducted over a two-week test period. Research results were compared against results from existing literature.

The students were asked to complete an anonymous survey that addressed their study habits and study conditions. Questions were designed to determine the number of times music was played in the background while studying and tallied opinions and feelings, regarding study experiences under said conditions. The ten-question survey consisted of one yes/no question, three “free write” questions, and six 1 through 5-Likert-scale questions.

The research survey was administered by varying the selection, invitation, and of research participants and by executing a scripted verbal invitation and convenient selection process. Participant recruitment in this research project was initiated by verbal invitation to at-large, curious individuals passing by survey table during research assessment period. Invitation to participate was at the convenience of available individuals, without regard to sex, race, physical appearance/capability or age. Any individual passing by the research station during the survey process was considered part of a viable participant pool of available higher education students.

All participants were undergraduate students at Sacramento State. No attempt was made to identify participants beyond questioning if said individuals were undergraduate students. Surveys were distributed at 5 different locations during the research time period. Variations in survey locations maximized the opportunity of interacting and inviting participation from as large and varied a survey applicant pool as possible.

Results

The following ten questions were presented to survey participants:

1. Do you listen to music while you study or do homework?

Of 250 higher education students surveyed 201 students (80.4%) reported they listened to music while studying. This represents a frequency ratio of four to one. Clearly, the findings of this research indicate that a majority of students listen to music while studying.

2. Please indicate the frequency you listen to music while studying.

Table 1

<table>
<thead>
<tr>
<th>Frequency by which Students Listen to Music while Studying</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Never</td>
</tr>
<tr>
<td>Rarely</td>
</tr>
<tr>
<td>Occasionally</td>
</tr>
<tr>
<td>Usually</td>
</tr>
<tr>
<td>Always</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Students were provided with the option of choosing a number between 1 (Never) and 5 (Always) to indicate the frequency by which they listen to music while they study. It is reasonable to infer that the use of a likert scale would equate to the following: 1 – Never; 2 – Rarely; 3 – Occasionally; 4 – Usually; and 5 – Always. Given this inference, an examination of the students that indicated they listened to music while studying (201 students) revealed that seventeen percent rarely listen to music while studying; twenty-nine percent occasionally listen to music while studying; twenty-three percent usually listen to music while studying; and thirty-one percent always listen to music while studying. Table 1 shows that fifty-four percent of these students usually or always listen to music while studying indicating that it is part of their regular study regimen.
3. Please indicate if listening to music while studying assists in shutting out distractions?

Table 2

<table>
<thead>
<tr>
<th>Shutting Out Distractions with Music</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Shut Out</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Minimal Shut Out</td>
<td>36</td>
<td>18</td>
</tr>
<tr>
<td>Some Shut Out</td>
<td>56</td>
<td>28</td>
</tr>
<tr>
<td>Mostly Shut Out</td>
<td>52</td>
<td>26</td>
</tr>
<tr>
<td>Shut Out</td>
<td>55</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>201</td>
<td>100</td>
</tr>
</tbody>
</table>

Students were provided with the option of choosing a number between 1 (No Shut Out) and 5 (Shut Out) to indicate if music helps shut out distractions. It is reasonable to infer the use of this scale would equate to the following: 1 – No Shut Out; 2 – Minimal Shut Out; 3 – Some Shut Out; 4 – Mostly Shut Out; and 5 – Shut Out. Given this inference, the examination of the students revealed the one percent has no shut out; eighteen percent saw minimal shut out; twenty-eight percent saw some shut out; twenty-six percent saw most shut out; and twenty-seven percent did experience shut out from distractions. Table 2 shows that a collective eighty-one percent at least experienced some shut out from distractions.

4. Please indicate the mood, listening to music places you into while studying?

Table 3

<table>
<thead>
<tr>
<th>Mood and Music while Studying</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unhappy</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Somewhat Unhappy</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Neither</td>
<td>25</td>
<td>12</td>
</tr>
<tr>
<td>Somewhat Happy</td>
<td>73</td>
<td>36</td>
</tr>
<tr>
<td>Happy</td>
<td>103</td>
<td>51</td>
</tr>
<tr>
<td>Total</td>
<td>201</td>
<td>100</td>
</tr>
</tbody>
</table>

Students were provided with the option of choosing a number between 1 (Unhappy) and 5 (Happy) to indicate the mood music placed them while studying. It is reasonable to infer that using the Likert-scale would equate to the following: 1 – Unhappy, 2 – Somewhat Unhappy, 3 – Neither, 4 – Somewhat Happy, and 5 – Happy. Given this inference, the examination of the survey responses indicated that thirteen percent were neither; thirty-six percent were somewhat happy; and fifty-five percent were happy. In other words, over ninety percent of students indicated that music placed them in a somewhat happy or happy mood.

5. What genre/type(s) of music selections do you listen to while studying?

The variation in music types and genres reported was as varied as the cross-section of students participating. Music types reported ranged from smooth instrumental jazz to Tibetan bowl chants; and from environmental soundtracks of chirping birds in a meadow with bubbling brooks to slash, speed-metal grunge rock. Variety in the availability of music types can be the key that allows the appropriate use of background music to successfully create positive study environments, regardless of a student’s location or physical environment tailored to the individual.

6. Please indicate the degree of enhancement the quality of your study is improved because you listen to music:

Table 4

<table>
<thead>
<tr>
<th>Listening to Music and Enhancing the Quality of Study</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Enhancement</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Little Enhancement</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Moderate Enhancement</td>
<td>66</td>
<td>33</td>
</tr>
<tr>
<td>Largely Enhanced</td>
<td>48</td>
<td>24</td>
</tr>
<tr>
<td>Greatly Enhanced</td>
<td>83</td>
<td>41</td>
</tr>
<tr>
<td>Total</td>
<td>201</td>
<td>100</td>
</tr>
</tbody>
</table>

Students were provided with the option of choosing a number between 1 (No Enhancement) and 5 (Greatly Enhanced) to indicate the enhancement in their studying period. It is reasonable to infer that using the Likert-scale would equate to the following: 1 – No Enhancement; 2 – Little Enhancement; 3 – Moderate Enhancement; 4 – Largely Enhanced; and 5 – Greatly Enhanced. Given this inference, the examination revealed that 2 percent saw little or no enhancement; thirty-three experienced moderate enhancement; twenty-four experienced large enhancement; and forty-one percent experienced great enhancement. Table 4 shows that sixty-five percent saw large to great enhancement in their study periods.

7. Do you experience an increase in study comprehension, memory, and/or retention (as expressed in improved study effectiveness, time management, or successful course examination scores) as a result of listening to music while studying?
Table 5
Listening to Music and the Increase in Study Benefits

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Unsure</td>
<td>144</td>
<td>72</td>
</tr>
<tr>
<td>Yes</td>
<td>55</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>201</td>
<td>100</td>
</tr>
</tbody>
</table>

Students were provided with the option of choosing a number between 1 (No) and 5 (Yes) to indicate any increase in the students’ study benefits (comprehension, memory, and retention) as a result of listening to music while studying. It is reasonable to infer that the use of the Likert-scale would equate to the following: 1 – No; 2 – 4 - Unsure; and 5 – Yes. Given this inference, the examination revealed that one percent experienced no increase; seventy-two percent were unsure; and twenty-seven percent experienced a significant increase. Table 5 shows that over twenty-five percent of students reported an increase in study benefits attributed to listening to music; however, most students were unsure of this result.

8. Please indicate if your musical selection resource is commercial or non-commercial (without vocal disc-jockey, advertisement and/or other intersong, non-musical interruptions) or some combination thereof?

Figure 2
Type of Music Resources Used during Study Periods

Please indicate if your music resource was commercial, non-commercial, or some combination thereof.

Students were provided with the option of choosing a number between 1 (Commercial) and 5 (Non-Commercial) to indicate what type(s) of music resources are used during study periods. It is reasonable to infer that using the Likert-scale would equate to the following: 1 – Commercial; 2 – More Commercial than Non; 3 – Half and Half; 4 – More Non-Commercial than Commercial; and 5 – Non-Commercial. Given this inference, the examination revealed that thirty-three percent used a half and half combination; twelve percent used more non-commercial than commercial resources; and fifty-five percent used non-commercial resources. In other words, most survey participants primarily used non-commercial resources.

9. Which non-commercial, musical resources do you listen to while studying? Please circle all that apply.

The following on-line music resource Web Site locations were utilized by those participants who use music as a study aid:

a. Qtrax - free downloads, stream a wider selection of songs online.

b. Jamendo - offers tens of thousands of full albums for download.

c. Pandora Radio – a leader in Internet radio, innovative use of algorithms to play songs based on music you already like, customize listening experience by rating artists played.

d. Last.fm - online radio station offering a customized experience. The site recommends artists based on your musical tastes, and features allow you to track your listening history and share music with friends.

e. Y! Music - A Yahoo! Internet radio stations, Y! Music has listening options for mood.

f. Stereogum - indie variety featuring lesser-known acts, features mp3s and streams of album tracks and live performances.

g. Pitchfork – indie, original material and links audio/video from various genre defying bands, access to album tracks, concert recordings and exclusive sessions.

h. Internet Archive - cultural artifacts in digital form, the Internet Archive of free recordings and concerts for download.

i. Soundclick - up-and-coming artists, all genres, more than four million songs, free to download or stream.

j. iTunes.com - Apple’s iTunes offers music for sale, many no-cost features of the application, stream hundreds of radio stations.

Online Music Search Engines

a. Songza - a music search engine and Internet jukebox, search for songs, share tunes with friends, play music on computer.

b. Qloud - combines a music search engine with social networking, connects users with free music from an endless library.
c. Playlist Music Search Engine - locates music files on the web, played or saves to personal playlist.
d. SkreemR - an mp3 music search engine, can search for music, podcasts, speeches and more.
c. Mp3Realm Search Engine - audio in mp3 format. Searches based on artist, title, genre or album.
f. FindSounds - sound effects and instrumental samples, wide range of file formats.
g. Absolute Lyrics - music lyrics database
h. Musipedia - a music encyclopedia, searchable collection of music and musical themes.
i. SongFacts - search for song information compiled by radio professionals and music enthusiasts, lyrics, song meanings and trivia.
j. Used CD Search - find and compare prices on used and rare CDs.

**Online Internet Radio**
a. AOL Radio - 350 Internet radio stations with song skipping, music, news, sports and talkmusic.aol.com/radioguide/bb
b. Live365 Internet Radio - members create own online radio station or listen to other Live365 broadcasters’ online stations: www.live365.com
c. Last.fm - tracks played tells a profile about what you like, can connect to other people who like what you like and recommend songs from their music collections: www.last.fm
d. Pandora Radio - a personalized Internet radio service that finds new music based on favorites: www.pandora.com
e. Radio-Locator - listing of international radio stations with have web pages: www.radio-locator.com
f. RadioTower - access to live Internet radio feeds: www.radiotower.com
g. SHOUTcast - Internet radio stations from international DJs and broadcasters: www.shoutcast.com
h. Yahoo! Music - music videos, Internet radio, music downloads, music news and information: new.music.yahoo.com

10. Why do you listen to these music resources while studying? Please explain!
Common responses among participants included: “I do not like the sound of silence”; “listening to music when I study helps keep me motivated and on track with getting the work done”; “...it helps to eliminate distractions”; “the music is
free, easy, relaxing, calming, habit forming, convenient, consistent, and helps to keep the mind creative and enjoyable.”

**Discussion**

How to be successful in class is the goal of every student. How to study, take notes, focus and manage time are study strategies that higher education students use to achieve this goal. However, study skills are not intrinsic; they can be learned. Creating the proper study environment to maximize concentration and identifying learning style to recognize how a student learns (e.g., listening to music while studying) can be essential learning tools. Research utilized was flexible, easy to utilize to the sample study group population and offered a range of research data and findings for interpretation and analysis. The assessment of each participant’s mood was self-identified. No attempt was made to ascertain the importance of being in this type of mood or emotion during study but it’s queried, in the context of the necessity of having a variety of learning tools available in the study skill tool belt to maximize study success. Data gathered during research survey provided a unique opportunity to obtain detailed insight into the learning environments of a segment of Sacramento State students. Feedback came directly from respondents and the comparison of the research survey findings against existing evidence measured the strength and opinion of Sacramento State students against the wisdom and conclusions of previous research.

**Limitations**

There are over 32,000 undergraduates on campus at Sacramento State. A sample size of 250 students represents 0.78% of the total student body. The size of the research population is a direct relation to the degree of confidence in the research conclusions. The range in music type and genre were well described in the research findings. This wide variation in music becomes an indirect variable when research speaks to the appropriateness of music as an effective learning tool. What may be an effective music study skill resource for one individual may in fact be a great source of distraction and interruption for another. This indirect variable becomes an issue when research attempts to articulate the effectiveness of any one style of music as its baseline for research examination. This researcher maintains that in order to achieve the anticipated outcome of increasing study effectiveness by elevating the mood of the student then the student must be the individual who makes the music selection, not the researcher. This way, understanding of the usefulness of background music as a positive learning tool can be appropriately analyzed.

Analysis of research survey responses represents a snapshot in time of each survey participant’s opinion at that moment in time. The moment the data were collected
it began to decrease in confidence due to the increasing age of the data set and the
perchance that survey participants may later change a survey participants’ opinion
and study practices. Participants were invited to participate based on the response
to a verbal invitation. If participants were unable to provide accurate descriptions of
their study habits then the usefulness of said survey data reduces the confidence of
any conclusions reached as a result of the research project.

Compounded with the identification of the use of background music as
an effective learning tool for higher education students the research survey
directs attention as to how the use of music is effective. Research questionnaire
analysis required the analysis of multiple variables at the same time to establish
fundamental understanding as to how music was beneficial to survey participants.
This type of analysis is useful in discovering how a set of one variable can explain
one or more other variables. While this discussion gives clarity to the analysis of
research data, many times the variability of other subsequent variables usually
lends itself to ask more questions giving rise to discussions regarding future
research topics.

Conclusion

This research revealed that a larger percentage of the Sacramento State students
sampled listen to non-commercial background music as an effective learning
tool assisting them in improving their study skills success rate. Research surveys
listed empirical foundations on which to develop and implement new strategies
filling the gaps of information within the existing research on this subject. Survey
trend and peer comparison data to existing research proved inconsistent with
studies refuting the effectiveness of music as an effective learning tool. A longer
series of surveys from a larger survey population is required to confidently track,
successfully establish and change reputable evidence supporting one school of
scholarly thought on this subject.

In conclusion, the research compares the findings from both schools of thought
regarding the usefulness of non-commercial background music as a learning tool but
was unsuccessful in establishing the prevalence of such behavior among Sacramento
State students because such occurrence may have been based on the relative ease
of music accessibility, availability and affordability, because of advancements in
technology, and many trends, that shift student behavior and study skill techniques
over time. What may appear appropriate and useful one day may be refuted by
scholarly findings from the next research expository on the subject.

Future Research

Future research on the use of non-commercial background music as an effective
learning tool must address the wide range of music available to students to best
achieve this goal. This research revealed a very wide range of music that was
employed during study. Clearly, what was considered an appropriate use of one
music genre would not work at all for another student. Music preference has a
direct affect on the success value of any non-commercial music resource being
considered as a viable learning tool. Future research must examine the relationship
between music selection and the wide varieties of music styles available in which
to achieve this goal. In order to gain clarity and confidence in existing and on-
going research on this subject, influences from direct and indirect variables must
be minimized.

Several studies indicate that mood can influence the likelihood of an individual to
use background music as an effective learning tool (Bower 1981, 129-148, Bradley
2001). A previous laboratory study indicated that music could be used to bring
about manipulations in mood and emotion before and during study.

New research on the importance of emotions that create moods for study, hearing
music at the same time as doing the expected task, and hearing something you like
as a learning tool to improve study skill performance should be examined.

Music can affect you in a variety of ways. Depending on the type of music you listen
to you can change your brain waves to make you achieve a higher state of awareness/
concentration. The way instrumental music can induce the brain into an alpha
brainwave state and silence as a distraction are subjects for future research.
REFERENCES


Science and the American Public

Nicole Garcia
Dr. Elizabeth Strasser, Faculty Mentor

Abstract

Many Americans reject science as a way of knowing and evolution as an explanation for life (Culotta and Holden 2006; Rutledge and Sadler 2007; Rutledge and Warden 1999). Possible causes for this rejection of science include ignorance of the geological time scale (Cotner, Brooks, and Moore 2009), a lack of understanding of how science is a method of inquiry (Rutledge and Sadler 2007), a lack of exposure to evolution in high school (Castello and McCall 2008), a perceived conflict with religious beliefs (Moore and Cotner 2009), or a misunderstanding of the significance of change in life (Nadelson and Sinatra 2010). In an effort to shine light on the acceptance of evolution in the classroom, this study synthesizes research that used the Measure of Acceptance of the Theory of Evolution, as well as various demographics pertaining to regions where the studies were conducted. Despite having a small sample size, we can determine that politically more liberal regions may have a higher education level, teachers may have higher evolutionary acceptance scores, and a region's dominant religion may have no effect on evolutionary acceptance.

It is important that the public understands that one can in fact believe in both religion and science. Gould (1997) argues that science covers the physical world, including what it is made up of and how it works, while religion covers the spiritual world, which raises questions of morality and value. Gould (1997, 16) offers a novel resolution to the evolution/religion controversy through his concept of “non-overlapping magisteria.” Gould was inspired by the Catholic Church's acceptance of evolution and borrowed its term “magesterium,” which refers to the teaching authority of the Catholic Church. Gould explains that the scientific and religious magisteria do not overlap, but instead meet at a fine line separating the two. Science cannot prove there being a creator, for no one can observe the unobservable, just as religion cannot prove science. They both can, in fact, coexist in the belief system (or understanding) of an individual.

There has been a controversy about the coexistence of religious beliefs and the scientific theory of evolution since 1859, when Darwin first published his findings on natural selection (Bybee 2001). The theory of evolution by natural selection challenges some of the oldest Judeo-Christian beliefs about how humans came to be through naturalization (Zimmer 1998). For example, those who interpret the Christian Bible literally (e.g., Creationists), believe that their God created humans in their modern form and that humans have always looked the way they do today (National Center for Science Education 2011). However, the theory of evolution threatens this belief because the fossil record suggests otherwise (Zimmer 1998). Zimmer (1998) mentions that this disconnect never sat well with many religious ideologues. The main concerns leading to the controversy between religion and science are the questions regarding the origin of the universe and humanity (Zimmer 1998). Zimmer (1998) states that just as the 1543 Copernican theory of heliocentrism upset religious ideologues, because it took humans and the Earth out of the center of the universe (known as geocentrism), so does the theory of evolution threaten many because their self-identifying ideas are based on the writings in the Judeo-Christian Bible.

To those who believe in the validity of evolution, the scientific theory that the earth is around 4.6 billion years old and that all living organisms evolved from predecessors is without question (Riess 2009). This is in opposition to the Christian creationist beliefs that the earth is only 10,000 years old and evolution has not occurred (Riess 2009). American society still persists with creationist beliefs, along with the increasing acceptance of Intelligent Design (ID) (Riess 2009). The basic argument for ID is that all living organisms are structurally complex and mechanisms, such as natural selection, cannot solely be capable of producing such complexity (Cleaves and Toplis 2007). Intelligent Design is a popular teleological theory that threatens science education in the United States (Branch and Scott 2009). Many people even think that ID should be taught in schools as an alternative to the theory of evolution (Cleaves and Toplis 2007).

Dawkins (1986) states that Intelligent Design can be explained through William Paley’s “Watch-maker Analogy,” where the design of the watch implies a designer. This designer ultimately is the creator of the universe (Dawkins 1986).

This researcher had a pivotal experience when she was first enrolled in a lower division general education course in general biology that eventually led to this study. On the first day of class, the professor asked for the students who did not accept the validity of evolution to raise their hands. Nearly half the class raised their hands in unison. That experience made clear to this researcher that science and religion as perceived by this group of students cannot overlap. Those in the scientific community are concerned about what will become of science education (Matsumura 2008). Personal experience has revealed that modern students continue to reject the fact of evolution entirely, despite overwhelming evidence to support its existence. This conflict between religious beliefs and evolutionary theory in the classroom led to this study.

Culotta and Holden (2006), writers for Science magazine, discuss the many polls taken in the U.S.A. to determine where individuals stand on evolutionary theory. Culotta and Holden (2006) report that the polls demonstrate that the more educated someone is, the more likely they are to endorse evolutionary theory. However, having a college degree is no guarantee that the graduate has abandoned
their religious beliefs and will agree with Darwin. Indeed, many intellectuals in fields other than biology reject evolutionary theory (Culotta and Holden 2006). Research based on the acceptance of evolution in secondary schools has been slowly accumulating since the Scopes Trial in the mid-1920s (Bybee 2001). The aim of this article is to review research on students’ and teachers’ acceptance of evolution as determined by a variety of instruments. Data will also be presented on the closely related topics of understanding evolutionary theory and understanding the nature of science.

**Literature Review**

Rutledge (1996) describes the central role of evolutionary theory as the unifying premise in biological disciplines. Only it allows connections to be made between incredibly disparate organisms, characteristics, and behaviors. Rutledge (1996, 3) describes the educational enterprise as “the vital nexus between accepted knowledge generated within a discipline and the general public.” Further, Rutledge (1996) describes the educator as the most important determining factor pertaining to the quality of science instruction. Rutledge (1996) believes it is the educator’s responsibility to translate the various curricular goals into learning. Rutledge (1996) claims that it is the science educator who is held responsible for determining whether or not future generations of students will be literate in science. Yet, Rutledge reports that high school biology teachers have either not taught evolutionary theory or taught it poorly.

Rutledge (1996) summarizes research conducted from the late 1930s through the late 1980s on high school teacher understanding and teaching of evolution. He states that prior to the 1960s, evolution was taught in less than 50% of high school classrooms. After the 1960s, due to the launching of Sputnik and the widespread adoption of a curriculum that emphasized evolutionary theory, Rutledge (1996) reports that fewer teachers completely avoided teaching evolution. Rutledge (1996) reports that over the past few decades, teaching evolution was widespread, but that it still did not receive the amount of attention it deserves as the unifying theory in biology. Rutledge (1996) concluded that the instruments used by previous researchers did not directly address teacher understanding of evolutionary theory. Rutledge (1996) also examined the literature on teacher understanding of the nature of science. Overwhelmingly it was found that teachers’ understanding of the nature of science was poor compared to that of working scientists.

Rutledge (1996) lists a number of factors, such as religious beliefs or poor coverage in textbooks, which have been investigated as explanations for the situation in high school biology classes. At the time of his writing, one factor not investigated was that of the teachers’ attitudes about evolutionary theory. Therefore, Rutledge decided to explore these attitudes among high school teachers using an instrument that he developed. The instrument, Measure of Acceptance of the Theory of Evolution (MATE), assesses teachers’ perception of: (1) the scientific validity of evolutionary theory, (2) its ability to explain observable facts, and (3) its acceptance by scientists. The instrument has been described as “a valid and reliable, homogenous, multi-item instrument to assess teacher acceptance of evolutionary theory” (Rutledge and Warden 1999, 13). Based on his field research with the MATE instrument, Rutledge (1996) determined five categories of acceptance (Table 1).

**Table 1**

*Categorical levels of the acceptance of the theory of evolution and associated MATE scores*

<table>
<thead>
<tr>
<th>Category</th>
<th>MATE Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High Acceptance</td>
<td>89-100</td>
</tr>
<tr>
<td>High Acceptance</td>
<td>77-88</td>
</tr>
<tr>
<td>Moderate Acceptance</td>
<td>65-76</td>
</tr>
<tr>
<td>Low Acceptance</td>
<td>53-64</td>
</tr>
<tr>
<td>Very Low Acceptance</td>
<td>20-52</td>
</tr>
</tbody>
</table>

Source: Rutledge, 1996.

Rutledge (1996) and Rutledge and Warden (1999) identified six foundational concepts to assess with the MATE instrument: (1) the process of evolution, (2) the scientific validity of evolutionary theory, (3) the evolution of humans, (4) the evidence of evolution, (5) the scientific community’s view of evolution, and (6) the age of the earth. He used 20 Likert-scaled statements to explore the six concepts. Respondents to Likert-scale statements indicate the degree of their agreement or non-agreement on a five-point scale method from strongly agreeing to strongly disagreeing with a statement.

Half of the statements in the MATE instrument are positively phrased and half are negatively phrased. Using the five point Likert-scale, if participants strongly agree (5 points) with the positive statements (N=10) the score is 50; if they strongly disagree (5 points) with negative statements (N=10) the score is 50. Thus, the highest possible score is 100 and the lowest is 20.

The MATE statements were judged by five university professors with scholarly expertise in evolutionary and education theory and the philosophy of science. Based on the feedback of this group, some statements were modified for clarity and precision. Rutledge (1996) used factor analysis to assess the validity of the MATE instrument. The factor analysis demonstrated that the instrument was a valid construct.
Rutledge and Warden (1999) assessed the reliability of the MATE instrument by mailing the instrument to 989 high school biology teachers in Indiana during the 1994-1995 academic year. They analyzed the responses using an internal consistency test, which showed that the MATE instrument was 98% reliable. Rutledge and Warden (1999) determined that the MATE instrument is homogenous, i.e., that it is assessing only one construct: teacher acceptance of evolutionary theory.

There are at least three inventories being used to assess students’/teachers’ understanding of evolutionary theory. The first, by Rutledge and Warden (2000), used a modified form of a scale, developed by Johnson (1985), to assess teacher understanding of evolutionary theory. Their modified scale contained 21 items. Cumulative scores were determined based on the number of correct responses. A score of 21 indicated a high understanding of evolutionary theory while a score of 0 indicated no understanding.

The second, by Anderson, Fisher, and Norman (2002), involved developing and testing the reliability and validity of a 20-item multiple-choice Concept Inventory of Natural Selection (CINS) that uses authentic scientific studies of natural selection. Anderson, Fisher, and Norman (2002) used ten concepts related to natural selection with two questions per concept. The authors believe the inventory is best for pre- and post-instruction testing situations (Anderson, Fisher, and Norman 2002). They state, based on work of predecessors, that undergraduates are expected to answer about 50% of the questions correctly. Indeed, Anderson, Fisher, and Norman (2002) reported that their sample of undergraduate students scored 46.4% correctly.

The third inventory, by Cavallo and McCall (2008), involved taking questions from Understanding Biological Change (UBC), designed by Settlage and Jensen (1996). Cavallo and McCall (2008) took four additional questions from another questionnaire and modified them to match the UBC questions. Possible scores ranged from 0-20, with high scores indicating a high level of understanding of evolutionary theory.

There are also at least three inventories being used to assess students’/teachers’ understanding of the nature of science. Rutledge and Warden (2000) used a modified form of the first such inventory by Johnson (1985). Rutledge and Warden’s (2000) scale, included 17 items. The items were Likert-scaled with the most correct response receiving a score of 5 and the least correct a score of 1. For this customized scale, a score of 85 indicated a very high level of understanding while a score of 17 indicated a very low level of understanding.

The Scientific Attitude Inventory II (SAI II) is the second scale referenced in this article. The SAI II is an instrument developed by Moore and Foy (1997). The instrument is a revision of one developed 25 years earlier and used extensively around the world. It has 40 items and uses a five point Likert-scale to measure perspectives of the nature of science. The instrument uses a combination of positive and negative statement items. The range of scores for the entire SAI is 40–200 (1–5 points * 40 items). Moore and Foy found a mean score of 141.2 for their sample of 557 middle- and high-school respondents.

The third inventory is the Science Knowledge Questionnaire (SKQ). An earlier version used by Cavallo et al. (2003) was modified by Cavallo and McCall (2008) to measure students’ beliefs about the nature of science. The SKQ has 16 items with a four point Likert-scale. A low score indicates that students have a more “fixed” view of science and a high score indicates that students understand the more tentative nature of science. The scores can range from 16 to 64 and are converted into percentages by dividing the score attained by the maximum value (64) and multiplying by 100.

Methodology

Data were collected from peer-reviewed articles, most of which were published in the journal, The American Biology Teacher. The results of each article are organized and presented first by the educational level of the sample (post-baccalaureate high school teachers, lower division university students, lower division high school students), then by their MATE scores. Information is also provided about the authors and purpose of each article, the sample size of respondents, and if provided, scores assessing the teachers’/students’ understanding of evolution and of the nature of science.

The MATE acceptance data were then organized by geographical region and the predominant political affiliation of the geographical region, based on the majority-vote from the last four presidential elections (Smith 2011). They were given a red (conservative), blue (liberal) or purple (uncertain) assignation. Then, the dominant religious affiliation of each region was categorized based on the state’s religious demographics according to The Pew Forum on Religion and Public Life displaying the U.S. Religious Landscape Survey. All religions viewed that lie under Christianity were classified as being Christian. The average educational level of each region was scored on a three-point scale from high to low, based on the six-year graduation rates of adults holding bachelor degrees as determined by the National Center for Higher Education Management Systems (NCHEMS) from 2009. Last, these demographic indicators were paired with the MATE scores obtained from each article.

Results

Rutledge and Warden (2000) measured high school teacher acceptance of evolution. Based on the range of scores reported by Moore and Foy (1997), this researcher had to ask whether our participating pre-service teachers had about average perceptions of nature of science, and are able to present that well to their students. However, some of the Oregon biology teachers also had strong religious beliefs. Nevertheless, in these cases, their religious convictions did not seem to stop them from presenting the theory of evolution (Trani 2004).

**Table 2**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Authors</th>
<th>Purpose</th>
<th>N</th>
<th>Mean MATE Scores</th>
<th>Understanding Evolution Theory</th>
<th>Understanding Nature of Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oregon HS teachers</td>
<td>Trani, 2004</td>
<td>Affect of religion</td>
<td>82 teachers</td>
<td>85.9 High</td>
<td>Mean score of 175 (-83% correct on 21 item scale): High (Rutledge and Warden, 2000)</td>
<td>Mean score of 661 (-78% correct on 17 item scale): Moderate to High (Rutledge and Warden, 2000)</td>
</tr>
<tr>
<td>Indiana HS teachers</td>
<td>Rutledge and Warden, 2000</td>
<td>Establish teachers’ understanding</td>
<td>552 teachers</td>
<td>77.6 High</td>
<td>Mean score of 149 (-71% correct on 21 item scale): Moderate (Rutledge and Warden, 2000)</td>
<td>Mean score of 595 (-70% correct on 17 item scale): Moderate (Rutledge and Warden, 2000)</td>
</tr>
<tr>
<td>Nevada and Idaho sophomore pre-service teachers</td>
<td>Nadelson and Sinatra, 2010</td>
<td>Pre/post test after web-based instructional interventions in experiments and control group</td>
<td>89 students</td>
<td>Pre/post-test scores: 72.3 experimental, 70 control; Moderate. Analysis of variance using group as factor showed a significant difference between the groups scores: 71.1 pre tests vs. 73.4 post test</td>
<td>Mean score of 48% correct for combined sample mean (CINS) (Anderson, Fisher, and Norman, 2002)</td>
<td>Mean score of 120 Average perception (SAI II) (Moore and Foy, 1997)</td>
</tr>
<tr>
<td>Michigan HS freshmen</td>
<td>Cavallaro and McCall, 2008</td>
<td>Pre/post test instruction</td>
<td>77 students</td>
<td>66.7 pre-instruction/ 68.5 post-instruction: Moderate</td>
<td>60% (30%) correct on 20 item scale: pre-instruction/ post-instruction; 97% (49%) correct on 20 item scale: pre-instruction (UBC) (Skelton and Jensen, 1996)</td>
<td>428% Pre-instruction/ 431% post-instruction (SBIQ) (Cavallaro et al., 2003)</td>
</tr>
</tbody>
</table>

Nadelson and Sinatra (2010, 22) report that “our participants fell in the middle of the range of values, which indicated that our participating pre-service teachers had about average perceptions of nature of science.” Based on the range of scores reported by Moore and Foy (1997), this researcher had to extrapolate the median value (120) to represent their “middle” value.

In 2000, Rutledge and Warden measured high school teacher acceptance of evolutionary theory. Using the results Rutledge (1996) had collected in 1994-1995, they found that the Indiana teachers had a mean MATE score of 77.6 (Table 2), which they report as indicating only a moderate acceptance of evolutionary theory, though according to the categorization given by Rutledge (1996; see Table 1), the score should be categorized as high acceptance (which is how it is presented in Table 2). Rutledge and Warden (2000) reported that it is worrisome that educators, who are responsible for the next generation’s understanding of science, responded correctly to only 71% of the Understanding Evolution Theory scale. Not only was the average MATE score eight points lower among Indiana teachers than for those in Oregon, but their scores on the same tests used by Trani (2004), Understanding Evolution Theory and Understanding the Nature of Science, were also substantially lower for the Indiana than Oregon teachers.

Rutledge and Warden (2000) identified two concepts that were the least accepted by the teachers. Over one-third of the respondents doubted the testability of evolutionary theory and 30% of them did not accept the evolution of humans. The most well-received concept by teachers was the acceptance by the scientific community of evolutionary theory; nevertheless, one-fifth of the respondents even doubted that. Rutledge and Warden (2000) revealed that Indiana public high school biology teachers had scores like those reported for the general public in their relatively low acceptance of evolutionary theory, which had been reported amongst the general public.

Nadelson and Sinatra (2010) were interested in the affect of the Understanding Evolution web-based instruction on pre-service teachers’ (1) acceptance of evolutionary theory, (2) understanding of biological evolution, and (3) understanding of the nature of science. Eighty-nine pre-service teachers from two universities, one in Nevada and the other in Idaho, were recruited for the study. They were divided into a control group (45) and an experimental group (44). The experimental group was exposed to parts of the Understanding Evolution (University of California’s Museum of Paleontology website) that addressed misconceptions about evolution and the nature of science. The control group was exposed to similarly designed filler material. Pre- and post-tests were given to both groups before and after viewing their respective websites. Pre-service teachers’ acceptance of evolutionary theory was assessed using the MATE instrument.

Pre-service teachers’ understanding of biological evolution was assessed using the Concept Inventory of Natural Selection (CINS) developed by Anderson, Fisher, and Norman (2002). Pre-service teachers’ understanding of the nature of science was assessed using the Scientific Attitude Inventory II (SAI II) developed by Moore and Foy (1997).

Nadelson and Sinatra (2010) found that the pre- and post-test MATE scores for the pre-service experimental teachers exposed to the Understanding Evolution website did not differ significantly from those of the control group (Table 2). Similar results were obtained for both the CINS and SAI II evaluations. Nadelson
Cavallo and McCall (2008) conducted a study at a ninth grade campus in a mid-western region of the U.S. Cavallo and McCall (2008) adapted the MATE instrument to assess student acceptance of evolutionary theory. Cavallo and McCall (2008) used questions taken from Understanding Biological Change (UBC) version B (Settlage and Jensen 1996) to determine students’ understanding of evolution. They used the Science and Knowledge Questionnaire (SKQ), developed by Cavallo et al. (2003), to measure students’ beliefs about the nature of science. Cavallo and McCall (2008) administered a pre-test prior to four weeks of instruction about evolution and then a post-instruction test. They used paired t-tests in order to identify shifts in the students’ acceptance of evolutionary theory and their understanding of evolution and beliefs regarding the nature of science. Cavallo and McCall (2008) found no significant shift in students’ acceptance of evolutionary theory and beliefs regarding the nature of science, but they found that their understanding of evolution shifted significantly and positively from pre- to post-instruction (Table 2).

Rutledge and Sadler (2007) assessed the reliability of the MATE instrument (designed for high school teachers) with university students in a non-majors biology course at Middle Tennessee State University. The MATE instrument was administered in a test-retest format, with no discussions of evolutionary theory occurring between the two tests so as to lessen the effect of learning. Rutledge and Sadler (2007) used the Pearson Product Moment correlation coefficient to assess the test-retest reliability of the MATE instrument with university students. They found a strong correlation between students’ acceptance of the theory of evolution between the two tests; that is there was no difference. Rutledge and Sadler (2007) also found that the instrument was internally consistent at the university level. Finally, the MATE scores for the Tennessee students tested were the lowest of all those reported in this article. Rutledge and Sadler (2007) conclude that their findings indicate a critical need for science education courses in order to provide knowledge, skills, and experiences, which offer the structure that enables students to think scientifically.

Table 3 presents the samples given above organized by state, and with the MATE category given exclusive of the score. Additionally, three other variables are included: political affiliation, dominant religion, and average educational level, as discussed in the Methods section. The samples are presented in the same order as in Table 2.

<table>
<thead>
<tr>
<th>State</th>
<th>Political</th>
<th>Religion</th>
<th>Education</th>
<th>Acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oregon</td>
<td>Blue</td>
<td>Christian</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Indiana</td>
<td>Red</td>
<td>Christian</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Nevada</td>
<td>Purple</td>
<td>Christian</td>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td>Idaho</td>
<td>Red</td>
<td>Mormon</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Michigan</td>
<td>Blue</td>
<td>Christian</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Tennessee</td>
<td>Red</td>
<td>Christian</td>
<td>Moderate</td>
<td>Low</td>
</tr>
</tbody>
</table>

Note: Nevada and Idaho were included in the same study by Nadelson and Sinatra (2010).

First, the majority of states were categorized as Red politically. Only Oregon and Michigan were categorized as Blue and Nevada was the sole Purple representative. Second, all but one state were classified as Christian; only Idaho was classified as Mormon (and some would consider them Christian). Third, the educational level of the states listed ranged from high to low. Nevada was the only state classified as having a low educational level.

When looking at relationships among these variables, none of the blue states had a low educational level. Michigan, a blue state, had a moderate education level, while Oregon, a blue state, had a high educational level. The states categorized as red politically had their education levels ranging from moderate to high. Second, there is no visible pattern relating religious affiliation to acceptance of the theory of evolution.

Further, both teacher samples had high MATE scores. Of the student samples, all MATE scores were of moderate acceptance with one exception. This exception is from the red state of Tennessee, which was categorized as having low acceptance.

**Discussion**

Despite not having the desired results of any identifiable patterns linking various demographics to evolutionary acceptance, this study is still of educational significance and belongs amongst the evolutionary acceptance literature. This study is one of the first to implement various demographics in relation to MATE scores. We can determine from the results that politically more liberal regions may have a higher educational level and that teachers may have a higher evolutionary acceptance score. However, the comparison of MATE scores along with comparing the Understanding Evolution and the Nature of Science variables between the teachers from Oregon and Indiana indicates that a regionally
different political view could be a potential factor. There is still much to be
determined about evolutionary acceptance in the United States in the near future.

In terms of science education, a lack of understanding in the nature of science is
often viewed as harmful to students (McComas, Clough, and Almazroa 2002).
With the uncertainty of what the future of science education holds, it cannot be
determined whether or not the American public will agree on a force of action
in the science curricula. The National Center for Science Education (NCSE)
is the biggest forum for the American public to visit and become educated on
the importance of evolution in the science classroom. They continue to back
evolution in the classroom as well as offer news articles, polls, and information on
the controversy. The NCSE aims to improve K-12 and college science curricula
and pedagogy.

Limitations

There were several limitations regarding this study. Due to a lack of studies using
the MATE tool to assess evolutionary acceptance among science education in the
literature, it became difficult to acquire an abundance of these articles. This would
have been a great asset to the data. More data are needed in order to provide
significant demographic patterns amongst the findings. The MATE instrument
is a relatively new evolutionary acceptance tool that was derived in the Midwest.
This caused a lack of demographically diverse regions.

The majority of the studies included in this research were primarily of
Midwestern, southern, and western regions of the United States. Also researchers
familiar with the MATE instrument had used it several times resulting in a
repeat of the geographical region being studied. The data were comparable given
that all studies used the MATE tool and that grade levels were not too distant
with one exception being Cavallo and McCall (2008). Educators and students
were not compared regarding MATE scores due to a significant difference in
their education levels. However, for those studies that implemented the two
other variables: Understanding Evolution Theory and Understanding the
Nature of Science, they were not comparable due to having been measured with
different instruments and were only included in Table 2 to offer broader insight
to potential factors that can be related to MATE scores. As the MATE tool
becomes more familiar to educators and researchers concerned with evolutionary
acceptance around the United States, it will continue to be implemented in
various regions that have yet to be studied, leading to a broader understanding of
evolutionary acceptance amongst educators and the American public.

Future Research

This study holds significance to the science education community and for that
reason alone it is in the hopes of this author to take this study further in the
near future. First, due to the lack of studies done on the west coast, it is in the
hopes of the researcher to construct her own MATE survey and administer it to
both biology and anthropology students. Both studies hold evolution at its core, yet
evolutionary acceptance studies done on anthropology students and teachers alike are
almost nonexistent. It is also in the hopes of the researcher to implement two other
factors that often accompany the MATE tool in the literature. These two factors
are the Understanding of Evolution Theory and the Understanding of the Nature
of Science. Both are often seen in the evolutionary acceptance literature as an aid to
identifying why such low evolutionary acceptance exists in the United States.

The evolutionary acceptance of students and teachers is something that will
continue to grow amongst the literature, as it is becoming more and more an
issue to both the scientific community as well as the American public. With
various court cases amongst school districts and parents, as well as the growing
concern for student education, acceptance of the theory of evolution amongst
the American public is a topic of concern that will continue to be researched until
there is perhaps a resolution to the evolution versus religion controversy.
References


Black Students’ Experiences in College: 
Exploring California State University, 
Sacramento Barriers through 
Their Standpoints

Cassie Garrett-Lewis  
Dr. Manuel Barajas, Faculty Mentor

Abstract

The purpose of this study is to understand more about retention and graduation rates among Black American university students through their own standpoints and experiences. The results of two focus groups suggest numerous reasons as to why these students believe there are such low retention rates at CSUS, including a lack of diverse curriculum, lack of Black faculty, financial aid obstacles, lack of mentorship and guidance, intelligence stereotypes, and more. The findings may be useful in providing institutions with the information needed to implement a better system that will improve the retention and graduation rates of Black college students.

This article examines college experiences of African American students at a California State University and the effects of underrepresentation of this group through their experiences within the academic setting. There has been a lot of attention in theoretical discussions about the achievement gap between Black and White students (Kao and Thompson 2003). Historically, African American students have been underrepresented in academic institutions in the United States and this is still the case today (Herndon and Hirt 2004). Most staff and faculty that work in a university setting believe in equal opportunity, but have conformed to social views and values of unequal access and opportunity to higher education, claiming meritocracy and individual effort as factors responsible for the educational inequities (Sue 2004). One possible indicator of inequity within an institution would be the lack of representation of African American undergraduate students enrolled at California State University, Sacramento. In Fall 2011 there were 24,701 total undergraduate students enrolled at the university. However, the percentage of African American students enrolled in 2011 was 6.5 percent compared to the population of African Americans in the United States, 12.6 percent (United States Census 2010a).
The low numbers alone do not constitute the problem, but also the disproportionate failing rates of these underrepresented students vis-à-vis other groups of students. Only about thirty percent of the first-year African American students graduate within eight years from California State Universities (Barajas 2011, 2). With less than one-third of these students graduating, means that a great majority of African American students that enter the university drop out or as this article will explore, are pushed out.

This study explores one research question: How is higher education failing African American students from their standpoint, experiences, and views?

**Literature Review**

**Cultural and Deficit Models**

Ogbu (1992) believes that Black American students have encountered many oppositional cultural and language frames of differences. Ogbu (1992) explains his “cultural-ecological” model in regards to educational achievement of being “voluntary” or “involuntary” immigrants. For example, people who come to America to escape the oppressions of their countries and seek social, political, and religious freedom in the United States, would be considered voluntary immigrants. However, for Black Americans, that is not the case. Black Americans were taken out of their homeland in Africa and forced into slavery and stripped of everything they knew about their culture, making them involuntary immigrants. African Americans have faced barriers that are still hard to overcome to this day. Some examples include not knowing the “right” way of talking, behaving or a sense of identity (Ogbu 1992). According to Ogbu (1992), involuntary minorities have no place to return to if living in the United States becomes frustrating or too complicated. Minority students are required to assimilate to the curriculum of the dominant group, but only some of the minority students are able to assimilate to the demands of society to be successful academically (Ogbu 1992).

Those minority students who see culture and language as barriers to overcome to get ahead in society will get the help they need to adjust to the culture and language standards of the school they are attending to succeed (Ogbu 1992). Other minorities see adjusting to these standards in school as damaging to the language and culture that they identify with, preventing them consciously or unconsciously from moving forward in higher education (Ogbu 1992). Jenkins and his colleagues (2004) confirm that students with voluntary minority parents are more persistent in college versus those students that have involuntary minority parents. In order to eliminate biased standards that work against involuntary minorities and advantage the dominant and voluntary minority groups, who generally come from more privileged socio-economic backgrounds, it is important to have a more diversified curriculum that relates to and integrates the lives of underrepresented minority students.

**Social Capital**

Fischer’s (2007) research shows that African American students who have academic ties fair better. For example, students that have ties with faculty are more likely to have a higher GPA than those who do not (Fischer 2007). All students that participate in extracurricular activities and have social ties tend to have high levels of college satisfaction and are less likely to leave college (Fischer 2007). Astin (1984) has found students with more participation in different areas of college life tend to be more successful. For example, Astin’s (1984) research shows that students moving into the dormitories will help them feel more involved in the college life. Gurin et al. (2002) also show adjustments of the college experience for African American students would create better end results in overall academic success.

**Human Capital**

Other explanations for the high failure rates of African American students are that minority students, coming from low-income families, are more likely to attend college part-time and work full-time to pay for living expenses, which causes them to take longer to earn a degree (Kao and Thompson 2003; Lavin and

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**Table 1**  
**Race and Ethnicity Enrollment and Population**

<table>
<thead>
<tr>
<th>Race</th>
<th>CSUS</th>
<th>Sacramento (County)</th>
<th>CALIFORNIA</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>6.5%</td>
<td>9.9%</td>
<td>6.2%</td>
<td>12.6%</td>
</tr>
<tr>
<td>White</td>
<td>40.3%</td>
<td>48.4%</td>
<td>57.6%</td>
<td>72.4%</td>
</tr>
</tbody>
</table>

Source: United States Census 2010a, 2010b (for the population) and Office of Institutional Research.
Crook 1990). Others say financial aid cuts and tuition increases due to budget cuts affect Black students and other minority groups more than White students because White students are less likely to come from low-income families (Lavin and Crook 1990).

Although most families would like their children to do well in school, achievement varies among minority groups (Gibson and Ogbru 1991; Jenkins et al. 2004). Gibson and Ogbru (1991) and Jenkins and his colleagues (2004) contend that a lack of cognitive skills among some minority groups reduce their academic achievement. For example, the history of minorities produced “a unique culture” that complicates their adaption to the dominant racialized culture of similarity in society and that devalues minority children’s academic potential with hegemonic standards in school curriculum (that privileges the dominant group and middle-class norms) (Jenkins et al. 2004; Shade 1991). In addition, the destruction of inner-city schools, where most minority students attend, has further hurt their educational achievement (Comer 1980; Edmonds 1986; Jenkins et al. 2004).

Families have largely been the focus of studies explaining why Black American students are not successful in higher education (Brooks-Gunn, Guo, and Furstenberg 1993; Hauser and Featherman 1977; Haveman, Wolfe, and Spaulding 1991; Hill and Duncan 1987). Cheng and Starks (2002) attributes black students’ failure rates to the low expectations from close family members and friends, which lowers their aspirations to pursue higher education. Without the familial support students do not pursue higher education (Cheng and Starks 2002). Furthermore, Black students peers’ low expectations in educational success also contribute to their low aspiration to pursue higher education (Cheng and Starks 2002).

The majority of the African American students in college are attending predominantly White institutions (Fischer 2007). The transition to a college environment is different for Black students than it is for their White and Asian counterparts (Fischer 2007). Prior research says the most crucial period for students is the transition to college, and could set the stage for students’ success or failure (Fischer 2007; Gall, Evans, and Bellerose 2000; Hurtado, Carter, and Spuler 1996; Terenzini et al. 1994; Tinto 1993). Unlike some White and Asian students, most Black students enter college as first generation students, come from low-income families and experience a predominantly White campus as racial ethnic minorities (Allen 1992; Fischer 2007; Nora et al. 1996; Smedley, Meyers, and Harrell 1993; Steele 1997; Steele & Aronson 1995, 1998). Universities try to support students with tutoring services, contact with faculty, and peer mentoring programs as well as campus facilities like libraries and computer laboratories that support student learning. Nonetheless, budget deficits and cuts to education have reduced much of this support, and human capital and social capital theories tend to frame Black students’ low graduation rates as a result of their own deficiencies, without contextualizing their experiences in their historical unequal treatment within universities (Barajas 2011). Their consequential low numbers and lack of diversity on campus makes the transition to college harder for African American students (Hurtado et al. 1998).

**Institutional Biases, Race, Gender, And Class**

Other research blames the institutions for the failure rate in higher education for Black American students (Aronowitz and Giroux 1985; Taylor and Clark 2009). Much research shows that African American students are at a disadvantage in higher education institutions, though a few researchers who believe White students do not have an advantage over Black students in postsecondary education (Wolfe 1985). Notwithstanding, White students are more likely to graduate from college than Black students are, irrespective of class background (Corbett, Hill, and Rose 2008). Lavin and Crook (1990) find that the majority of African American students are required to take non-credit remedial classes which often discourage Black students due to the amount of time it would take students to earn a college degree. Some research claims the programs in institutions are not sufficient to overcome weak preparation for college that African Americans received (Lavin and Crook 1990), yet other work points to the fact that academic preparation accounts for a small percent of why students drop out and that remediation programs make higher education accessible to communities that are socio-economically marginalized and denied quality public education (Barajas 2011).

African American students’ enrollment into institutions has statistically increased from 1976 to 2000 by 14.9 percent (Fischer 2007; USDE-NCES 2002), although, the low percentage (4.3%) of African American faculty members compared to the percentage of Caucasian faculty members of (71.4%) at California State University, Sacramento is a reflection of underrepresentation, and indicative of historical institutional racial exclusion and bias still to this day:

**Figure 2**

*Faculty Race and Ethnicity Statistics at California State University, Sacramento*

Source: Office of Institutional Research
Another example that may reflect racial inequalities within academic institutions is the low number of African American students attending California State University, Sacramento.

**Figure 3**

*Student Race and Ethnicity Statistics at California State University, Sacramento*

Source: Office of Institutional Research

Academic institutional racism still exists in the form of unequal proportions of resources and unearned advantages that benefit one race-ethnic group at the expense of others (Aronowitz and Giroux 1985; Taylor and Clark 2009). Sue (2004), for instance, suggests biased admissions criteria limit access for African American students. The absence of minority faculty, moreover, limits the multicultural perspectives in higher education (Banks 2004; Sue 2004). Gurin and associates (2002) find that more diversity in the institutions would help all students.

According to Ogbu (1992), the low degree of trust from African Americans towards the White Americans mold their decisions to pursue or not to pursue higher education. Some African American students believe White students have an upper hand in education and some believe obtaining a degree in higher education would be impossible due to the way institutions are structured to fail minorities and pass White students (Ogbu 1992). According to Ogbu (1992), unlike voluntary minorities, historically underrepresented minorities believe that education alone will not help them get ahead in society because of institutional discrimination.

The underrepresentation of Black students within higher education limits the social and occupational opportunities for African American students and their families, which reveals the high stakes for accessing higher education (Sue, 2004; Taylor and Clark 2009). The institutional racism is invisible to most (Taylor and Clark 2009; Sue 2005; Pence and Field 1999) because people remain ignorant about the policies, values, and practices that advantage some racial groups and disadvantage others through a discourse of color-blindness, suggesting only individual effort and meritocracy explain the racial inequities in higher education (Sue 2005; Taylor and Clark 2009).

Existing literature reveals the barriers that hurt African American students’ success in higher education. However, more research is needed that specifically identifies what Black American students themselves perceive as barriers they have encountered when attempting to succeed in higher education. This study responds to that void in the literature of African American students in higher education.

**Research Design and Method**

The research design and procedure reflect the exploratory nature of Black American students’ views at California State University, Sacramento. This study used a qualitative methodological approach to collect data on the lived experience of Black American students at California State University, Sacramento (Turner, Gonzales, and Wong 2011). According to Turner, Gonzales, and Wong (2011) qualitative research is the best way to examine distinctions of human behavior in a social environment and to capture the quality of the human experience (Lincoln and Guba 1985). This study conducted focus groups with Black American students, as it is the most effective way to determine participants’ sense of awareness, insight, understanding, emotions and reflection about complicated issues (Krueger and Casey 2000; Turner, Gonzales, and Wong 2011). Focus groups are favored widely within the academic discourse community and outside of the community, and continues to increase in usage (Grudens-Schunck, Allen, and Larson 2004; Krueger and Casey, 2000; Turner, Gonzales, and Wong 2011). Because the study does not generalize to a larger population, the qualitative research method is most appropriate and allows the researcher to explore more deeply the educational experiences of Black American students.

All of the focus groups were conducted at California State University, Sacramento. The average length of time for each focus group was about 90 minutes long. The participants were recruited from various locations on campus, including the Multicultural Center, Ethnic Studies Student Association, and African American Student Organizations. Focus group locations were arranged by the McNair office Administrative Coordinator of California State University, Sacramento. Pseudonyms were used to keep the participants’ information confidential.

**Description of Focus Group Participants**

Twelve Black American students participated in the two focus groups. Collectively, these 12 men and women were very experienced students, with a 2 to 3 year (average) attendance as students at California State University, Sacramento. There were three men and nine women in total. These students represented diverse majors: such as Music, Biology, Sociology, Communications, Business and
American Sign Language majors. In terms of race and ethnicity, all 12 students considered themselves Black American students. Three out of the twelve students have applied for graduation.

**Description of Focus Group Order**

After handing out consent and questionnaire forms, the researcher introduced herself and explained the purpose of the study using the consent form as a guide (see Appendix A). After the introduction, the researcher made sure everyone consented with recording their views and once everyone agreed, the recording started. Participants were asked to introduce themselves and the major that they were in. After the introductions, the following questions were asked verbatim:

1. **Overall Sense of Campus Climate.**
   - Do you feel a sense of belonging on campus? Why or why not?

2. **Promoting Diversity.**
   - Do you feel valued as an African American on campus? Are you treated with respect and equality?

3. **Discrimination.**
   - Is discrimination an issue at Sacramento State? If so, where have you experienced it? What have you experienced?

4. **University Support of Diversity.**
   - Do you feel the university is supportive of racial diversity? Explain.

5. **Students Prepared to Relate to Diversity.**
   - Have your experiences at Sacramento State improved your ability to relate more effectively to different groups of people?

6. **Institutional Support for Diversity.**
   - Do you think this university supports diversity in general (e.g., within programs, centers, resources offered, student population, faculty, or resources to support your own group)? Why? How?

7. **Involvement and Sense of Belonging to the Institution.**
   - Are you involved in student organization(s) at Sacramento State? What are they?
   - Do you feel you fit in at Sacramento State?

8. **Diversity in Colleges and Curriculum.**
   - What is your major? Do you believe your department offers a curriculum that values diversity? Does the college you are in at Sacramento reflect the value of diversity in their curriculum?

9. **Classroom Experience.**
   - Are you an active participant in your classrooms? Do you always feel comfortable in your classes and within your major at Sacramento State to voice your opinion?

10. **Faculty and Diversity.**
    - Do you believe the current faculty at Sacramento State reflects the diversity of the student population? Do you think it matters to minority students whether faculty represent their racial/ethnic background? If so, how does it make a difference?
    - Do you feel the faculty at Sacramento State are supportive of your academic achievement? Do you feel you can connect to your professors? Why?
    - Have you had any Sacramento State faculty act as mentors to you?

11. **Sacramento State Community is “welcoming/unwelcoming.”**
    - Have you had a welcoming or unwelcoming experience so far at Sacramento State? Why do you feel the community here at Sacramento State is welcoming/or unwelcoming?

12. **Sacramento State Community is “friendly/unfriendly.”**
    - Do you believe Sacramento State is generally a friendly or unfriendly environment? Explain.

13. **Barriers students face at Sacramento State.**
    - What is the major barrier you face in pursuing higher education at Sacramento State?
    - What is the major source of support in pursuing higher education?

14. **Financial Aid.**
    - How do you pay for tuition? Has it been difficult for you to pay your tuition? How has your experience been with financial aid?
15. Emotional Support.

- Do you feel you can get emotional support on campus? Do you feel you can seek emotional support informally from faculty, staff or peers in the campus community? Explain.

The students were free to respond or skip each question and to end the interview when they wanted.

**Findings**

**Views on Diversity & Welcoming Environment**

Students generally feel the campus is very diverse. This perception made them feel more comfortable with the campus environment. For one student, this is the reason why she decided to attend California State University, Sacramento.

Pearl: Personally I did apply here because I knew that it had one of the highest percentages of African Americans here.

Even with the students expressing how diverse this campus is, some students mentioned that they think the percentage of African American students who are at Sacramento State results from the university trying to meet a quota to look like a more diverse institution. The students nonetheless expressed how low the numbers are for African American students on campus:

Preston: I feel like there is diversity. But I feel like you know, our African Americans, our numbers are so low, I mean they’re so low, I mean right off the bat. But you know just in general looking around like, I feel like ok there’s you know like a few there and a few Latinos you know and I feel like its diverse for what it is, for what it can be.

The participants overall feel even though the Black student numbers aren’t very high, this school is still one of the top options due to the student diversity compared to other California State Universities. Some students expressed the dorms played a major role in helping them feel comfortable on campus when they started attending California State University, Sacramento (Sacramento State). Five out of the eleven students stated that the dorms were the main reason why they felt this campus is welcoming and diverse. A different member of the focus group described how his dorm experience helped him feel welcomed and more comfortable on campus:

Preston: I know that when I lived in the dorms financial aid wasn’t enough because the dorms are way too expensive, but my dad wanted me to live in the dorms and I see why he wanted me to do that so I would feel involved, I would feel a part of the campus. And so I feel like that price tag that they have on the dorms, that deters a lot of students and probably a lot of African American students from living in the dorms. If you don’t live in the dorms, you don’t feel involved.

This research shows that dorms are one of the main ways to help Black students transition smoothly into Sacramento State.

Overall, the students felt they belonged because most were part of formal and informal groups on campus (Science Educational Equity (SEE), sororities, sports, Educational Opportunity Program (EOP), and fraternities). The sense of belonging seemed healthy, and it was attributed to their own social capital, networks of friends and organizations, rather than university’s intervention/programming. Most sensed the university provided support on diversity, but that it was not visible or noticeable to them.

**Diversity among Faculty and Mentorship**

None of the participants reported having a faculty mentor, and only three of the eleven said a coach and an EOP advisor provided them with counseling support. Five out of the eleven students have never had a Black professor. Three out of eleven students felt comfortable with their professors. Even though most students did not feel comfortable with their professors and have not experienced what it is like to have a faculty mentor, some students mentioned other people they sought help from. Three students mentioned that their EOP counselors helped them and advised them through this college experience. One student, Ann, from the biology department mentioned her SEE advisor was the person who helped her and mentored her through this college experience. Ann expressed that her advisor in SEE understood her and what she was going through, thus helped and guided her in the right direction.

The Black students generally expressed that there was a lack of mentorship from faculty. The Black students have very little to look up to, to show them that it is possible to go to graduate school and become a professor or a leader. Chesley believed that she received the most support in a class that had a Black professor. Chesley got the most out of that class because the professor had high expectations of her and pushed her in a very caring and supportive way. On the other hand many students have experienced discrimination from some of the non-Black Professors.

Preston expressed that he felt like in one of his classes he and his fellow Black American students (that he did not know) were singled out and graded unfairly.

Preston: I had, there was one case of where I had a professor and I felt there was, I couldn’t connect with him at all. He was not supportive, in any way, I felt like that when he graded me, and I don’t feel like this often, but I felt that he was grading me unfairly. There were three African American students in that class, another female, and another male, I was talking to the male and he felt like he was being
graded unfairly too. I mean we’re all smart. We’re all smart kids, and they ended up dropping out of that class. I didn’t do very well in that class and I just felt like a major disconnect. I felt like I didn’t even communicate with my professor, I just felt, I did feel uncomfortable.

When the participants were asked, “Does it matter to you guys if you have diverse minority faculty members that look like you, that are the same culture as you and the same race as you?” Ten out of the eleven participants responded that they would love to see more diverse professors from underrepresented ethnic racial backgrounds.

*Ann:* I think so, I mean it kind of helps with the whole, communication barrier between students and professors. I would probably feel more comfortable and could relate to them. We would probably feel more comfortable going up to the teacher asking questions.

The participants believe this will show them that Black people can succeed in college. Other reasons the Black students would like to see a more diverse group of faculty is to allow them more opportunity to seek mentorship from people that understand them. Not having this option is a disadvantage at California State University, Sacramento.

**Curriculum/Classrooms**

The participants mentioned several times that the curriculum is not diverse. The curriculum is not evenly spread out to meet the needs of all races of students, which has made it twice as hard to succeed in a class. These students expressed that they have to put in more time than their classmates to understand the material that is being taught. Curriculum was mentioned a lot in the focus groups, with two of the students stating The College of Arts and Letters was the main department lacking diversity and two of the students stating Science was the main department lacking a diverse curriculum. The fact is that historically underrepresented minority faculty (i.e., Black, Chicana, Native American) are grossly underrepresented in five of seven colleges (Barajas 2011). Nine out of the eleven participants felt they were required to learn a lot of material that does not interest them, and noted a Eurocentric bias.

*Mya:* Actually, uh, adding to what he just said, kind of jog my memory. I did take a music appreciation class last semester and we basically covered uh, classical music all the way up to jazz, but I felt like the curriculum wasn’t evenly disbursed, you know it touched on the jazz slightly and then the semester was over. I do believe that from my experience in taking music appreciation, it does need to be more diverse.

All students except for one felt uncomfortable in their classes, sometimes being the only African American student in their classes. One student, Kelly, mentioned that she can’t relate to anyone that is in one of her general education courses that she is taking right now; because of this she doesn’t speak or say much in class.

*Kelly:* I’m the only Black woman, and so I very seldom say anything. Because I feel like, I don’t know, it doesn’t make me feel comfortable talking in that class. And I always feel like the teacher looks at me like, he’s expecting me to say stuff, but I don’t have anything to say because I just don’t feel comfortable.

Her expression of not feeling comfortable is of significance, because she felt very comfortable speaking in the focus group and demonstrated confidence and maturity in her communication.

Overall, the participants felt their departments were indifferent to them, lacking representation of African American students and a diverse faculty. Only one said her department (Communication Studies) seemed unusually friendly and supportive:

*Ashley:* I’m in and they have been really helpful. I had someone call me, hey I know you’re graduating in May, you forgot to do this. I was actually surprised she went out of her way to call me because I probably would have been screwed.

This department is the home department of an African American administrator. Out of eleven students, only one is pleased with her department’s representation of African American students and diverse faculty.

**View on Clubs and Groups on Campus**

Being part of a group does make students feel a sense of belonging at Sacramento State. Seven out of the eleven students are members of an organization(s). Some of the groups were EOP, SEE, Sororities, Fraternities, different Student Assistant Positions on campus, and Black Student Union. Some reasons mentioned for joining these groups were networking, connections, support, guidance, friendship and financial support. The student, Ashley, who was a part of a sorority said that she was the only black student, but she was okay with that because the people that were in the sorority knew people and could help her get jobs she may want in the future. One of the EOP students, Kelly, mentioned that her first semester here was with all African American EOP students, which was a cultural shock to her because she came from a predominantly White neighborhood. Another student, Marcus, had no real commitment with a particular group, he just floated from one group to another.

**Barriers of Success**

This research shows that financial aid has created one of the largest barriers for Black American students. Eight out of eleven students expressed how much of a barrier the Financial Aid department has been. This is one of the top barriers for the students when trying to obtain a degree. The students mentioned that some semesters they didn’t know how they were going to come up with the money that financial aid was not paying for. Only three students did not have
this problem. One out of the eleven students, Jessica, has always had plenty of
funding throughout her college years through EOP, track and financial aid.
These programs have allowed her to not have to worry about the financial burden
that the other students had to worry about daily. Financial aid has created many
obstacles in getting and obtaining aid for Black American students throughout
their college experience. This study revealed that people who work in financial aid
may not always be pleasant and there may be many obstacles in obtaining financial
aid. Mya described her experience:

Mya: I do receive financial aid and grants. It’s difficult to pay for
tuition. However I am enrolled as a full-time student and I dropped
two classes this semester because I was going to go to work. So I was
unable to enroll back into two classes to place my status at full time, so
therefore I was over awarded and I had to pay back financial aid. So
I went back into the financial aid several times to be proactive instead
of waiting until it showed up on MySacState and be reactive to the
situation. I kind of ran into several barriers because when going to the
financial aid office I was told that I had to wait and I couldn’t make
any payments onto my account until it posted onto MySacState. So it
finally posted over to MySacState and then I went back to financial
aid to make a payment. So they were like oh we can’t accept any
money, we have to wait until you receive a letter in the mail from
financial aid. So I was like ok. So I finally received the letter and that
actually happened today. I went back to financial aid to take care of
the debt. I get ready to pay with my credit card and they were like, oh
no you can’t pay with a credit card. So therefore, I was unable to pay
the full portion with my credit card, I had to pay half the portion that
wasn’t under tuition with my credit card and the other portion I have
to pay with cash. Mind you that financial aid told me that classes,
open enrollment will be April for Fall classes, but if I don’t have that
outstanding balance paid in cash, then it blocks me from registering
for Fall classes. And I felt like. You know, just those stipulations in
the way that the institution works and is set it, it set me up for failure
because I came in several times to try to take care of it and was denied
in taking care of it and now I’m just like ok I don’t really have this
amount of money in cash but I do have my credit card that I could
place it on but yet I’m being denied to pay it with my credit card. So
there has to be some type of changes everyone can’t just come up with
that kind of cash when trying to pay back the university.

Three students who came to Sac State as Freshmen and have now applied for
graduation explained that it has taken them six years plus to graduate. Some of
the reasons were that professors would fail students, no matter what personal
problems they may have been going through. Other reasons were bad advising.
For example, Ann was told to only take two science classes at a time and just add
two more classes she did not need to meet financial aid requirements.

Ann: My classes are really hard, so when I first started to take my
major classes, I seen an advisor. Well the first advisor, she was my
teacher, she was like, well uhmm. It was the end of my sophomore year
and I was done with my GE classes, so ok now I’m ready to start
taking my major classes and she was like oh you got 4 more years, and
she was like, oh you can only take like 2 science classes a semester, so
then like they tried to fill it in with like classes I didn’t need so that I
could fulfill the need for financial aid, so that’s a barrier.

Two students just did not get the right support and advice they needed
throughout this process. Ann mentioned the challenges of paying for tuition:

Ann: The past couple of semesters, like, I had to kind of like find, like
my financial aid didn’t cover all of it so it’s like if I don’t come up
with the extra money, then I’m not gonna be able to graduate, so just
coming up with the tuition. I also took a Winter class one time and
just for one class it was like $800, and since I didn’t have financial aid,
I had to charge it to my credit card. Now I have to have that burden of
trying to pay down my credit card.

Other barriers that Black students face are going into academic institutions with
preconceived notions that they are not smart enough, because of the color of their
skin. Four out of the eleven students mentioned the barrier of racial stereotypes
about Black students. One stereotype is, if you’re Black and in college, you must
be an athlete. Four out of the eleven students felt the pressure to assimilate and
fit in to the predominantly White culture in order to be viewed as normal or
intelligent. All students expressed they still experience racism, irrespective of their
assimilation levels. However, many accepted it as a norm and sometimes deal with
it, by laughing it off. Two out of eleven students said they feel disconnected on
campus overall.

Overwhelmingly, students viewed racism as a significant barrier to equality,
expressed through differential treatment based on the color of their skin. However,
one student, Kelly, elaborated intersectional racial, class, and gender barriers
blocking students’ success. She also suggested a university practice of, tokenism that
includes a few minorities to appear inclusive yet not really sensitive to their real life
experiences (e.g., child care needs and work schedules). The responsibility of taking
care of younger siblings appears to be a gender barrier because as a woman there
might be the pressure of fulfilling a nurturing role with family.
Kelly: The fact that faculty or just anybody on campus may not understand the situations we go through a lot. A lot of us have to work to go to college. Most of the people in my classes, they don’t work, their parents pay for everything and cars. I have kids and work full-time and I go to school full-time. Like I don’t even use that as an excuse cause those are my choices in life, but it’s a barrier because there is no understanding for the situation. You know, an emergency. That would be my barrier. I’ve been here 6 years, why, I should be gone. There’s just no understanding for things when I have to take care of business.

A sense of belonging is important to student success, and being involved in the campus is important for the students to succeed. All three students that have applied for graduation were involved in at least one club or organization on campus. They have all attributed the completion of their undergraduate degrees to at least one or more of these programs. It is important to create enough programs for everyone. This is vital to the student’s success.

Black students face many barriers on their journey to earning an undergraduate degree. One of the barriers is the pressure to assimilate to the dominant culture, and by relation the devaluation of their culture—contributing to a sense of not belonging. Second, the battle to maintain financial aid is a barrier. The third barrier is the preconceived views of Black American people, if they’re in college they must be athletes, they are not capable of being successful in college, and Black people aren’t intelligent people. Fourth, not feeling involved is a barrier for Black students. One of the participants explained what she believes her overall barrier is of the success of obtaining her degree:

Mya: I think it has to do with both the foundation that was set and in terms of uhmm, family efficacy and family support and community and everything, but it also spills over into the schools and the foundation that was set for, uhmm us as a minority in schools. I mean we uh it’s been said and studied plenty of times where we were destined to fail and so I think the struggle uhmm for higher education and to succeed is a lot more uhmm challenging for us again because the curriculum is not diverse and uhmm we have to regurgitate one culture’s ideals and way of life opposed to what our experiences are and the way of life has been so it’s just not enough diversity in the materials that’s being uhmm that’s being taught to all minority groups, not just African Americans. It’s basically filtered around what’s basically supposed to be the superior class or the higher culture.

The participants’ feelings on diversity are adequate, but when digging deeper into their experiences, it is apparent to them that students are accommodating to unfair structures of opportunity privileging whites, men, and those with money, such as the policies that are implemented for higher education. Students show there are many barriers that are faced when trying to obtain a degree.

This researcher shows the realities of African American college students’ dynamics of being pushed out of the university, rather than merely dropping out. Generally sociological theories focusing on higher education stress human, cultural, and social capital deficits among Black families and students as reasons for their poor academic achievement. However, this study demonstrates through the lived experiences of Black students that the learning environment is not equal for everyone, and is clearly shaped by race, gender, and class hierarchies embeded in the university context. The “push out” of African American students at California State University, Sacramento occurs in a context of unequal structures of opportunities that are exposed by the student voices and include; absence of Black professors/mentors, weak diversified curriculum, double standards, stereotypes, and existing colorblind policies [prop. 209] that do not help the situation (Barajas 2011).

Overall, this study confirms what scholars have said about nationwide trends, that institutions have yet to find a solutions for the low retention rates of African American students. This shows that more research is very necessary.

Limitations

Time constraints made it hard to get a larger number of focus groups to make this research stronger. The researcher plans on continuing this research later on to further strengthen the results of the research. Description of future research will be discussed in the next section.

Future Research

Some of questions the researcher will attempt to answer in future research will be:

- What are African American students doing to graduate successfully? What is their formula to success?
• What is the percentage of students involved in an organization on campus within their college experience? Did the involvement in these organizations help students’ success?
• Did Black professors make a positive impact Black students’ success?
• What are the major factors that got Black students through college?
• How do data for faculty and students on campus compare to applicants’ data?

Appendix A

Consent to participate in Research
My name is Cassie Garrett. I am an undergraduate student at California State University, Sacramento. I am doing a study about the African American students experience at California State University, Sacramento. It has been documented that for a long time African American students have been underrepresented in American higher education. I would like to explore this topic and find out why African American students make it into the university but many of these students do not complete their degree. My purpose is to understand African American students’ experiences at California State University, Sacramento and why their graduation and success rates are so low vis-à-vis other groups. This study is of great importance for African American people as it would capture their experiences and struggles in higher education in the United States.

The questions in this study include various themes such as discrimination, diversity, classroom experiences, social, financial, academic and emotional support at California State University, Sacramento. Some of the focus group questions may also be personal and touch sensitive topics such as financial stresses. All questions are voluntary, and you can skip any question you want and you can withdraw from the focus group at any time you want. The focus groups are expected to last 1 to 1 ½ hours.

If you participate, your interview will be confidential, meaning that no information that identifies you will be reported in any written or oral presentations of the findings. I will ask for your permission to audio record the interviews to ensure an accurate and comprehensive account of your experiences and views. The tapes will remain available only to me as the principal investigator, who will store the tapes in a secure box with lock until they are transcribed to paper. Once the cassettes are transcribed, within approximately a month from the interview, they will be destroyed. Again, you have the right to skip any question or stop the interview at any moment you want without penalty. Your participation and your help in this study will be greatly appreciated.

A few ground rules apply if you agree to participate in this focus group:
1. I can only hear one person at a time, so please don’t talk over one another.
2. Be respectful of each other (i.e. don’t laugh at another person’s response to a question or try to be the advising counselor)
3. To protect the privacy and confidentiality of all participants, the information you hear in this group discussion must not leave this room.

If you have any questions about this research, feel free to contact me or my faculty mentor at the following number:
Cassie Garrett
9999 Street way
City, State, Zip
e-mail: cxxxxx@gmail.com
(999) 218-0021
Manuel Barajas
Building Number
1000 Address, City, State, Zip
e-mail: bxxxxx@saclink.csus.edu
(999) 999-9999

If you feel distressed for any reason and need someone to talk to, please contact CSUS health center at (916) 278 – 6461, located in the WELL primary care, 2nd Floor.

Your participation in this research is entirely voluntary. Your signature below indicated that you have read this page and agree to participate in this research.

_____________________________                       ____________________
Signature of Participant                                                  Date

By signing this line, you are indicating that you are agreeing to be audio recorded during this interview.

_____________________________                       ____________________
Signature of Participant                                                  Date

Note: Researcher and Faculty Mentor contact information has been removed.
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The Effects of Size Differential on Aggression in Female Convict Cichlids (Archocentrus nigrofasciatus)

Jasmine Hamilton
Dr. Ronald Coleman, Faculty Mentor

Abstract

Convict cichlids are highly aggressive tropical fish, exhibiting complex behaviors and adaptations. Studies suggest that environmental conditions, such as resource availability, individual development, trait variation, and activity of other individuals, affect these factors. Examining aggressive behavior in laboratory-raised females under different pairing situations, the researcher hypothesized that an individual paired with an equally-sized individual would display more aggression than the same individual paired with a smaller opponent. Aggression was measured by scoring attack behavior, namely the number of bites, number of chases, and chase lengths. Individuals in the equally-sized treatment exhibited more and longer chases than those placed with an unequal-sized opponent. This study is beneficial in leading to further understanding of the field of behavioral ecology of fishes. Analyzing ways in which fish respond to different situations at an individual level can inform us about ecological and evolutionary factors, such as survival and reproduction, at higher levels of organization.

Environmental factors including temperature, chemicals/nutrients in the environment, and resource availability can have drastic effects on animal behavior. The characteristics and behavior of other animals within the same population may also have an effect on the behavioral ecology of organisms. An apparent behavior that is affected by these factors is aggression, which is defined as “an animal’s tendency to act with a goal of protecting its individual fitness and reproduction efficiency” (Brown 1964, 160). In other words, any form of agonistic behavior used to increase an organism’s chance of survival or attractiveness is considered aggressive behavior. Individuals may exhibit aggressive behavior when competing for resources or mates, which allows them to live and pass on their genes to offspring in the most effective way possible. The evolution of traits and strategies that allow organisms to better compete are favored by natural selection (Dingemanse and Wolf 2011). The traditional theory of aggression and other animal behavior is that flexibility in behavior is centered on an adaptive mean, the most favorable level of a certain behavior, with extreme levels acting as outliers (Conrad et al. 2011). However, a new theory is beginning to emerge as recent studies have shown that differences in aggression and other behaviors are organized at the individual level. Each animal can display various levels of behavior based on environmental factors, variation in traits, temperament, and specific situations.

Cichlids are popular fish used in behavioral studies due to their aggressive nature and extensive parental investment in offspring (Barley 2000). They are a model subject in many behavioral studies because many species are easily accessible and maintained (Barley and Coleman 2010). The convict cichlid (Archocentrus nigrofasciatus) is perhaps the most commonly studied New World cichlid (Galvani and Coleman 1998). Due to their active and bold nature, convicts have become a widely studied species as researchers examine the function and ecological significance of their complex behavior. Various studies have explored the different factors that influence aggressive behavior by convict cichlids (e.g., Barley and Coleman 2010).

Barley and Coleman (2010) found that a dense habitat structure decreases levels of aggression in this species. The researchers paired female convict cichlids in aquaria and compared attack frequencies under different amounts of habitat structure by manipulating the number of plants and ceramic pots present. Their study suggests that with more habitat structure, there is less competition over resources due to a decrease in the chance of encounters and the increase in territory; this results in less aggression. Similarly, studies have found that food abundance and dispersion of resources can also affect aggression levels of convict cichlids (Grant et al. 2000; Noel, Grant, and Carrigan 2005). Noel, Grant, and Carrigan (2005) manipulated the competitor-to-resource ratio in social groups of fish, and found that aggressive behavior was significantly altered when food abundance was decreased. Grant et al. (2000) found that fish changed their feeding behavior when food dispersal patterns were manipulated, suggesting that fish adjust their behavior under different environmental conditions.

Characteristics of individuals, such as size, are also likely to play a role in aggression levels. Leiser, Gagliardi, and Itzkowitz (2004) examined the differences in aggression in small and large size-matched pairs of convict cichlids (i.e., a small fish matched with a small fish, or a large fish matched with a large fish), but found that aggression levels were similar in both groups. They found that large and small fish display similar behavior patterns in contests, yet larger male fish tend to escalate to more risky behavior sooner than smaller males. However, few research studies have investigated the importance of size asymmetry between opponents in pair situations.

The current research evaluates the impacts of size differential on aggression levels in pairs of convict cichlids. The researcher hypothesized that contests between individuals of obviously different size are likely to be resolved more rapidly and with less aggression because the outcome is more obvious to the participants, i.e., the larger one would likely win should the contest escalate to physical encounters. However, the outcome is less obvious when contestants are closer in size; therefore, we are likely to witness longer and more intense aggression to
determine the outcome. This study aims to test this hypothesis to determine if fish in equally-sized pairings exhibit more aggression than fish in pairs where the individuals differ substantially in size.

Rationale

This study will expand our knowledge about the degree to which factors like size asymmetry can affect aggression in animal contests. Recent studies have found that environmental factors such as resource abundance, temperature, and body size are associated with aggression levels in fish. However, determining whether the magnitude of size differences between two individuals affects levels of aggression will tell us more about the competition in the forms of contests and fighting present in convict cichlids and also behavioral variation happening at the individual level. In addition, studying behavior is important in determining ecological and evolutionary aspects of fish behavior and how variation in aggression can alter their ability to perform in certain situations (Conrad et al. 2011).

This research evaluates aggression patterns in aquarium-raised fish, which is a common technique used in cichlid research because controlling conditions and assessing behavior in the wild is challenging due to confounding factors such as the presence of predators, disturbance, and other influences. However, it is equally as important to gather information on the behavior of wild fish in other studies to compare and contrast behavior of domestic and wild populations of fish.

Literature Review

Animal behavior has been of great interest in the scientific field, and becoming familiar with the behavioral ecology of certain species or populations of animals can give us insight into different conservation techniques and what influence certain environmental factors are having on animals (Bell 2007). Fish are considered model subjects for research in behavioral ecology because different studies have demonstrated consistent behavioral associations across different populations and taxa of fish (Conrad et al. 2011). For example, cichlid behavior has been studied extensively in the last decade, and results have frequently demonstrated the complexity of aggressive behavior shown by this group of fish. By developing a clear idea of which biotic (living organisms) and abiotic (nonliving) factors are affecting agonistic behavior in different fish species, researchers can determine which strategies are most suitable for domesticated fish populations, and those being released back into the wild (Carere and Eens 2005). Aggression is a behavior that requires individuals to act in ways that result in substantial energy costs, physiological depletion, and altered overall fitness (Briffa and Sneddon 2007; Copeland et al. 2011). Other than applications for fisheries management, research on fish behavior gives us insight into social and evolutionary dynamics by investigating animal conflict between individuals, and these findings may be applied to any population of animals (Conrad et al. 2011).

Contests and Fighting

Current literature in behavioral ecology shows evidence that animal conflict and aggression are universal issues impacting humans and other populations; research on this topic has shown that agonistic behavior influences, and has implications for, both human and animal social dynamics (Filby et al. 2010). Behavior can affect other individuals in an animal’s population as well as the community dynamics of an ecosystem in the form of intraspecific (within the same species) and interspecific (between species) competition. An example of aggressive behavior common across many species comes in the form of contest competition, in which animals directly compete for resources to increase their chance of survival by gaining certain payoffs (Davies, Krebs, and West 2012). Contests involve injurious fighting and other types of direct physical aggression and communication (Briffa and Sneddon 2007). These conflicts are usually over competition for territory, mates, and other resources (Chatterjee, Reiter, and Nowak 2012; Reddon et al. 2011).

Evolutionary Game Theory

A prominent theory that suggests different patterns or rules present in animal conflicts is known as Evolutionary Game Theory, which was developed by Maynard Smith in 1982 (Davies, Krebs, and West 2012). Several explanations and models were used, involving strategies for fighting and contests, including the ‘Hawk-Dove model’, the ‘War of Attrition model’, and the organisms’ ability to use ‘evolutionarily stable strategies’ and assess the ‘resource holding potential’ of themselves and others in the population (147). Game theory suggests that instead of using models of ‘optimal behavior’ (where organisms behave in a way that results in the greatest chance of survival) to explain animal conflict, the theory reveals that organisms should adjust their behavior depending on what other organisms in the population are doing (Davies, Krebs, and West 2012).

There are different factors that determine the types and intensity of behavior present in contests, such as the costs and benefits of the situation (Barley and Coleman 2010). Engaging in aggressive behavior may be difficult and costly due to the potential loss of time and energy for participating in other activities and the risk of injury or death (Briffa and Sneddon 2007). The intensity of fighting behavior also relies on the value of the desired resource because it influences the motivation of the individuals fighting for it. A factor that may influence the motivational state of opponents in a contest is ‘prior residency.’ Prior residency refers to one individual occupying a particular piece of territory before another,
which is thought to affect both the outcome and intensity of a contest over that territory (Harwood et al. 2003).

Wazlavek and Figler (1989) investigated whether there is a residence advantage during contests between male and female convict cichlids. Sex was not controlled in this experiment because the researchers expected males and females to both display aggressive behaviors during resource contests. In this study, researchers expected a prior resident to display more aggression than an intruder because the prior resident may have a sense of ownership over the territory. Results showed a significant residence advantage during the contests, which supported their hypothesis. Researchers found that size asymmetry played a bigger role in contest success than prior residency. However, when convict cichlids were both larger and held prior residence, they displayed the most aggression and advantage over intruders. This group also exhibited less escalation of aggression, suggesting that the intensity of animal behavior can be affected by their motivational state; in this case, the fish with prior residence and a size advantage were more motivated to defend the resource over intruders.

Other studies have investigated costs and benefits of contests in relation to body size of opponents and found that other factors such as physiological constraints and metabolic costs may affect aggression and decisions made by fish (Briffa and Sneddon 2007; Copeland et al. 2011). Copeland et al. (2011) investigated the metabolic costs and behavior involved in fights between male convict cichlids. They found that size asymmetries affected contest outcomes between larger fish more so than smaller fish. Results also showed that larger fish engaged in more costly behavior. The researchers suggested that larger cichlids engaged in more risky behavior because they had more tolerance for metabolic and energy costs; meaning they were able to better withstand lactic acid accumulation and have more energy available to last longer in fights. These findings were consistent with evolutionary game theory because larger fish were able to successfully assess their chances of winning fights. Beeching (1992) did a study on the attack behavior of oscar cichlids, examining differences in opponent body sizes, which were modeled by artificial fish (dummy models). The study used a game theory approach and expected that the intensity of attacks would be correlated to the size of opponents. Results concluded that the most aggression was displayed when opponents were around 75% of the subject’s body size; this finding suggests that the fish are able to assess the relative body size of opponents and to adjust their behavior to reflect the most evolutionarily stable strategy. In this case, it was most reasonable to be more aggressive toward an opponent that was moderately smaller because that individual had a higher resource holding potential compared to a significantly smaller fish, and the risks of losing were low for the larger fish. This study demonstrates the importance of body size in contest competition, as well as a fish’s capability of evaluating the fighting ability of another fish through visual assessment. Because body size plays a large role in fighting ability, reproduction and resource defense, natural selection is expected to favor the evolution of strategies that allow a fish to visually measure the resource holding potential of its opponents (Beeching 1992).

The War of Attrition Model

A paradigm of the evolutionary game theory is the war of attrition model, also known as the ‘waiting game’, in which contest opponents wait for different periods of time to achieve a certain resource. Chatterjee, Reiter, and Nowak (2011) describe these waiting competitions as biological auctions because the desired resource is being auctioned to the animal with the most favorable wait time. The authors discuss the evolutionary dynamics and evolutionarily stable strategies present in biological auctions.

The Sequential Assessment Model

Another important pattern that plays into the characteristics of contests and fighting is the sequential assessment model, which was developed by Enquist and Leimar in the 1980s (Briffa and Sneddon 2007). Sequential assessment is the idea that “contests escalate through a series of phases of increasing intensity” (Briffa and Sneddon 2007, 629). These differing intensities of behavior represent the animal’s tendency to evaluate the fighting ability and health of its opponent at different levels to avoid investing too much energy into unnecessary physical contact. Koops and Grant (1993) investigated whether assessment patterns were present in convict cichlids by staging contests between pairs of male fish that varied in weight ratio. As predicted by the sequential assessment model, individuals engaged in a consistent sequence of behavior (from visual displays to physical fighting). Contests lasted longer when the weight ratio between individuals was low (closer in size). As predicted by other researchers, the more symmetric the pairs were, the more intense were the contests (Eshel 2005).

Most studies on fish aggression and conflict focus on group dynamics or male combat, rather than individual behavior. This study aims to evaluate individual behavior patterns and strategies occurring in contests and fighting. Various theories have been developed regarding contest behavior and resource defense. This study aims to investigate the validity of those theories and look at the patterns of behavior in female convict cichlids.

Methods

The Study Organism

Convict cichlids are small tropical freshwater fish inhabiting lakes and streams ranging from Guatemala to Panama (Galvani and Coleman 1998). They are substrate-spawning fish, most frequently found in habitats with shelter in
the form of rocks or sunken branches (Wisenden, Lanfranconi-Izawa, and Keenleyside 1995). The convict cichlid is considered a model organism in behavioral ecology because it is easily bred and maintained in the laboratory environment, with spawnings occurring every 4-6 weeks (Barley and Coleman 2010). Various studies of convict aggression have been performed in natural and laboratory environments because of their distinct fighting behavior (Galvani and Coleman 1998; Leiser, Gagliardi and Iztkowitz 2004; Reddon and Hurd 2009). By studying the complex traits that convicts cichlids display, researchers can develop a better understanding of animal conflict and territoriality.

Experimental Design
In the current study, female convict cichlids were placed in different pairing situations within aquaria, the difference being the relative body size of opponents. The goal was to observe aggressive behavior depending on the body size of opponents. The experiment was conducted in the main fish room of the Evolutionary Ecology of Fishes Laboratory at California State University, Sacramento. The room is subjected to 12:12 hours light: dark with minimal human traffic. All experiments were performed in 75-liter experimental aquaria (30cm x 30 cm x 75 cm) containing a standard set up. Aquaria contained approximately 3 centimeters of grey gravel coating the bottom, a sponge filter, a ceramic flowerpot that was 8 cm in diameter (turned on its side to serve as shelter), an artificial Hygrophila plant, and a heater to keep temperatures at 26°C. Aquaria were cleaned using algae scrubbers and a gravel siphon before fish pairs were placed into them for each trial.

To avoid courtship and gender influences (see Methods section in Barley and Coleman 2010), the researcher only used females; females were differentiated from males because of the bright orange coloring on the belly region of females. The juvenile and adult females used were no smaller than 32 mm in total length (TL) and were chosen from three available stock aquaria, each containing 10-14 convicts of mixed genders. Fish in stock aquaria were fed daily on a mixture of Hikari micro wafers and TetraMin flake food. For each experimental trial, one female fish was selected and subjected to two treatments. This fish was referred to as the focal female. No two females were previously housed in the same aquarium before being paired together in an experimental aquarium.

Treatment 1
In the equally-sized treatment, the focal female was paired with an equally-sized individual in an aquarium. All females in the equally-sized treatment were less than 10% different from each other in total length (see Methods section in Leiser, Gagliardi, and Iztkowitz 2004). The two fish were added to separate Lustar plastic isolation baskets (16.5cm x 12cm x 13.3cm) at opposite ends of the same aquarium to acclimate for 24 hours. Fish were fed approximately 10 Hikari micro wafers per individual within a few minutes of being placed in the isolation baskets. The acclimation period allowed the fish to adjust to the new environment and undergo similar experiences before being released into the aquarium, and also mitigated the aggressive effects of prior winning or losing in fighting contests (Hsu, Earley, and Wolf 2006).

Just prior to release, the fish were fed again. Once released from the baskets, the fish underwent another 24 hour acclimation period of free swimming in the aquarium to encounter each other and establish their relationship before aggressive behavior was recorded. The researcher then sat 1.5m across from the aquarium to observe aggressive behavior for a 30-minute period. The behavior which was recorded included the number of bites and chases, as well as chase lengths, made by the focal female. Other behavior, such as lateral and frontal displays, was present, however, the researcher chose to record only biting and chasing because they were distinct. An action was considered to be a bite when a focal female touched her mouth to the body of her opponent. A chase was defined as occurring when the focal fish swam towards and came within 10cm of her opponent. The combined time duration of chases during the 30-minute trials were also recorded to account for variation in chase lengths. Once behavior was recorded, the fish pair was fed a final time.

Treatment 2
Immediately after recording behavior in the first treatment, the focal female was placed with a significantly smaller female in a different aquarium to acclimate for 24 hours in isolation baskets. The fish then underwent the same procedures as in treatment 1, with the difference being the size of her opponent, which was from 5-10 millimeters shorter in standard length.

Statistical Analysis
Ten trials consisting of a total of 30 females were recorded. Biting and chasing behavior data from treatment 1 (equally-sized pairs) and treatment 2 (unequally-sized pairs) were compared using paired student’s t-tests. By comparing the three measures of aggression (number of bites, number of chases, and chase lengths) within the two treatments, the researcher determined if and to what degree body size was affecting female aggression.

Results
The experiment was repeated ten times, i.e., each of the ten focal females was paired with an equally-sized and an unequally-sized opponent. The total length (TL) of fish ranged from 32.0-74.0 millimeters, and weight ranged from 0.80-8.5 grams. Data were collected over a five-week period.
To test the degree to which individuals were willing to engage in aggressive activity, the researcher compared the frequency of bites, chases, and chase durations between the two treatments (equally-sized versus unequally-sized). The focal females spent more time and engaged in more aggressive activity when paired with a fish of equal size in comparison to an unequally-sized individual. There was a significant difference between focal female behavior in total number of chases between fish paired with equally-sized versus smaller-sized opponents (see Figure 1); the number of chases were higher when fish were equally sized (two-tailed paired t-test, t=3.38, df=9, P<0.01). Likewise, total chase times (see Figure 2) for the entire 30 minute periods were significantly higher in the equally-sized treatment (two-tailed paired t-test, t=2.62, df=9, P<0.05). There was no difference between the number of bites made by focal fish in the equally-sized versus unequally-sized treatments (see Figure 3). Average chase times also showed no difference between the two treatments (see Figure 4).

**Figure 1**
The number of chases made by the focal female during the 30-minute observation period

![Chases](image1)

**Figure 2**
The total chase time by the focal female during the 30-minute observation period

![Total Chase Time](image2)

**Discussion**

These results indicate that the level of body size asymmetry between two individuals plays a role in the amount of time and effort they are willing to exhibit in the form of aggression. Because individuals chased more and spent more time chasing when paired with equally-sized individuals compared with smaller individuals, this suggests that equally-sized individuals have similar relative fighting ability and therefore must engage in longer and more intense contests, than those which differ in size. In addition, individuals demonstrated assessment because they adjusted the intensity of their aggression depending on the size of their opponent. However, biting was not shown to increase when individuals
were equally sized, and, in fact, did not change at all based on pairing situation. Therefore, biting may be considered an aggressive behavior that is very risky and is used sparingly during contests. Biting may also have been unclear to the researcher because chases usually ended in very sudden bites that were difficult to consistently monitor.

The main limitation of this study was the order of pairing of the two treatments: fish were always paired with an equally-sized fish before an unequally-sized fish, which biases the results (i.e., individuals may have been more aggressive during the first contest). The study was done in a laboratory environment, and future research in the natural habitat would be beneficial in comparing the differences in behavior of wild versus domesticated fish populations.

References


Tyler Perry’s *Madea Goes to Jail*: Normalizing Hegemony and Stereotypes of “Black Crime”

Theodore Harrison III
Dr. David Zuckerman, Faculty Mentor

Abstract

This paper expands communication studies by analyzing Tyler Perry’s (2009) film *Madea Goes to Jail*. The study looked for theoretical themes and patterns that might suggest a compelling social framework for the film’s acceptance and commercial success. It was hypothesized that the film used counter-hegemonic themes to disrupt traditional American cultural hegemony. The author used qualitative ethnographic content analysis to examine the film using Cedric C. Clarks (1969) Stages of Minority Representation. Upon analysis, the film lacked any significant counter-hegemony, thus it is argued that the lack of counter-hegemony contributes to the normalizing of mass incarceration and stereotypes of “Black Crime.”

By the release of his first movie *Dairy of a Mad Black Woman* in 2005, Tyler Perry had already been successfully producing stage plays and touring the country for seven years (*Tyler Perry Studios* 2012). This was far removed from his early years, where he struggled to overcome childhood domestic violence, sexual abuse and subsequent homelessness (Bowles 2008). Perry used his first stage play entitled *I Know I’ve Been Changed*, as a therapeutic self-healing proclamation of forgiveness to his childhood abuser. The title, *I Know I’ve Been Changed* would also serve as metaphorical notice to the entertainment industry and academic scholars alike that Tyler Perry had arrived. Named the Highest Paid Man in Entertainment, *Forbes* magazine estimated *Tyler Perry* earned $135 million for the period May 2010 to May 2011 (Pomerantz 2011). As a point of reference, it took Spike Lee, another popular African American film maker, 25 years to amass $375 million in box office receipts, Perry has grossed in excess of $600 million in just over 5 years (*IMDb.com*, Inc. 2012). Perry’s title as the Highest Paid Man in Entertainment is consistent with previous scholarly research that found Perry has a near monopoly on the representation of middle class African Americans in scripted media (Harris and Tassie 2011). How Perry’s monopoly functions within the social framework and context of American mass media is worthy of scholarly inquiry and research. By far Perry’s most successful movie was *Madea Goes to Jail (MGJ)* (Perry 2009) which grossed in excess of $90 million and was nominated for a 2010...
Nickolodian Kids Choice Award (IMDb.com, Inc. 2012; Tyler Perry Studios 2012). Madea Goes to Jail stars Perry’s most popular character Madea (aka Mabel Simmons); the plot centers around Madea and her experience with the criminal justice system. The supporting actors include notable and somewhat controversial archetypes created by Perry including Mr. Brown, Uncle Joe, and Cora. As such it is here argued for the purpose of this study, that Madea Goes to Jail is a critical case sample of Perry’s body of film work. Given Perry’s position of prominence in the entertainment industry and his production control, how he frames issues of race and criminal justice in the movie Madea Goes to Jail (MGJ) is of social significance and worthy of scholarly inquiry. In a promotional public interview with Gayle King, Perry stated he is very specific in his story telling and crafts his stories to appeal to a broad range of audience members both in age and race (King 2009). The statement “I am very specific” implies a thought-out scripting process in which his story lines and archetypes are crafted. In a 2009 public interview, he stated he is well aware of past media stereotypes of African Americans, including the black face minstrel shows of the 1930s and 1940s (Perry 2009). Despite his public assertions, critical scholars have questioned whether Perry is capable or even willing to disrupt negative media stereotypes of African Americans and challenge this system of American cultural hegemony (Harris and Tassié 2011; Heartley 2011; Lyle 2011; Patterson 2011).

This criticism comes despite Perry’s assertion that he portrays African Americans as they are in real life, counter to typical Hollywood fashion. Perry’s position would then suggest that his portrayals of African Americans are counter-hegemonic in relation to that of Anglo American hegemony. The use of 1960’s Civil Rights imagery in MGJ’s marketing material would also suggest counter-hegemony. Thus it is predicted by the author that portrayals of African Americans in Perry’s MGJ will contain images and discourse presented in a way that will disrupt historical representations of African Americans, including both the black face minstrel shows of the early 20th century and the myths of black crime.

**Literature Review**

Negative media images and stereotypes of African Americans have been a consistent theme historically in American mass media (Mastro and Tropp 2004). The media framing of race and class are dominant themes in American mass media, used to maintain the status quo of Anglo American hegemony and its economic and social hierarchy (Clark 1969; Shohat and Stam 1994). The concept of hegemony was developed by Antonio Gramsci. In broad terms it describes a system of suppression and domination through which both implicit and implied forces are used to manipulate the oppressed into accepting a subjugated status (Chaudhuri 1988; Lears 1985). In the American system of hegemony, mass media became an explicit tool from the movie Birth of a Nation (Griffith 1915). The movie depicted the majority if not all African Americans as dumb, lazy, dishonest, and hyper sexual. These types of media depictions represent American cultural hegemony, as well as illustrate the psychological force of negative media stereotypes needed to construct the same American cultural hegemony (Pierre 1999). American cultural hegemony’s resulting mass media artifacts of the 20th century reflect a systematic creation and distribution of negative images and stereotypes of African Americans (Clark 1969; Jhally and Lewis 1992; Pierre 1999; Shohat and Stam 1994).

Once fully constructed, the system of cultural hegemony no longer requires the presence of the dominant group and its implied force to function. The subjugated status of the oppressed minorities is internalized, accepted and embraced. The superior status of the dominant group is no longer questioned, it is deemed just and fair (Fitzgerald 2010). At full manifestation, members of the oppressed minority can be placed in positions of power within the hegemonic system and it will still function no differently. Critical scholars have begun to question whether Perry fits the profile of the oppressed minority in a position of power functioning as an agent of American cultural hegemony (Coleman 2006; Harris and Tassié 2011; Heartley 2011; Lyle 2011; Patterson 2011).

**The Black Crime Construct and Mass Incarceration**

Mass media and mass incarceration of African Americans are used to construct cultural hegemony (Alexander 2010; Dixon 2008). As noted by Alexander (2010) and Dixon (2008), black crime was a frequent theme in American nightly news media as it disproportionally portrayed African Americans engaged in criminal behavior contrary to the actual demographic. A review of American media and literature shows a pattern of specific cultural artifacts that normalize the mass incarceration of African Americans. The United States incarcerates more people than any other country in the world, which includes per capita and total incarcerated (Alexander 2010; Clear 2008; Roberts 2004; Walmsley 2011) Michele Alexander’s study of primary and secondary data detailed the disproportional rate at which African Americans and minorities in general are being incarcerated. The underlying disparity in rates of incarceration is a function of economic disparity rather than of genetic social behavior patterns (Alexander 2010; Roberts 2004). Alexander’s book noted that if controlled for socio-economic status, rates of incarceration between whites and non-whites are nearly identical. While the phenomenon of mass incarceration began as an answer to the crack epidemic and resulting drug war of the 1980s, the public acceptance and justification was largely achieved through mediated messages of “black crime” associated with 1980’s crack cocaine epidemic (Alexander 2010). Any discussion or depiction of incarceration of African Americans would certainly have to include reference to the drug war and their disproportional rates of incarceration.
Thus it is predicted that Perry’s 2009 film Madea Goes to Jail would contain dialogue or descriptions that detail the disproportional rates at which African Americans are being incarcerated. American political discourse and the resulting media framing of race and the criminal justice system are important tools used to construct the normalization of mass incarceration of African Americans.

**Mass Media**

How African Americans are portrayed in mass media affects how African Americans use mass media (Abrams 2008; Fujioka 2005). A 2008 survey found that African Americans primarily use television for entertainment based on the uses and gratification (U&G) perspective; this was in comparison to other potential uses such as information or learning (Abrams 2008). The same study also found that African Americans avoid television programming based on ethnic identity gratification or programing that lacks representation of in-group members. The repeated themes of black crime and negative stereotypes of African Americans in American mass media have played a major role in normalizing the mass incarceration of African Americans (Alexander 2010). Even so, as Fitzgerald (2010) pointed out, the communication scholarship of race and media hegemony is lacking: “Communications scholars for the most part have been far behind literary analysts and cultural scholars in articulating the connection between stereotypes and the processes of colonization” (Fitzgerald 2010, 369).

**Tyler Perry**

Much of the previous research, while acknowledging the success of Tyler Perry and his films, attributes Perry’s success to emotional themes. Harris and Tassie (2011) and Patterson (2011) have gone so far as to attribute his success to audience ignorance and willful acceptance of the negative stereotypes used in Perry’s films. Patterson (2011) put forward a possible explanation for the audience phenomenon: Jacqueline Bobo’s theory of negotiated reception where audience members identify with on screen experiences that bring to mind their own personal experiences and reject on screen experiences that do not (Patterson 2011). The qualitative criticism of African American audiences lacks quantitative audience analysis to support such generalized conclusions and contradicts previous research that suggests African Americans are a more critical audience than all other American racial ethnicities (Alexander 2010; Roberts 2004; Tasslitz 2011). This assumption is necessary to set the proper social context for the critical analysis of Madea Goes to Jail. As evidenced by the film’s title, and the ethnicity of the supporting characters in it, the film deals directly with themes of race and criminal justice. In place of this assumption, a lengthy discussion would be required to establish what other scholars have already researched and found to be true; African Americans are incarcerated at a disproportionately higher rate than all other American racial ethnicities (Alexander 2010; Roberts 2004; Tasslitz 2011). Without this assumption a lengthy review would be required to establish both the role of American socio-politics and the depth of hegemonic media propaganda in the construction of “black crime” stereotypes and other negative and demeaning media images of African Americans. The purpose of this research is to examine how Tyler Perry frames these two assumptions along with race in the movie Madea Goes to Jail (Perry 2009).

**Methodology**

The study analyzes the film Madea Goes to Jail using qualitative methodology, specifically Ethnographic Content Analysis (ECA). Given the two previous assumptions, Ethnographic Content Analysis is the most appropriate method of content analysis for identifying and analyzing the phenomena of interest within the scope of Madea Goes to Jail. This method’s unique characteristics make it well suited for identifying and verifying theoretical relationships in mass media artifacts. It is most notable for its instinctive nature with respect to the process of qualitative scientific inquiry (Altheide 1987). For the purpose of this research, the author viewed the film three times with the aid of video editing software. The first
viewing was used to identify cinematic points of transition between scenes, this was done to insure the context of each scene could be identified and preserved. The second viewing was used to divide the movie into 48 scenes and label the scenes based on the cinematic points of transition. In addition during the second viewing video still thumbnails were captured for each scene. During the third viewing ECA was used to code the scenes looking for the presence or absence of traditional hegemonic representation of African Americans. If a presence was found it was coded according to Cedric C. Clark’s four stages of minority representation:

1. **Non-recognition**: A given minority group is not acknowledged by the dominant media to even exist.

2. **Ridicule**: Certain minority characters are portrayed as stupid, silly, lazy, irrational, or simply laughable.

3. **Regulation**: Certain minority characters are presented as enforcers or administrators of the dominant group’s norms.

4. **Respect**: The minority group in question is portrayed no differently than any other group. Interracial relationships would also not appear extraordinary. (quoted in Fitzgerald 2010, 368)

During the third viewing an excel spread sheet was created for the purpose of coding each scene and noting dialogue and symbolic imagery present in each scene. The choice of Clark’s model was based on its historically detailed description of how African Americans and minorities in general were represented in American mass media. Although Clark’s model was written over 40 years ago and mainly discussed television it is timely and relevant, in that it correctly identifies the hegemonic structure of American mass media:

> Television reflects the social structure of society by selection and presentation of characters associated with its structural divisions. The commercial nature of the medium emphasizes advertising of products bought by those at the top of the social structure, and thus reinforces the status quo. There is no quick solution to the problem...for it must still operate under one severe restraint: He who pays the price calls the tune. If white Americans want continued regulation and control of certain groups, under current operating rules they will get it. (Clark 1969, 18).

While the medium may have changed, the fundamental cybernetic process of conflict, control and communication that Clark (1969) described still exists in American mass media today. However there are noted weaknesses in the four stages. Specifically it was based on casual observations and not on a scholarly study employing rigorous methodology (Fitzgerald 2010; Fuentez and White 1997). Additional scholarly critiques found the descriptions of Clark’s stages were mostly accurate, but the assumption that minority representation progressed in a linear fashion through the stages was not always accurate (Fitzgerald 2010; Money 1997). For example American Indians backslide in the model continuously going back and forth from non-recognition to ridicule, occasionally rising to regulation then back to non-recognition (Money 1997). Conversely other scholars have found Clark’s four stages useful for empirical research including Mary Alice Money’s “Seven Stages of Images of Native Americans” and Alice A. Tait’s “Evolutionary Stages of Minorities in Mass Media” (Fitzgerald 2010). It was reasoned that Perry as an ethnic minority would portray African Americans in a way that would defy traditional hegemonic representations of African Americans described in Clark’s model, thus possibly explaining the film’s commercial success.

**Results**

The study found the presence of traditional hegemonic themes as consistent with Clark’s four stages of minority representation in television. Specifically, the author found several examples of ridicule and regulation in the film. Additionally the study found few (if any) positive examples of resistance or disruption of American cultural hegemony in the representation of African Americans and the American criminal justice system. This point is clearly illustrated in the film’s prison chapel scene where the film’s main character Madea suggests the American criminal justice system is by and large fair, and the minority or oppressed people under its control had no one to blame but themselves for their incarceration. The movie contains token representations of counter hegemony; for example in one scene Madea challenges a member of the dominant group who cut in front of her and took her parking space. This challenge is immediately followed by ridicule at the minority character’s expense, where Madea steals a front loader, and picks up the car of the dominant group member and smashes it to the ground. As one might expect by the title of the movie, Madea is then exposed to regulation and taken off to jail. Token challenges such as this are not considered counter hegemonic for the purpose of this study.

The researcher then sought to identify the themes as they are presented in relation to the criminal justice system by adapting Clark’s four stages. The adaptation of Clark’s model for further analysis was based on adaptations done by previous scholars Alice A. Tait and Mary Alice Money, as they sought to identify and verify theoretical relationships between minority representations and American mass media. The names for the stages in the author’s adapted model are similar to the original except for the fourth stage, which is changed to Normalization. In Clark’s (1969) model, if African Americans were being portrayed no differently than any other group in society represented, it signified respect. In the authors adapted model African Americans being represented no differently than any other group in relation to the criminal justice system represents normalization of the mass incarceration of African Americans. The title of the adapted model is:
Stages of Hegemonic Media Regulation and Control. It includes four stages used for coding and analysis:

1. **Non-recognition**: Minority criminal characters experience no lasting ill effect of incarceration (home ownership, voting, etc.). Thus the minority character’s criminal behavior is glorified.

2. **Ridicule**: Minority criminal characters are portrayed as stupid, silly, lazy, irrational, or simply laughable.

3. **Regulation**: The upper class minority characters are presented as celebrities, enforcers or administrators of the dominant group’s norms. Upper class minority characters display disdain for lower class minorities.

   3a. Members of dominant group appear in regulation, but as helpers not enforcers.

4. **Normalization**: Minority criminal characters in question are portrayed no differently than any other racial group in the criminal justice system, true disparity not always readily apparent.

There were numerous examples of regulation, particularly minorities in the role of regulator of the dominant group’s norms (i.e., prosecutor and/or celebrity judges such as Mablean Ephriam and Greg Mathis, both of whom are reality television personalities). Further analysis also identified a somewhat predictable pattern of representation and storytelling, where the criminal minority is portrayed in the stage of non-recognition and glorification of criminal behavior. This stage is then followed by ridicule where the minority character is portrayed as silly or laughable, regulation then follows to bring the criminal minority in line with the dominant group’s norms. This suggests a pattern as to how Perry constructs his storylines using non-recognition, ridicule, and regulation as repetitive themes, thus reinforcing the negative stereotype of black crime about African Americans.

**Conclusion & Discussion**

Putting African Americans both in front of, and behind, the camera is instrumental in the fight to overcome and change hegemonic images of African Americans (Mcgilligan 2004; Williams 1995). Cornel West states that postmodern producers of culture have no responsibility greater than to challenge cultural hegemony and create alternative perceptions of African Americans (West 1985). Scholar bell hooks’ critique of media suggests that individuals who exist on the margin between the oppressed and oppressor have a special responsibility to disrupt hegemonic discourse (Littlejohn and Foss 2011; hooks 1989). Perry is one of those people: a postmodern producer of culture on the margin between the oppressed and oppressor. Perry is clearly someone behind the camera and capable of creating alternate perceptions of African Americans in media and disrupting hegemonic discourse.

It is argued by the author that Perry’s unwillingness to disrupt hegemony and create alternative perceptions of African Americans, stems from the troubling perspective that one must sacrifice commercial success to create counter-hegemony. This mindset is evident from his 2009 interview with Gayle King, where Perry stated that he believed making good movies AND being successful are polar opposites (King 2009). This leaves those of a critical audience and scholars to reason that he is fully aware of the negative stereotypes and images that his movies portray. Perhaps Perry believes his only method of success is to purposely develop films that appeal to uncritical audiences even if it is to their own detriment. To counter Perry’s statement, commercially successful entertainment and counter hegemony need not be mutually exclusive. They can and should co-exist, no differently than hegemony and entertainment co-exists today. One should not give in to the commercial advertisement argument as Clark stated in 1969, mass media’s dependency on commercial advertising is in and of itself an organ of hegemony, there to reinforce the status quo by suggesting commercial success is entirely dependent on appealing to the dominant group’s norms and regulations (Clark 1969). The numerous examples of ridicule in the movie are more troubling in that ridicule serves two purposes in the Anglo American system of hegemony as scholar M. R. Fitzgerald (2010) noted:

*Ridicule serves to dehumanize or infantilize subjugated peoples—not so much as a psychological weapon to demoralize them or as a way of controlling them—although this too might be considered an “advantage”—but to convince skeptical or guilt-ridden members of the dominant group that their supremacy is “natural,” fair, and inevitable.*

In Perry’s interview with Gayle King, Perry stated the film’s purpose was to make people laugh and provide entertainment to the masses in hard economic times. The use of “black crime” and themes of incarceration as entertainment potentially have far reaching consequences for the perpetual re-cycling of negative stereotypes of African Americans. Upon analysis, the film lacked any significant counter-hegemonic discourse, or disruption of hegemonic stereotype of minorities in media; in their absence, the stereotypes portrayed in the film are consistent with media normalization of mass incarceration and new Jim Crow stereotypes (Alexander 2010). Thus the research hypothesis was rejected; this normalization process is strongly suggested by the film’s nomination for a Nickelodeon 2010 Kids Choice Award. Nickelodeon’s target audience is 6-11 year old children, an audience still in the early stages of forming racial identity and stereotypes. By offering “black crime” as entertainment to such a young audience, Perry is suggesting that the issue of mass incarceration of African Americans is of no significant consequence. The film would suggest to that same 6-11 year
old audience, that by and large the criminal justice system is fair and just, thus implying disproportional incarceration rates of African Americans is purely of their own doing. It certainly could be argued with good reason that Perry’s film *MGJ* creates a false illusion at the expense of an already disadvantaged group, thus ultimately serving as a form of system justification and false consciousness (Jost and Banaji 1994).

**Future Research**

Previous scholarly research on Tyler Perry and his films have primarily focused on qualitative content analysis. There is very little, if any, empirical quantitative research on audience reaction to Perry’s movies. Additional quantitative survey research needs to be done to understand how both African Americans and non-African Americans perceive the images and stereotypes in Perry’s films. This would help to understand how Perry’s movie affects intercultural relationships, attitudes and perceptions of African Americans. Additional research may also discover if the knowledge of past stereotypes are passed on from one generation to the next, as described by Annette Henry (1990). This is important in the context of understanding how the exploitation of uncritical audiences occurs. Particularly in situations where their parents or grandparents may have lived through the Amos and Andy, black face and minstrel shows of early 20th century, yet for all the pain and ridicule their parents or grandparents may have suffered, the current generation of African American movie goers seems un-offended by the re-incarnation of these past stereotypes. It’s important to understand whether African American audiences are consciously aware, or to what significance they give these past stereotypes. These historical stereotypes and criticism may not explain how African American audiences perceive and judge Tyler Perry films for their entertainment value under the uses and gratification (U&G) perspective and out-group vitality (Abrams 2008). Moreover, additional research may reveal how uncritical audience behavior is constructed or created in the broader context of cultural hegemony.

**References**


Why Am I Behind?
An Examination of Low Income and Minority Students’ Preparedness for College

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**Abstract**

Although college enrollment is at an all-time high, most universities are graduating only about half of their students within four years (USDE-NCES 2011); this is a problem that is more likely to impact students from low socioeconomic areas (Perkins-Gough 2008). College students that attended high school in low or high SES areas received an online survey about perceived differences in educational preparedness. The findings show that students from both SES area high schools perceived that they were prepared for college, and that teachers had high expectations for them throughout high school. Results also indicate that fewer students from the low SES area perceived that they had enrichment opportunities. These opportunities may enhance preparation and hence, an examination of equitable funding for schools is warranted.

College enrollment has increased drastically over the past 20 years, with a 45% increase in full time students from 1999 to 2009 (USDE-NCES 2011). However, statistics show that only 50% of students that enroll in four-year colleges obtain their degree within the expected time (Perkins-Gough 2008). This is a problem; higher education for students and their families is the American dream for countless students, including minority and underrepresented students. Many students have been told that college is their key to financial freedom and that it will allow them to break the glass ceiling present in many industries and institutions (Perkins-Gough 2008).

Some of the causes of such high student dropout rates can be attributed to the lack of family involvement, poor schooling, peers, and a variety of other factors (Balduf 2009). Research indicates almost 50% of college students are unprepared for college level work (Long, Iatarola, and Conger 2009). Many schools across the country are raising their entrance requirements. Also, one-third of college freshmen find themselves unprepared in Mathematics and English, along with many other core academic disciplines (Long, Iatarola, and Conger 2009). In many low performing schools across the country, up to 80% of students are considered behind in basic academic skills (Steinberg and Almeida 2010); these students are not being challenged and are being held to a
lower level of expectations than their suburban counterparts (Beck 2011). This statistical information, considered as a whole, suggests that public schools are not preparing students for college; in fact, some public schools are causing students to underperform academically throughout their lives (Long, Iatarola, and Conger 2009). In some cases, public schools at the K-12 level are keeping students from finding employment, achieving success, or becoming productive members of society (Long, Iatarola, and Conger 2009). Many of these public schools are not giving students the proper tools they need to be successful after high school.

In today’s current and ever developing U.S. job market, having a high school diploma is no longer enough to support a middle class family. According to the non-profit education reform organization Achieve Inc. (2006), students who receive a high school diploma often have a difficult time competing with individuals who have a college degree. Research suggests that 67% of new jobs will require at least some post-secondary education (Achieve, Inc. 2006). By 2020, 123 million American jobs will reflect high-skill/high-pay occupations, from computer programming to bioengineering, but only 50 million Americans will be qualified to fill these positions (Weber 2010).

With the existence of a new work environment created by developing technological advances and unpredictable economic changes, it is clear that education for all Americans is the only answer. During the 1980s, about half of all high school graduates enrolled in college (Perkins-Gough 2008). During this time, a high school diploma was enough to raise a middle class family, and have success in the work world (Perkins-Gough 2008).

In college, an underachieving student can be defined as one who is either unprepared or does not perform at the expected academic level. Researchers indicate that 50% of students entering college find themselves unprepared (Balduf 2009). In response to so many students being unprepared for university level coursework, many universities place students in remedial courses based on their college entrance test scores. Academic institutions, families, and students spend up to $17 billion dollars yearly on remedial courses, so that students can gain knowledge that they should already have (Achieve, Inc. 2006). This cost is usually divided between the state, students, and their families (Long, Iatarola, and Conger 2009). Therefore, Americans are clearly paying the price for our failing K-12 public school systems.

Many American students from high socioeconomic status (SES) areas are receiving an adequate public education that will help them become successful in the current and future job market (Steinberg and Almeida 2010). Also, these students’ K-12 educational experiences leave them properly prepared for college level work. However, there is a large group of students that, upon graduation from high school, will not be prepared for the work force or for college level coursework (Steinberg and Almeida 2010).

The documentary film, Waiting for Superman (Guggenheim 2010), examines the crisis of the failing American public school system. The film illustrates how other countries are passing the United States in terms of education and testing, and how the problem is even more prevalent among poor and minority students (Weber 2010). The nation’s failing educational system is a problem that is not going away, the years and years of reforms seem to not be working or they may be generating even bigger problems (Weber 2010).

Students who live in low SES areas are especially impacted and are disproportionately underprepared for college (Steinberg and Almeida 2010). Data from the California State University system show an annual enrollment of about 400,000 students; of those students, 40% to 50% will need remedial courses (Howell 2011). A substantially large portion of the students who will need to take remedial courses are minority and low SES students who often come from failing education systems, and often live (and/or attended high schools) in low SES areas (Howell 2011).

It is clear that the K-12 American education system is leaving some students unprepared. “The Coleman Report highlighted the alarming extent to which students from low-income minority groups were falling behind their more fortunate counterparts, creating a nation with two separate and radically unequal education systems” (Weber 2010, 3). Educators have tried to identify the problem of the failing public school system through the perceptions of administrators, policy makers, and educators (Howell 2011). The students’ perspective must be studied in more detail. The present study attempts to understand student perception of whether some teachers and schools properly or better prepare their students for college, while other schools underprepare their students. Understanding students’ retrospective perceptions of their preparedness for college will help researchers gain a perspective of how they feel they were prepared for college. Examining this will help researchers define the problems that are present in today’s public education systems and attend to gaps in the information cycle. Could many students think they are on their way to success in college because of their high school experience, and end up failing or dropping out?

College students were surveyed in order to collect data about perceived differences in educational preparedness among schools in different SES areas. The research question focuses on how students perceive their preparedness for college work, given the high school that they attended. The purpose of the research is to examine and understand how college students, retrospectively, perceive the quality of their college preparation. The goal is to also understand more clearly the difference in actual college preparedness that exists between students attending high-achieving high schools, in low and high SES areas.
Alarming Rates of Remediation in College Courses

Minority and low SES students who make it through a broad array of barriers into college often find themselves at yet another disadvantage: being placed in remedial courses. In one study, more than 75% percent of students entering college from low SES areas, and who required either one or two years of remediation in Mathematics or English, did not earn their degrees (Achieve Inc. 2006). A large number of these students in need of remediation come from low SES families and/or minority backgrounds (Howell 2011). Many of the students who participate in remedial courses did not have K-12 courses that pushed them academically, resulting in those students not possessing the academic tools to perform basic academic level coursework. However, evidence shows that students who do complete remedial courses gain more persistence and have a greater chance of graduating (Howell 2011).

Even students who went to good public high schools and took difficult classes found themselves being placed in remedial courses when arriving to their local universities or community colleges (Perkins-Gough 2008). There is an apparent disconnect between universities’ academic standards and the level of preparation that the local public schools are providing. This disconnect is even greater among information about college given to low SES students (Ascher and Maguire 2011). These are all factors that contribute to student preparedness (or lack thereof).

College Preparedness after Brown v. Board of Education

In response to the Civil Rights movement, the U.S. Department of Commerce created the Coleman Report, which showed the rapid growth of two separate yet very unequal education structures developing in the United States (Weber 2010). The Coleman Report addressed problems in the American education system for low income and minority students in 1966. Almost 50 years after the Coleman Report, and more than 50 years since Brown v. Board of Education, the United States still has many of the same inequality problems as it did back then (Lynn et al. 2010). The achievement gap between minority and non-minority students is not going away; in fact, minority and low SES students are considered behind in almost every indicator of success, from grades to standardized tests (Olszewski-Kubilius, Lee, and Ngoi 2004). Two generations after Brown v. Board of Education, many urban students are attending schools that are not equal in resources or teacher quality compared to their suburban counterparts (Darden and Cavendish 2012). The Brown v. Board of Education decision eliminated segregation in schools within the United States. However, did the elimination of segregation adequately address inequality with regard to academic preparedness in relation to socioeconomic level? The system has left many students unprepared for college level coursework. As a result, they are required to take remediation courses.

Between the years of 1990 and 2010, college enrollment dramatically increased all over the country (USDE-NCES 2011). Between the years of 1999 and 2009, national enrollment in college increased by 30%, from 14.8 million to 20.4 million. The most significant rise is the 45% increase in full time students from 1999 to 2009. Not only has enrollment gone up for colleges, but tuition has increased each year. Between 1999-2000 and 2009-2010, the cost of undergraduate tuition increased by 37%, leaving the average cost of a bachelor’s degree at a public university at $12,804 per year (USDE-NCES 2011). Even with this trend and rush for more education, the student dropout rate continues to increase.

Statistics point out that, despite the high college enrollment rate, only 56% of students who seek a bachelor’s degree from a four-year institution receive their degree within six years (Perkins-Gough 2008). Some take longer or drop out. Only one-third of students who attend a two-year institution receive their associate’s degree in three years (Perkins-Gough 2008). The number of students dropping out and not completing their degrees can be attributed to many different factors, one of which is a lack of preparation (Perkins-Gough 2008; USDE-NCES 2011). Remedial courses were created for students who lack the basic skills they should have before they enter college. In public two-year colleges, 43% of students are required to take remediation courses, while 29% of students from four-year colleges are required to take remedial courses (Perkins-Gough 2008). The problem is even worse in California; in the California State University (CSU) system about 40% to 50% of students are required to take remedial courses in Mathematics or English (Howell 2011).

Millions of California students are coming into college unprepared for college level coursework (Howell 2011). The state public education system is failing to adequately educate many of their students (Howell 2011). This problem is even more severe when the lens is focused on minority and low income students. Public school systems are failing minority students every year, especially African American students (Moore, Henfield, and Owens 2008). African American male students are often viewed as a population at risk, due to cultural challenges in the public school system and the lack of other fundamental resources they need to be successful (Moore, Henfield, and Owens 2008). Researchers have attempted to identify some of the contributing factors of minority and low SES student unpreparedness for college. The most commonly discussed areas include changes in college preparedness after Brown v. Board of Education (Moore, Henfield, and Owens 2008); student remediation, which refers to when students are required to take remedial courses once they enter into college because of their low college entrance exam scores. Other contributing factors included: teacher quality in low SES schools (Howell 2011); teacher expectations of minority and low SES students (Lynn et al. 2010); unsuccessful standardized testing policies (Lynn et al. 2010); and the lack of
minority students from low SES high schools, leaving many of these students unknowingly unprepared for higher education (Perkins-Gough 2008).

Teacher Quality
Research shows that many urban schools or schools in low SES areas have high minority populations (Darden and Cavendish 2012). These schools tend to have over-populated classes, which means less one-on-one time between student and teacher (Darden and Cavendish 2012). Also, schools in low SES areas are able to attract fewer qualified teachers, and those qualified few must work with limited resources (Darden and Cavendish 2012). Often students that live in affluent neighborhoods have the luxury of being educated by better-credentialled and more experienced teachers and principals (Darden and Cavendish 2012). The most experienced and qualified teachers tend to congregate in the districts with more money and resources, and these better qualified teachers create more academically rigorous environments for their students within the classroom (Darden and Cavendish 2012).

Higher quality teachers make immense differences in their students’ educational and developmental lives; better teachers equal better prepared students. In our flawed public education system the poorest schools get the least experienced teachers, and the high SES schools get the best and most experienced teachers (Darden and Cavendish 2012). Many schools from low SES areas deal with resource problems “On average, minority students who attended schools that under resource do not have access to high quality teachers” (Lynn et al. 2010, 294). Tragically, the poorest schools are the ones that could most benefit from teachers that are more qualified.

High quality teachers have a positive impact on minority and low SES students, but it is not surprising that the students most in need do not get the most effective teachers in their classrooms (Lynn et al. 2010). Many teachers start out at low income schools, and after gaining experience have the option of transferring to other schools or going to a different district (Lynn et al. 2010). Teachers argue that until proper funding is accessible to low SES neighborhoods, teachers and schools cannot offer the type of education that students need (Lynn et al. 2010).

Teachers Expect Less from Minority and Low-Income Students
Teachers share the responsibility of pushing students and helping them succeed (Lynn et al. 2010). As previously mentioned, despite knowing that better teachers create better results with students in need, the K-12 education system does not include a way for minority and low SES students to have access to the most qualified teachers. In some cases, the teachers share some of the blame. New teachers, who would in all traditional measures be deemed qualified, sometimes lack confidence in their ability to educate African American students (Lynn et al. 2010).

Researchers argue that some teachers hold higher expectations for their white students and students from higher SES neighborhoods (Lynn et al. 2010). Students who are taught by ineffective teachers or teachers that refuse to hold them to high standards will show slow drops in their academic performances (Lynn et al. 2010). Removing the challenge from a student’s educational path at an early age can cause the student to remain stagnant; this can be a contributing factor to the lack of preparation that students face (Lynn et al. 2010). Perhaps because so many students are behind already, and class is taught at a slow pace many students find that they are bored and begin to act out and display behavior problems. It would make sense that time given to behavioral problems can take away from instruction time in the classroom.

High School Students are Ill Informed about College
Students from low SES backgrounds, whose families know little about college, must be helped to stay on track even more than the average student (Ascher and Maguire 2011). Many low SES schools hold lower standards for students, thus making it easier for students to accept watered down instruction, a weaker learning approach, misinformation about college, or no information about college at all (Ascher and Maguire 2011). School standards and expectations for students living in low SES areas tend to be more general or vocational and less geared toward preparing students for college (Darden and Cavendish 2012).

Some students are unknowingly unprepared for college and various other aspects of the college lifestyle. Students who are at the top of their high school class surprisingly struggle to stay on track in college (Perkins-Gough 2008). Many of these students rank in the highest percentile among their peers and most earned above average grades in the most challenging courses that their schools had offered (Perkins-Gough 2008). Many first generation college students are severely ill informed about college and the steps to apply (Perkins-Gough 2008). These students are forced to use non-systematic, school-based information that is not clear and not from the original source (Deil-Amen and Tevis 2010). They often learn about college from their ill-informed peers or overloaded counselors who often do not have the necessary resources for their students (Deil-Amen and Tevis 2010). Even when students take all the required classes, external forces (such as a lack of adequate information within the student’s purview) become factors in students’ lack of preparedness for college level coursework (Deil-Amen and Tevis 2010).

Unsuccessful Education Policies
The No Child Left Behind (NCLB) Act, signed by President George W. Bush in 2004, is widely regarded as unsuccessful (Beck 2011). Instead of maximizing academic potential of bright students, many argue that NCLB actually creates limitations (Beck 2011). Almost 3.4 million high performing, low SES children have been ignored, resulting in a drop in academic performance within these
students’ first few years of school (Beck 2011). These students are not being challenged and are being held at a lower level than their suburban counterparts (Beck 2011). Even with the existence of many different programs and policies aimed to increase performance, many low SES students still have numerous problems in understanding standardized tests (Beck 2011).

**Standardized Testing**

Aside from being one of the biggest factors that colleges use to admit incoming students, standardized tests help students decide their plans for college based on the results of tests such as the SAT or ACT (Steinberg and Almeida 2010). Students that come from high SES schools with a lot of funding are able to take multiple practice tests and they receive expensive testing preparation from either their school or parents (Steinberg and Almeida 2010). Students from low SES schools often have potential but they lack the necessary tools they need to be successful on these exams, ranging from a lack of social ability to a lack of financial support (Steinberg and Almeida 2010). Students from unstable homes often find it more difficult to focus and prepare for important tests; because of distractions at home (Beck 2011).

The research question identified in this study examines the differences between students’ perceptions of their preparedness for college, from students attending high achieving high schools in both low and high socioeconomic areas. The literature review discusses the key factors of student unpreparedness for college which often leads to students dropping out. The public education system after the Brown v. Board of Education decision desegregated schools. Almost four decades following the Brown v. Board of Education school desegregation decision, education problems in the United States remain and are possibly getting worse. Along with a dysfunctional education system, teachers are failing to teach students who are from low (SES) areas, often times having low expectations of their academic ability (Lynn et al. 2010). During students’ K-12 school years students need positive encouragement from educators and role models. From the literature, the researcher hypothesized that participants from the high school in the high SES area would perceive themselves to be more prepared as compared to the participants located in the low SES high school area.

**Method**

This research examines student perception about college preparedness and why many hard working attentive students feel that they are or that they are not prepared for college. The researcher chose California State University, Sacramento (Sacramento State) to conduct research, because of Sacramento’s diversity in people and economic backgrounds. The present research consists of surveys of college students. Students were invited to participate via Facebook messaging and in that process, the researcher noticed that students varied in age, sex, ethnicity, and level of degree sought (e.g., undergraduate or graduate). Students from two different college preparatory high schools (one in a high SES area and one in a low SES area) within close proximity to the university were included in the study. Students from all social classes attend Sacramento State.

**Participants**

Of the 20 participants in the research study, all participants were from the same northern California geographical area, and all attended high schools considered within the service area of the university. All participants attended high performing high schools located in two different SES areas (one high SES area and one low SES area). Both high schools were ranked among the top fifteen high schools in the Sacramento area based on their API scores, SAT scores, and graduation rates (Cassinos-Carr 2010).

**Measures**

An online survey was used to collect data from participants regarding their perceived preparedness for college. The survey contained seven questions asking students to retrospectively evaluate their own preparedness to succeed at the university level. The survey was designed to examine how high school students from different SES areas perceive their own preparedness for college level coursework. The majority of questions were answered using a 5-point Likert scale (ranging from “strongly agree” to “strongly disagree”). Please see Appendix.

**Procedure**

Participants were recruited based on the location of the high school they attended, and the college they attended. Participants fulfilled the researcher’s requirements of having attended the same northern California university and one of the two designated local high performing high schools, one in a high SES area and the other in a low SES area. Participants were selected based on the high school they attended. Using a Facebook search, the names of the high schools were correlated with Sacramento State and were submitted for a search for available students. Once potential subjects were identified, they were contacted and given information about the survey and then invited to participate in an online survey. The researcher personally contacted the participants via an e-mail that explained the purpose of the study and asked for participation consent. Some of the participants were recruited via snowball sampling. According to Devlin (2006), a snowball sample is a “sample obtained by a participant recommending another participant for the study, who in turn recommends a third participant, and so on” (249). Participants were given a time by which the survey should be completed and submitted. Some participants did not meet the completion deadline. Participants who did not complete the survey in time were not counted in the research. The researcher used a quantitative research model. The researcher...
chose Survey Monkey, an online survey site, to collect data. Survey Monkey is a free online website that allows the researcher to create and send out online surveys via email and Facebook. The researcher chose to use Facebook and email to collect data because of their efficiency for busy college participants.

**Data Analysis**

Survey Monkey also provides a data summary by frequency of responses, and it automatically provides percentages. The researcher then took the results, and used the Statistical Package for Social Science (SPSS) to translate the data from Survey Monkey into graphs. The graphs compared the results from participants that attended the high school in the low SES area to participants that attended the high school in the high SES area. In the following section selective results of comparative analysis are articulated. This information illustrates the findings via the majority of participant responses.

**Results**

**Item one: I enrolled in college within two years after graduating from high school.**

The responses for item one show that participants from the high school located in the low SES area chose “Strongly Agree” 100% of the time. The response selected by the high SES high school area participants were “Strongly Agree” or “Agree” at 78% of the time. Also, the high school participants located in the high SES area selected “Strongly Disagree” 22% of the time, while the low SES high school area participants did not disagree at all. The results show that all students from the low SES area high school attended college within two years after graduating. Students from the high SES area high school had a lower percentage respond that they attended college two years after graduating from high school.

**Item two: My high school prepared me well for the rigors of college level academics.**

The responses for item two show that participants from the high school located in the low SES area selected “Strongly Agree” or “Agree” 70% of the time. The responses selected by the participants from the high school located in the high SES area were “Agree” or “Strongly Agree” at 75% of the time. Both sets of participants indicated that their high school prepared them well for college level academics.

**Item three: My high school teachers had high expectations of my academic participation.**

The responses for item three show that participants from the high school located in the low SES area selected “Agree” or “Strongly Agree” 90% of the time. The responses selected by participants from the high school located in the high SES area were “Agree” or “Strongly Agree” at 89% of the time. The results suggest that both sets of participants agreed their teachers held high expectations for their participation. Figure 2 corresponds with Question three.

**Item four: My high school teachers had high expectations of my academic performance in my courses.**

The responses for item four show that participants from the high school located in the low SES area selected “Agree” or “Strongly Agree” 91% of the time. The responses selected by the high school students located in the high SES area were “Agree” or “Strongly Agree” at 78%. Also the results show 11% of the participants from the high school located in the high SES area chose “Disagree”. While the participants from the high school located in the low SES area selected
“Disagree” 9% of the time. The results show that slightly more students from the low SES high school area felt their teachers had high expectations of their academic abilities as compared to the students from the high school in the high SES area.

**Item five: My grades in college prep courses were consistently B or better.**

The responses for item five show that participants from the high school located in the low SES area selected “Agree” or “Strongly Agree” 73% of the time. The responses selected by participants that attended the high school located in the high SES area was “Agree” or “Strongly Agree” at 77%. These results suggest that students from both the low and high SES high schools received comparable grades while in high school. Figure 3 corresponds with Question five.

![Figure 3](image)

**Item five: My Grades in High School**

The responses for item five show that participants from the high school located in the low SES area selected “Agree” or “Strongly Agree” 73% of the time. The responses selected by participants that attended the high school located in the high SES area was “Agree” or “Strongly Agree” at 77%. These results suggest that students from both the low and high SES high schools received comparable grades while in high school. Figure 3 corresponds with Question five.

**Item six: My school consistently provided me with enrichment opportunities like travel out of state or out of the country, exposure to cultural activities like museums and theatrical productions, and foreign language emersion.**

The responses for item six show that participants from the high school located in the low SES area selected “Agree” or “Strongly Agree” 0% of the time. The response selected for participants in the high school located in the high SES area was “Agree” or “Strongly Agree” at 89%. However, the participants from the high school located in the low SES area selected “Strongly disagree or “Disagree” 54% of the time. While the participants from the high school located in the high SES area chose “Strongly Disagree” or “Disagree” 11% of the time. These results are consistent with the research on the topic of resources received by students. Low SES schools have very limited resources, which often results in students being underprepared (USDE-NCES 2011).

**Item seven: My family consistently provided me with enrichment opportunities like travel out of state or out of the country, exposure to cultural activities like museums and theatrical productions, and foreign language emersion.**

The responses for item seven show that participants from the high school located in the low SES area selected “Agree” or “Strongly Agree” 54% of the time. The responses selected by participants in the high school located in the high SES area were “Agree” or “Strongly Agree” at 77%. However, the participants from the high school located in the low SES area selected “Strongly disagree or “Disagree” 36% of the time; while the participants from the high school located in high SES area chose “Strongly Disagree” or “Disagree” 22% of the time. These results show that when it comes to families providing enrichment opportunities, both sets of participants agreed their families provided them with these opportunities. However “Agree” and “Strongly Agree” responses by participants from the high school located in the high SES area were slightly larger in comparison to similar responses by the participants from the high school located in the low SES area.

**Discussion**

The purpose of the research was to examine student perceptions of their preparedness for college. The study analyzed responses provided by students from two different SES areas and attempted to identify what role perception plays on college unpreparedness among high school students. This study took two different sets of participants who graduated from college preparatory high schools that were located in two different SES areas. One of the college preparatory high schools is located in what is considered a low SES area, and the other school is in an area considered high SES area. The results show both sets of participants felt they were prepared for college level course work, also both set of participants agreed their families provided them with these opportunities. However “Agree” and “Strongly Agree” responses by participants from the high school located in the high SES area were slightly larger in comparison to similar responses by the participants from the high school located in the low SES area.

**Limitations and future research**

The study was limited by having a low number of survey participants, perhaps due to the criteria for participants. Another limitation of the study was that participants could have went to high school in different years, which often times changes the curriculum and how classes are taught. In the future, the researcher aims to compare more schools located in both high and low SES areas and more
participants with an improved method to gain stronger data that can test the hypothesis identified in this study.

Conclusion

Despite current rules implemented to regulate high school and academic standards, students and parents should be aware of unequal high school preparedness based on whether their student is attending high school in a high or low SES location. The SES area is not the only problem concerning student unpreparedness, but each study leads to a little more understanding. Parent involvement and parent expectations are still the most important factors when it comes to student preparedness (Lynn et al. 2010). Parents set the bar for students; however, teachers and educators must continue to maintain high academic standards. Educators, administration workers, policy makers, students, and parents must communicate effectively with each other in order to control the quality of our education system. A student’s perception of how well she or he performs academically can lead to confidence in school or a loss of faith in their academic ability. If students believe they are prepared, and then begin to fall behind, they will think that they are the problem, not that they are simply unprepared for the coursework.

Many students arrive at college with academic disadvantages that they may not be aware of. This often times will discourage them from achieving their full academic potential, resulting in an increase of dropout rates and higher enrollment in remedial courses. The college dropout rate seems to be at an all-time high, and employment is not getting easier to find. Properly preparing students for college will help close the expanding achievement gap, while also lowering the student dropout rate for students from low SES settings. According to the article, *What Matters to Students’ Success: A Review of the Literature* (Kuh et al. 2006), “Earning a bachelor’s degree is linked to long-term cognitive, social, and economic benefits to individuals, benefits that are passed on to future generations, enhancing the quality of life of the families of college educated persons, the communities in which they live, and the larger society” (105). With a degree students can make a better life for their entire community creating a better and safer society for generations to come.

References


Lynn, Marvin, Jennifer Nicole Bacon, Tommy L. Totten, Thurman L. Bridges III, and Michael Jennings. 2010. “Examining Teachers’ Beliefs About African


APPENDIX

Survey

1. I enrolled in college within two years after graduating from high school.
   ____ 1. Strongly Disagree
   ____ 2. Disagree
   ____ 3. Undecided
   ____ 4. Agree
   ____ 5. Strongly Agree

2. My high school prepared me well for the rigors of college level academics.
   ____ 1. Strongly Disagree
   ____ 2. Disagree

3. My high school teachers had high expectations of my academic participation.
   ____ 1. Strongly Disagree
   ____ 2. Disagree
   ____ 3. Undecided
   ____ 4. Agree
   ____ 5. Strongly Agree

4. My high school teachers had high expectations of my academic performance in my courses.
   ____ 1. Strongly Disagree
   ____ 2. Disagree
   ____ 3. Undecided
   ____ 4. Agree
   ____ 5. Strongly Agree

5. My grades in college prep courses were consistently B or better.
   ____ 1. Strongly Disagree
   ____ 2. Disagree
   ____ 3. Undecided
   ____ 4. Agree
   ____ 5. Strongly Agree

6. My high school consistently provided me with enrichment opportunities like travel out of state or out of the country, exposure to cultural activities like museums, theatrical productions, and foreign language emersion.
   ____ 1. Strongly Disagree
   ____ 2. Disagree
   ____ 3. Undecided
   ____ 4. Agree
   ____ 5. Strongly Agree
7. My family consistently provided me with enrichment opportunities like travel out of state or out of the country, exposure to cultural activities like museums, theatrical productions, and foreign language emersion.

   ____ 1. Strongly Disagree
   ____ 2. Disagree
   ____ 3. Undecided
   ____ 4. Agree
   ____ 5. Strongly Agree

Not On Facebook?! An Examination of Interpersonal and Personality Factors Affecting Non Use of Facebook

Dallas Morrison
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Abstract

Several studies using the Five Factor Model have assessed personality traits associated with Facebook use (Ross et. al 2009; Amichai-Hamburger and Vinitzky 2010). However, literature regarding interpersonal communication motivations associated with Facebook use is lacking. Recent research has examined differences between users and non-users of social networking sites. This study evaluates Facebook users and non-users via the Basic Factors Inventory (BFI) and the Fundamental Interpersonal Relations Orientation – Behavior (FIRO-B) assessments. Hypothesis: users of Facebook will not have scores on the FIRO-B and BFI assessments that are opposite from non-users of Facebook. Using a t-test, data from 73 undergraduates were analyzed. Data support the hypothesis. Results indicate other factors may exist, which override personality and interpersonal communication motivations as reasons individuals do not use Facebook.

The purpose of this study is to determine whether there is a relationship between fundamental interpersonal relations orientations and personality factors between users and non-users of the Social Networking Site (SNS) Facebook in an undergraduate sample population. Literature abounds on topics such as presentation of self (Hogan 2010; Mehdizadeh 2010); identity construction (Zhao et al. 2008); privacy (Boyd 2008); the 2008 presidential election (Robertson et al. 2010); and even job candidate selection (Bohnert and Ross 2010) and how these varied topics relate to Facebook and its users. Personality traits associated with Facebook use are a rapidly emerging area of study, and are becoming more prevalent in the current body of literature (Amichai-Hamburger and Vinitzky 2010; Ross et al. 2009), while interpersonal communication motivations remain virtually unexamined. This article fills a gap in the literature by taking a comparative look at the interpersonal communication motivations, as well as the personality differences of users and non-users.

Facebook has reached a never before seen level of ubiquity in our society. Created in 2004 by Mark Zuckerburg, a then sophomore at Harvard, the site was first exclusive to Harvard students as a means of keeping in touch with academic and professional contacts. As it increased in popularity, other colleges...
were added, until it was finally opened up for public use in September of 2006. Since its inception, the Web site has snowballed into a virtually unrivaled social phenomenon. According to recently released figures, Facebook has over 600 million users worldwide (Carlson 2011) and approximately 42% of the United States population has a Facebook account (socialmediatoday.com 2011). What truly differentiates Facebook from other social networking websites is its unique offline-to-online characteristic, meaning that most people’s Facebook friends are met offline (in person) and then added online at a later time (Ross et al. 2009). In 2006, when Facebook became a public domain, scholars immediately became interested in the emerging trend.

**Literature Review**

**The Facebook Personality**

In recent years, scholars have been conducting an increasing number of studies that explore personality traits associated with Facebook use (Amichai-Hamburger and Vinitzky 2010; Ross et al. 2009; Wilson et al. 2010). In 2000, Hamburger and Ben-Artzi concluded that Internet use is linked to personality. Amichai-Hamburger (2005) asserted that we cannot evaluate Internet usage without also trying to understand the personalities of its users because the Internet itself is powered by human interaction. When boyd (2007) states that a Facebook profile “can be seen as a form of digital body where individuals must write themselves into being” (131), it would only seem to follow that this cyber entity would become an extension of the creator’s personality. Or, it would seem in some cases, an extension of the persona or character of whom they wish to be viewed.

**The Dramaturgical Approach**

Hogan (2010) examined presentation of self in online social media environments using Goffman’s (1959) dramaturgical approach, which uses the metaphor of a theatrical production to explain how individuals present an often idealized version of themselves to others. This approach has been used extensively by researchers to examine self-presentation in online social media environments (boyd 2006; 2007; Lewis et al. 2008; Mendelson and Papacharissi 2010; Tuñec 2008;). While Goffman’s (1959) work posits a situational model in which performances take place on the stage of life in front of an audience, Hogan (2010) argues an exhibitional approach. Hogan (2010) states that self-presentation can be broken down into two distinct categories: performances and exhibitions. This model contends that within the parameters of presentation of self on social networking sites, there are exhibitions in conjunction with situational activities. The key difference between the two is that performances happen in synchronous environments, and exhibitions take place in asynchronous environments, leaving behind what Hogan (2010) refers to as “artifacts.” Examples of artifacts in the context of asynchronous online social media environments would be lists of status updates and albums of photos. A couple examples of synchronous online behavior via social networking sites are instant messaging and chatting.

The social media platform assumes a role that Hogan (2010) calls the curator. Similar to a traditional museum curator who carefully chooses and places historically significant works of art (artifacts) to display, often with the intention of telling a narrative, the social media platform accesses relevant artifacts and presents them to the user. Good curation, according to Hogan (2010), will present the user with artifacts that are interesting or germane to what they are already looking at. However, bad curation is usually topically inappropriate or overwhelming to the user. Hogan (2010) delineates three basic functions of the curator which are not a characteristic part of performances and situations: filtering, ordering, and searching.

Hogan (2010) states that filtering happens when the artifacts on display are limited in some way. This can be as a result of the relationship between the user and the artifact, or even just the quality of the artifact. Filtering cannot be accomplished in a situation, due to the emergent nature of the performance. Although one can ignore a performance and the performer can censor a story, situational selectivity is not equivalent to filtering. Performers have the ability to censor themselves, while curators filter artifacts for the user by retrieving only relevant artifacts from a storehouse and displaying them.

Artifacts are also often ordered in a meaningful way. Items for sale are commonly ordered according to price, which can be filtered to show lowest to highest price, or highest to lowest price. Flights are displayed in chronological order according to departure time. A more refined version of this can be seen when Facebook shows prospective friends for the user derived from the secondary connections of those already on the user’s friend list. Names are frequently compiled alphabetically, as is the case with Facebook friends lists. Ordering is another function of curation which cannot be realized in a synchronous setting (Hogan 2010). Situations do, in fact, have a definite sequence; however, performances that take place in “real time” situations cannot be suitably re-ordered. Hogan (2010) states that the ordering of online artifacts is based in the fact that each artifact is one piece of a set of similar artifacts that are known ahead of time.

Lastly, artifacts online can be searched, which means that they are filtered (as well as ordered) based on user input. Hogan (2010) says that curators usually work passively; an example of this would be when people view their Facebook newsfeeds. By merely viewing online content the user is subject to both filtering and ordering. Searching entails the user submitting supplementary information in order to get the curator to display the desired content.
Users Versus Non-Users

Also relevant to the current study is the emerging body of work regarding differences between users and non-users of the Internet. Robinson and Martin (2009) compared Internet users and non-users with particular attention to whether Internet use is connected to individuals having more or less “liberal” political opinions, and how these connections have changed since the year 2000. Generally, they found that when any differences existed, Internet users tended to be more supportive of diverse and tolerant points of view. This is in line with the idea that Internet use is a way of expressing openness to differing perspectives and new experiences. However, Robinson and Martin (2009) also found that higher levels of Internet use did not lend to proportionately more progressive ideals. Furthermore, there were differences for some select attitudes that could not be structured into standard political affiliations. The researchers concluded that, with the exception of a very limited number of political issues, there were no significant attitudinal differences between Internet users and non-users with regard to social issues.

Even more directly related to the hypothesis herein is the study conducted by Hargittai (2007), who asked if there are systematic differences between users and non-users of social networking sites. Using a sample that consisted of primarily 18 and 19 year olds, the study focused on predictors of use for six social networking sites: Xanga, Bebo, MySpace, Orkut, Facebook, and Friendster. The results indicated that usage is not random, but that the individual’s gender, parental educational background, and race and ethnicity were all linked with use. Interestingly, this was primarily the case when the aggregate concept of social networking was broken down by individual service. That is, trends were not always consistent across users of social networking sites, but they showed strong affinities when the sites were examined separately. According to Hargittai (2007), when social networking usage is examined in the aggregate sense, the results show a correlation only between gender and use, in addition to the importance of context of use and the user’s experience with a given medium. Moreover, it was found that individuals with more experience with specific sites were more likely to be users of the medium at large. Hargittai (2007) also theorizes that existing inequality of participation is due to the effect that user background has on usage of social networking sites.

The Five Factor Model

The Five Factor Model (FFM) breaks down the human personality into five distinct personality dimensions (Costa and McCrae 1992). The first of these traits is Extraversion, which reflects the predisposition to be sociable, experience positive emotions, and the tendency to seek stimulation in the company of others. Neuroticism, the second trait, is an inclination to experience unpleasant emotions easily, such as anger, anxiety, depression, or vulnerability, and is associated with a vulnerability to threat. Openness to Experience represents an individual’s willingness to consider new approaches, as well as their appreciation for art, emotion, adventure, unusual ideas, and intellectual curiosity. Conscientiousness, the fourth dimension and another aspect of interpersonal behavior, can be defined as a tendency to show self-discipline, act dutifully, and aim for achievement. This trait is marked by planned rather than spontaneous behavior, organization, and scrupulousness. Finally, Agreeableness reflects a tendency to be trusting, compassionate, and cooperative rather than suspicious and antagonistic towards others. This model has been employed in the majority of recent studies that explore motivations and personality factors surrounding Internet usage (Ross et al. 2009; Wilson et al. 2010).

Using a FFM questionnaire, Ross et al. (2009) sought to discern the ways in which dimensions of personality and competency are related to how individuals in a sample of university students use Facebook for social purposes. Their findings partially supported the association between an individual’s personality and the FFM personality traits displayed through their use of Facebook. Contrary to the researchers’ speculation, the traits of Agreeableness and Openness to Experience were found to be unconnected to features of Facebook use. Neuroticism was found to be related to where and what an individual preferred to post on their Facebook. Consistent with the expectations of Ross et al. (2009), participants who scored high in Extraversion were members of more Facebook groups than individuals who scored lower. However, higher Extraversion scores were not found to be related to number of Facebook friends, or time spent online, as researchers had hypothesized. Higher competency using computer-mediated communication platforms was also found to increase the amount of time the individual reported spending on Facebook daily.

Important to note (along with the strengths of any particular study) are the shortcomings. Amichai-Hamburger and Vinitzky (2010) proposed what they thought, and what this researcher agrees, would be a more effective methodology. Instead of relying on the self-reporting of participants, these researchers advocated that the Ross et al. (2009) scrutinize the way that subjects build their Facebook profiles. Amichai-Hamburger and Vinitzky (2010) cited objectivity as the primary advantage to their proposed alternative method since self-reports are often influenced by social desirability. Additionally, they recommended replicating Ross et al.’s (2009) study utilizing analytical tools that would be less prone to bias. Also referred to as the Big Five Model, Costa and McCrae’s (1992) FFM was adapted by John and Srivastava (1999) to become the Big Five Inventory (BFI), an abbreviated 44-item measure of the five traits - Neuroticism (a tendency to experience unpleasant emotions easily, such as anger, anxiety, depression, or vulnerability); Extraversion (energy, positive emotions, and the tendency to seek stimulation in the company of others); Openness to
Expressed needs, and low in Wanted needs are more inclined to be involved with her/his overall need for interpersonal interaction. Those who score high in (Furnham 1996). The individual’s score on the social interaction index indicates the amalgam of these six values is referred to as the social interaction index (Schutz 1958) developed an interpersonal orientation theory that is grounded in the base assumption that “people need people,” and that all people strive to establish harmonious relationships in their social interactions. Schutz posits three key interpersonal needs that must be satisfied. The first of these is need for affection, or the measure of positive or negative emotional aspects in a relationship. This need is not restricted to romantic relationships, but includes a person’s need for warmth, intimacy, and love. The second interpersonal need delineated in Schutz’s model is the need for inclusion. This can be described as a need to maintain relationships with other people, as well as to be included in their activities, or to include them in one’s own activities. The final need forwarded by the FIRO-B model relates to control, which is a need to maintain an agreeable equilibrium of influence in relationships. Schutz theorizes that every individual needs to exercise control over other people, while simultaneously remaining independent from them. Schutz also forwards the notion that people innately need to be controlled, directed, or structured by others, while maintaining independence (Furnham 1996).

Each of these three interpersonal needs is measured in two ways: an expressed value, and a wanted value; therefore, the FIRO-B scale returns six scores: Affection Wanted (AW), Affection Expressed (AE), Control Wanted (CW), Control Expressed (CE), Inclusion Wanted (IW), and Inclusion Expressed (IE).

### TABLE 1

<table>
<thead>
<tr>
<th>Social Interaction Index</th>
<th>Wanted</th>
<th>Expressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affection</td>
<td>AW</td>
<td>AE</td>
</tr>
<tr>
<td>Control</td>
<td>CW</td>
<td>CE</td>
</tr>
<tr>
<td>Inclusion</td>
<td>IW</td>
<td>IE</td>
</tr>
</tbody>
</table>

The amalgam of these six values is referred to as the social interaction index (Furnham 1996). The individual’s score on the social interaction index indicates her/his overall need for interpersonal interaction. Those who score high in Expressed needs, and low in Wanted needs are more inclined to be involved with others and gregarious, while people with high Wanted scores and low Expressed scores are more apt to be shy, reserved individuals.

In one of only a few studies of its kind, researchers Mahoney and Stasson (2005) correlated data from the FIRO-B and BFI measures. The study provided limited support for a commonality between the FIRO-B interpersonal motivations and the BFI personality measures. Their findings revealed a consistently strong correlation for the BFI trait of Extraversion across all six FIRO-B scales. They attribute this rather pronounced correlation to the fact that most individuals who score high on the trait of Extraversion would simply have larger social circles. Highly Extraverted participants have a propensity to both express and to want Inclusion and Affection from others, as well as to express Control. Conversely, the only FIRO-B trait negatively correlated with Extraversion was Control Wanted. The BFI trait of Agreeableness correlated positively with Affection Wanted and Affection Expressed, as well as Inclusion Expressed. Mahoney and Stasson (2005) suggest that this could indicate an elevated social proficiency amongst individuals who enjoy social activity. In contrast, there was a negative correlation between Conscientiousness and Control Wanted. These researchers propose that this negative correlation may represent a complexity in choosing relationships that facilitate the avoidance of control by others. Additionally, Neuroticism is strongly and positively correlated with Control Wanted. Mahoney and Stasson (2005) speculate that people who have trouble expressing their emotions may be just fine with being controlled by others. Lastly, these researchers discuss the correlation between Openness and Inclusion Wanted, Affection Wanted, and Affection Expressed. Nevertheless, despite these correlations, the researchers point out that the two measures “are neither isomorphic nor strongly equivalent” (Mahoney and Stasson 2005, 212). The objective of the present study, however, is not to analyze the ways in which these measures correlate, but to explore whether or not opposing scores within traits can determine an individual’s use or non-use of Facebook. The studies cited herein indicate personality traits associated with use of Facebook; thus, one could reasonably assume that opposite personality traits would be present in those who choose not to use the site. This study intends to clarify such an assumption. Accordingly, the hypothesis guiding this study is that users of Facebook will not have scores on the FIRO-B and BFI assessments that are opposite from non-users of Facebook. For clarity, this researcher is defining “opposite” as the mean scores for users and non-users having a difference of greater than 2.5 on the five point Likert-style scales used for both measures.
Method

Participants
A convenience/snowball sample of 43 undergraduate students from a diverse northern California state university participated in the study. Of the individuals in the sample, 17 were male, and 26 were female. The mean age of participants was 24.

Instrument
The Big Five Inventory is comprised of 44 items that comprehensively measure five personality dimensions. Openness, one of the traits, has ten items, two of which are reverse-scored. Conscientiousness and Agreeableness are each represented by nine items, four of which are reverse-scored. Extraversion and Neuroticism have eight items each, including three which are reverse-scored.

The FIRO-B assessment (Schutz 1958) is a 54-item questionnaire, with nine questions for each of the six scales, that measures three dimensions of interpersonal needs: Inclusion, Control, and Affection. These variables are stated in terms of an expressed behavior (E) and a desired or wanted behavior (W). The “E” score represents the person’s overt, observable behavior toward others, and the “W” score refers to what the person wants from other people. The six scales are Wanted Inclusion (WI), Expressed Inclusion (EI), Wanted Affection (WA), Expressed Affection (EA), Wanted Control (WC), and Expressed Control (EC). Each question is answered using a five point Likert-type scale.

Additional survey questions about the individual’s age, sex, availability of Internet, and use of Facebook were asked on a separate survey page, following the BFI and FIRO-B questionnaires.

Procedure
Forty-three surveys were completed by the sample group. After gaining the permission of the professors, the researcher emailed students in four undergraduate level Communication Studies courses a hyperlink to an online survey. The participants were given the opportunity to go to the site and take the assessment. They were also encouraged to refer friends who were also undergraduate students to take the survey. Participants were able to access the website and take the survey at their leisure. The website used to administer the survey for this study was: www.surveygizmo.com.

Results
Data were analyzed using an independent sample t test to look for statistically significant differences between the scores of the two discrete participant groups: users and non-users. Table 2 presents the participants’ mean scores, separated by the distinction of being either users or non-users, for each component of the BFI and FIRO-B scales. Means are listed, as well as the differences obtained when the means of non-users are subtracted from the means of users.

<table>
<thead>
<tr>
<th>BFI/FIRO-B trait</th>
<th>Non-users (N=14) Mean</th>
<th>Users (N=29) Mean</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>3.8438</td>
<td>3.6750</td>
<td>-.16875</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>3.7361</td>
<td>4.1111</td>
<td>.37500</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>4.3472</td>
<td>3.6444</td>
<td>-.70278</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>2.6094</td>
<td>2.7917</td>
<td>.18229</td>
</tr>
<tr>
<td>Openness to Experience</td>
<td>3.9000</td>
<td>3.9000</td>
<td>.00000</td>
</tr>
<tr>
<td>Wanted Inclusion</td>
<td>3.2375</td>
<td>2.1400</td>
<td>-1.09750</td>
</tr>
<tr>
<td>Expressed Inclusion</td>
<td>3.2917</td>
<td>3.1037</td>
<td>-.18796</td>
</tr>
<tr>
<td>Wanted Control</td>
<td>4.2778</td>
<td>4.3704</td>
<td>.09259</td>
</tr>
<tr>
<td>Expressed Control</td>
<td>3.7778</td>
<td>3.4889</td>
<td>- .28889</td>
</tr>
<tr>
<td>Wanted Affection</td>
<td>3.5139</td>
<td>3.2222</td>
<td>- .29167</td>
</tr>
<tr>
<td>Expressed Affection</td>
<td>3.0000</td>
<td>2.5333</td>
<td>-.46667</td>
</tr>
</tbody>
</table>

The results of the study supported the hypothesis; the BFI and FIRO-B scores of users of Facebook were not opposite (difference of means > 2.5) from those of non-users of Facebook. The only trait that had no variance in the means between users and non-users was the BFI trait of Openness to Experience. This trait does not seem to have any impact whatsoever on whether an individual uses Facebook. The mean scores for users and non-users were identical (3.9). Openness to Experience relates to an individual’s appreciation for art, emotion, adventure, unusual ideas, curiosity, and variety of experience. Appreciation for a variety of experience seems like it could play an integral role in a person’s adoption of new communication media. However, if the actual communication experience is not unique (messaging on Facebook functions much like email), perhaps the medium is not the point of contention for non-users. Rather, it is also possible that the quality of communication, unwillingness to have yet another point of contact to have to keep track of, or even another BFI trait could override this aspect of personality to the point of it having no influence at all.

Both the BFI and the FIRO-B measures score the assessment using a five point Likert-style scale. The most significant variance found in the dataset of the present study is scarcely more than one point out of the five possible; therefore, the
word “opposite” as defined by this researcher (difference of means > 2.5) cannot accurately describe that difference. Differences of means ranged from zero for the BFI trait of Openness to Experience, to 1.0975 for the FIRO-B dimension of Wanted Inclusion.

Table 3 presents the $t$ scores, degrees of freedom, and significance levels from the $t$ test for each component of the BFI and FIRO-B scales as found through this study. Degrees of freedom relate to sample size and allow the researcher to identify the correct $t$ values. The significance level ($p$) indicates the probability that the data are a random occurrence. A $p$ value of less than .05 is considered to be statistically significant. For example, if the $p$ value is .02, it means that there is only a two percent probability that the data are a random occurrence. Significance levels for each component of the BFI and FIRO-B scales as found through this study are also listed in the table below.

**TABLE 3**

<table>
<thead>
<tr>
<th>BFI/FIRO-B trait</th>
<th>$t$</th>
<th>df</th>
<th>Sig. Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>-.380</td>
<td>10.079</td>
<td>.712</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>1.580</td>
<td>10.660</td>
<td>.143</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>-3.679</td>
<td>17.025</td>
<td>.002*</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>.475</td>
<td>10.418</td>
<td>.645</td>
</tr>
<tr>
<td>Openness to Experience</td>
<td>.000</td>
<td>9.458</td>
<td>1.000</td>
</tr>
<tr>
<td>Wanted Inclusion</td>
<td>-2.255</td>
<td>9.725</td>
<td>.049*</td>
</tr>
<tr>
<td>Expressed Inclusion</td>
<td>-.468</td>
<td>11.366</td>
<td>.649</td>
</tr>
<tr>
<td>Wanted Control</td>
<td>.310</td>
<td>12.172</td>
<td>.762</td>
</tr>
<tr>
<td>Expressed Control</td>
<td>-.620</td>
<td>15.367</td>
<td>.545</td>
</tr>
<tr>
<td>Wanted Affection</td>
<td>-.929</td>
<td>9.472</td>
<td>.376</td>
</tr>
<tr>
<td>Expressed Affection</td>
<td>-1.453</td>
<td>9.440</td>
<td>.179</td>
</tr>
</tbody>
</table>

*p<.05

The only two scores that achieved statistical significance ($p < .05$) were Conscientiousness from the BFI ($p = .002$) and Wanted Inclusion from the FIRO-B ($p = .049$). Although these two scores achieved statistical significance, the mean scores between users and non-users can hardly be called opposite – a difference of only -.70278 exists between users and non-users with regard to the BFI trait of Conscientiousness, and a difference of -1.09750 for the FIRO-B Wanted Inclusion score.

**Discussion**

The aim of the present study is to examine the BFI and FIRO-B scores of participants and determine if an opposite relationship (difference of means > 2.5) of scores on these two scales exists between users and non-users of Facebook based solely on an individual’s use of the site. This study does not follow the pattern of studies before it, such as Amichai-Hamburger and Vinitzky (2010), which was meant to refine the work done by Ross et al. (2009) by using a more objective measuring process than the self-reports of users. The present study does not follow those patterns because it does not include an examination of how specific personality traits and interpersonal communication motivations are correlated with how and why individuals use Facebook. Instead, this study seeks to explore whether or not opposite BFI and FIRO-B scores will be found between users and non-users. Since the present study makes no attempts to predict habits of Facebook use, or personality traits of users and how they correlate to the FIRO-B and BFI scales, it is not necessarily feasible to draw correlations to previous research. However, there does seem to be a difference between users and non-users, which is consistent with the findings of previous studies.

While the findings of this study showed statistical significance in the two instances of Conscientiousness (found to be much lower in users) and Wanted Inclusion (found to be much higher in users), this study lacked the scope to attempt any meaningful determination of systematic differences between users and non-users. In the study conducted by Hargittai (2007) she also collected data about participant’s race and ethnicity, parental educational background (for determination of socioeconomic status), as well as time spent online. Such information allows researchers to extrapolate a more holistic profile of the participants, and better determine the types of individuals who do or do not fit into a certain category.

In Mahoney and Stasson’s (2005) study of how scores from the BFI and FIRO-B measures correlate, the researchers bring to light potential shortcomings of the FIRO-B scale. Through interaction analysis between and within the elements of the FIRO-B and BFI measures, the results reveal that Inclusion and Affection are so similar conceptually that the majority of their participants could not accurately distinguish between the two. This resulted in Mahoney and Stasson (2005) concluding that the difference was reduced to being “purely academic – a distinction without a difference” (213). When Schutz (1958) developed the FIRO-B measure, his data were collected entirely from white, male students at Harvard – a “highly homogeneous and socially exclusive population” (Mahoney and Stasson 2005, 213). Mahoney and Stasson make their case for why this distinction could have existed within the minds of Schutz’s original participants, positing that these privileged individuals would have had much more time to experience, note, and internalize the nuances of interpersonal interaction. This
researcher additionally suggests that the social pedigree of the average young man attending Harvard in the 1950s would lend to a greater level of awareness in everyday interpersonal interactions. Whatever the reason for the original delineation of the three components of the FIRO-B, Mahoney and Stasson (2005) speculate that in a more heterogeneous sample, the distinctions would be diminished to the point of near non-existence.

Also mentioned in the study conducted by Amichai-Hamburger and Vinitzky (2010), is the presence of outside factors. While personality seems to have some bearing on why and how individuals use Facebook, Amichai-Hamburger and Vinitzky also cite social norms as being potentially influential with regard to the individual’s behavioral displays on the site. This researcher proposes that based on the answers from participants, socioeconomic status and availability of the Internet in an individual’s home are two potential outside factors that would possibly contribute to non-use.

Limitations and Future Research

The present study is not without limitations. This study would be more comprehensive if a greater number of participants had taken the survey. Also, if a more externally valid measure of interpersonal motivations was available, the study could be easily replicated using a different measure, and perhaps would provide more insight into the possible interconnectedness of interpersonal motivations and Facebook use. Additionally, if users could be further broken down by frequency of use, such categories (e.g. daily user, weekly user, monthly user) might help to further our understanding of SNS users.

Another limitation the present study faced was the inherent flaw in using an online survey site to try to gather data about non-users. When a Web site is utilized for surveying purposes, it creates a bias against those who may not engage in the use of SNSs for competency reasons. A lack of computer skills could eliminate less competent individuals from the sample population (Ross et al. 2009). Another possible explanation for reluctance to participate is that some individuals simply may not be interested in spending their time on the Internet. These individuals might not become involved in the present study because doing so would increase their time spent online. As a result, those whom the present study is focused on may not be represented within the data set. Finally, since differences of means only ranged from zero to 1.0975 the lack of significant differentiation leads this researcher to believe that perhaps no two groups of people would have opposite traits as defined within the parameters of this study.

This researcher is also interested as to what a content analysis of users’ Facebook activities would yield when coded and analyzed in terms of interpersonal communication motivations. Moreover, a goal for future research could be to create a matrix of user types not defined by personality measures or any outside assessment, but by case studies of user profiles. The academic applications of such research could include furthering our knowledge and understanding of not only human personality and communication, but also how computers are affecting interpersonal and social aspects of our lives over time.
References


Gender Discrepancies in Social Facilitation

Ariel Mosley
Dr. Lisa Harrison, Faculty Mentor

ABSTRACT

Social facilitation, the performance hindering or enhancing phenomenon that occurs when an individual completes a task under evaluation of an audience, is one of social psychology’s oldest and most fascinating phenomena (Aronson 2010). Sixty-two students at California State University, Sacramento completed a Color Categorization task alone or in the presence of an audience in order to examine whether participant gender influences social facilitation. Women participants, but not men, performed the task more slowly in the presence of an audience than when alone. Findings are discussed in relation to the influence of gender on social facilitation. The implications of this research can be manifested in fields of sport psychology, employment, and social contexts of public evaluation.

The purpose of this study is to examine whether gender affects social facilitation when completing a Color Categorization Task (CCT). Social facilitation, also identified as the audience effect, is a performance effect that enhances or deteriorates an individual’s execution of a task in the presence of an evaluative audience (Aronson, Wilson, and Akert 2010, 262). This article discusses the history of social facilitation and theoretical explanations for its effects, followed by the discussion of how divergent gender self-constitutions lead to different behaviors, cognitions, and motivations. A combination of these two bodies of literature provides the foundation for the current study.

Social Facilitation: A Brief Overview

From the apprehension that public speakers experience causing them to forget their lines, to the performance enhancing effect that makes star athletes great, the implications of social facilitation are widespread. It is one of the most intriguing universal behaviors consistently found in different species. Psychologist Norman Triplet first investigated social facilitation in 1898 when he observed children reeling in fishing lines. He found that children reeled in fishing lines faster in the presence of others than when alone (Triplet 1898). Although, Triplet’s research did not examine the performance deteriorating effect, as his results only illustrated the performance enhancing effect, he did inspire several other social psychologists to study this phenomenon extensively in humans. Furthermore, research suggests that even ants, cockroaches, and birds are susceptible to its effects (Aronson, Wilson, and Akert 2010; Guerin 2003; Platania and Moran 2001).

Nearly a century after Triplet’s research, Zajonc (1965) revitalized interest in social facilitation and extended the bounds of this phenomenon by using Drive Theory as a means to explain the performance deteriorating effects of unfamiliar or unpractised responses in the presence of others. Also known as Distraction-Conflict Theory, this theory suggests that social facilitation occurs because of a reflexive and automatic drive that arises within ambiguous situations. When an individual is placed in an ambiguous situation, an automatic response is aroused and facilitated. Using the Hull-Spence equation (\(s_{ER} = s_{HR} x D\)), Zajonc (1965) established that performance effects are the result of an enhancement of dominant responses. Dominant responses occur automatically because the attendance of an audience increases physiological arousal. The sympathetic nervous system activates the “fight-or-flight” stress response, and the individual’s behavior is modified by the mental heuristics that facilitate the emission of dominant responses. The result is either an obstruction or amplification of individual performance.

According to Zajonc (1965), an audience stimulates the division of the performer’s cognitive performance, inasmuch as the individual is attending to the audience, as well as the task at hand. Simple tasks facilitate an enhanced performance, while complex tasks lead to reduced performance, because complex tasks require more cognitive energy than simple ones (Aronson, Wilson, and Akert 2010; Feinberg and Aiello 2006; Muller and Butera 2007; Zajonc 1965). Complex tasks are unpracticed, unfamiliar, and therefore elicit a recessive response. During a complex task, a performer is practicing a recessive response, and the requirements of the task lead to impaired functioning. During a simple task, a performer can effectively split attention between two stimuli (peripheral and central tasks). This is because the central task is practiced and mechanical, therefore eliciting a dominant response and a facilitated performance. Zajonc’s (1965) work greatly expanded our understanding of social facilitation by identifying the role of physiological arousal on performance effects; however, he did not fully explain which contextual conditions lead to the strongest social facilitation effects. Nor did he give any attention to the role of individual differences on performance (Kushnir 1978).

Cottrell and colleagues (1967) proposed an alternate explanation as to what causes social facilitation with their Evaluation-Apprehension Theory, attributing the arousal responsible effects not to the physiological emissions connected to the mere-presence of the audience, but to the social context. This theory suggests that in a context of an audience, individuals associate the audience with sources of evaluation, and there is a resulting fear of potential negative evaluation. This splits cognition between the central task and the fear of apprehension via peripheral...
stimuli, such as nonverbal expression, posture, and relative body position of the audience. This division in cognition results in impaired or enhanced responses. In one study, 45 university students perform a pseudo-recognition verbal task alone, or with an audience. Fifteen students were in an alone condition, 15 participants were in an evaluative-distracting condition with two audience members watching their performance, and 15 participants were in a mere-presence condition with two audience members blindfolded and not interacting with the participant. The purpose of the study was to examine the role of the mere-presence of an audience on social facilitation effects, as well as to see if the apprehension of evaluation was a necessary condition for social facilitation. Results illustrated that participants in the alone condition exhibited the lowest social facilitation effects in comparison to the evaluative-apprehension condition and the mere-presence condition. They also found that participants completing a task in an evaluative-apprehension context illustrated more social facilitation effects than in the mere-presence condition and the alone condition. Results demonstrated that this process occurs due to distraction from the potential of negative evaluation (Cottrell et al. 1967). Individuals associate social contexts with reinforcement. A performance is thought to result in either a positive or a negative evaluation by audience members. The potential idea of social disapproval begins to dominate one’s cognitive processes, leaving fewer resources available to focus on executing the task. This theory differs from Zajonc’s (1965) Drive Theory in that it is not the physical presence of the audience members, but the anxiety of evaluation that leads to social facilitation effects.

Bond, Atoum, and VanLeeuwen (1996) extended research in this area by examining the contextual audience factors that lead to social facilitation effects. Subsequently, they proposed that the performance enhancing effect is due to the motivation to portray a positive image of self to others, because performing successfully on a task is associated with social reinforcement. They also theorized that the performance deteriorating effect is due to the motivation to avoid embarrassment and to avoid conveying a negative image of self to others, because performing poorly on a task is associated with failure and social punishment. To test this notion and to further examine Distraction-Conflict Theory they conducted a study in which participants completed a complex verbal learning task, either alone, in the presence of an audience, or alone with knowledge that they were being evaluated via intercom. The researchers hypothesized that because social evaluation of one’s public persona is connected to one’s visual appearance (Baumeister and Sommer 1997), individuals who are visually performing a task in the physical presence of an audience would elicit greater social facilitation effects than those performing a task with only the awareness of evaluation via intercom (Bond, Adnan, and VanLeeuwen 1996). Their findings indicated that participants who completed the task in the visual presence of evaluative audience produced larger social facilitation effects than participants completing the task with the presence of an evaluator through an intercom. This suggests that for performance impairment to occur via social facilitation, the participant must be able to link their performance on the task to social perception of their performance, and thus their public image (Bond, Adnan, and VanLeeuwen 1996). This research lends support to the Evaluation-Apprehension theory proposed by Cottrell and colleagues illustrating the necessary conditions of evaluation and physical audience presence (1967).

Feinberg and Aiello (2006) examined the two competing dominant theories in the field of social psychology that investigate the specific attributes of social contexts that explain and predict Social Facilitation (Distraction-Conflict Theory and Evaluation-Apprehension Theory). The purpose of the study was to examine the roles of evaluation and distraction, and as well as the combination of those roles on social facilitation effects. The design of the study was a 2 (Task) x 7 (Condition) mixed-model design. Participants were randomly assigned to one of seven conditions. An alone condition served as a control condition and participants in this condition completed the task without an audience, an evaluation, or distraction. Participants in the alone condition were given instructions in relation to the task, compared to instructions in relation to performance.

There were two distraction conditions in which participants completed two tasks, alone or in the presence of a distracting audience. The second task was a less important task requiring the categorization of numbers via comparison. This task served to cognitively distract the participants. There were also two evaluative conditions. In the first evaluative condition, participants were told that their performance on the tasks would be predictive of their academic grade-point average and intelligence. Importantly, they were told this before they performed the tasks. Participants in the second evaluative condition were only told that their performance would be evaluated upon conclusion of the trial.

Finally, there were two evaluation-distraction conditions where an amalgamation of both conditions of evaluation and distraction were combined, one alone condition and one in the presence of an audience. During this condition, researchers utilized the Word Attribution Procedure (WAP) to test which theory better explained and predicted social facilitation outcomes. When completing the WAP, participants are asked to categorize two lists of word-pairs, both a noncompetitive list to serve as a simple task, and a competitive list to serve as a complex task.

Researchers hypothesized that the evaluation-apprehension and distraction-conflict conditions would result in different social facilitation effects. Researchers also hypothesized that the mere presence of an audience was not sufficient for significant performance alteration. Finally, they proposed that a combination of both conditions (evaluation-apprehension and distraction-conflict) would produce larger social facilitation effects than when the conditions are executed
solitarily. They found that physical presence is not a necessary condition when evaluation and distraction are already in context. They also found that a combination of the distraction and evaluation conditions resulted in the most significant impairment of performance of a difficult task compared to when these contexts were separate conditions (Feinberg and Aiello 2006). This study illustrates the necessary conditions for social facilitation and highlights the significance of an evaluative context including complexity of the task, evaluation of performance, and potential for distraction. Other studies illustrate some other variables important for creating a context of social facilitation, including cohesiveness of the group, distinctiveness of the audience, awareness of state, deindividuation, and individual expectations (Guerin 2003).

**Gender Role Attributions**

Self-construals are a culmination of traits defined within an individual’s subjective self-representation that serve as mental heuristics for organizing stimuli in one’s perceptual fields (Cross and Madson 1997b). Self-construals are powerful theories of self that incorporate personal cognitions, motivations, and expectancies that dictate one’s behaviour. Self-construals serve as mental maps that facilitate cognitive processing with automatization and celerity. When placed in an ambiguous situation, the behaviour of the individual often is influenced by his or her own personal self-construal. In Cross and Madson’s (1997b) meta-analysis of literature regarding divergent models of the self in relation to gender, they proposed that men and women differ because they have dissimilar self-construals. Through an extensive review of the current gender role literature, they proposed that females are more likely to have interdependent self-construals, and that males are more likely to have independent self-construals. An interdependent self-construal is a representation of self that places importance on relational harmony and group relationships. Individuals with interdependent self-construals are motivated to stay connected to others, and express relational and harmonious traits to enhance self-esteem. An independent self-construal is a representation of self that focuses on autonomy, uniqueness, and self-definition. Individuals with independent self-construals are motivated to maintain separateness from others, and express specialness and individuality to enhance self-esteem (Cross and Madson 1997b). Some researchers have attributed this difference in self-construals as due to different social roles that are prevalent in society because of the male gender role that traditionally requires men to provide financially and the female gender role that traditionally requires women to nurture and sustain the family (Kashima et al. 1995).

In their argument, Cross and Madson (1997b) describe how men and women differ in self-construals, and those differences are illustrated in discrepancies of cognitions, self-representations, information processing, self-related motivations, strategies for self-enhancement, and affect (Cross and Madson 1997b). For example, they found that consequences of social interaction are potentially more self-relevant for individuals with an interdependent self-construal than an independent self-construal because of a difference in apperceptions. This is because men, who often have an independent self-construal, attend to information that illustrates their uniqueness, while women, who often have an interdependent self-construal, process information concerning interpersonal relationships (Cross and Madson 1997a). The differences in self-construals parallel social facilitation differences because males perceive audiences as opportunities to illustrate their uniqueness, while females perceive audiences as opportunities for relationships. Because males and females focus on different things when asked to complete a task with an audience, the distribution of their cognitive loads will be different. This results in different performance levels.

Furthermore, research suggests that females are more responsive than males to the feedback and evaluations of others. For example, in a study examining self-evaluations and self-esteem in settings either of achievement or of failure, a questionnaire was administered to participants before and after receiving evaluative feedback from their supervisor. Results illustrated that the self-esteem of males was not significantly affected by negative or positive evaluation, while the self-esteem of women increased when they received positive feedback and their self-esteem plummeted when they received negative feedback (Cross and Madson 1997b). The researchers argue this difference between men and women arises because the self-esteem of individuals with an interdependent self-construal is rooted in relationships and their ability to maintain them, while the self-esteem of individuals with independent self-construals is established by their own uniqueness and the ability to maintain independence.

To assess the notion that women are likely to have interdependent self-construals and men are likely to have independent self-construals, Gabriel and Gardner (1999) conducted a series of studies. In the first study, 36 participants were asked to complete a sentence fragment task in which they responded with twenty descriptions of self, each beginning with the phrase “I am.” They proposed that men would respond in more independent ways than women. They found that female participants responded more relationally when describing the self, and that men responded more collectively (Gabriel and Gardner 1999). Results demonstrated that women are likely to respond in ways that included more close relationships in their self-definitions.

In their second study, Gabriel and Gardner (1999) sampled 78 university students. They used the Relational Interdependence Self-Construal Scale (RISC) to measure relational interdependence, a modified collectivistic RISC scale to measure collectivism, and Spence’s and Helmreich’s Personal Attributes Questionnaire to measure masculinity and femininity. The researchers proposed that if women were more characteristic of interdependent self-construals and
men are more characteristic of independent self-construals, then men would score higher on the modified RISC and females would score higher on the RISC. Furthermore, they hypothesized that masculinity would be correlated with collective interdependence, but not relational interdependence, and femininity is correlated with relational interdependence, but not collective interdependence. Their results supported the hypotheses.

A third study was conducted to examine if there would be gender differences in selective recall of collective events and relational events (Gabriel and Gardner 1999). Undergraduate university students were asked to recall and write down an emotional memory. Findings indicate that women were more likely to recall more relational events, while men were more likely to recall more collective events (Gabriel and Gardner 1999). This lends support to the notion that men and women diverge in apperception.

Furthermore, additional research that illustrates gender differences in self-construals is the divergence in decision making. Confirmation bias is the tendency for individuals to maintain consistency when obtaining information to make a decision (Traut-Mattausch et al. 2011). To examine if differences in gender self-construals influenced decision making, Traut-Mattausch and colleagues (2011) asked participants to complete a questionnaire in which they had to make either an independent or an interdependent decision. They proposed that because women often had interdependent self-construals, interdependent decisions would be more significant to them compared to independent decisions. They also proposed that because men often had independent self-construals, independent decisions would be more significant to them than interdependent decisions. As expected, the findings indicated that women considered interdependent decisions to be more important than independent decisions, while results were the opposite for men (Traut-Mattausch et al. 2011). These findings support previous research illustrating the differences in gender self-construals.

Based upon previous literature, women are more likely to have relational-interdependent self-construals and often perceive an audience as an opportunity for relationships (Cross and Madson 1997b). Conversely, men are more likely to have independent self-construals and often perceive an audience as an opportunity to illustrate their uniqueness and leadership (Kashima et al. 1995). Therefore, it follows that if a contextual factor of social facilitation is the apprehension of evaluation by an audience, and if females are more susceptible to social situations, then female performance in front of an audience should be more affected by the presence of social cues.

The Present Study
Social facilitation research has implications that apply to nearly every social situation in relation to task performance. Examining literature regarding social facilitation and gender facilitates an inquiry regarding the relation of the two concepts. Few studies have examined gender differences in vulnerability to this audience effect phenomenon. Lack of such data leaves an important gap in the literature. The purpose of this study is to contribute to the literature by exploring whether gender influences social facilitation on a color categorization task (CCT). It is hypothesized that women’s performance on the CCT will be more negatively influenced by the presence of an audience than will men’s performances.

Methods
Participants
Participants were 68 students from California State University, Sacramento who volunteered to participate in the research in exchange for a cellophane bag of candy. Six participants were eliminated because they did not complete all the measures. Therefore, the sample contained 62 participants, (42 females, 20 males; $M_{age} = 20.48, SD = 2.43$). The sample contained 17 White/European-Americans, 11 Black/African-Americans, 17 Asian/Asian-Americans, 5 Hispanics, 4 multi/bi-racial participants, 1 declined to respond, and 7 participants that identified themselves as “Other.”

Materials
Participants completed a Color Categorization Task (CCT) requiring the sorting of candy pieces in labelled cups according to color, while timing themselves on a standard laptop.

Design and Procedures
The experiment was a 2 (Participant gender) x 2 (Audience: Alone vs. Audience between participants design. Individuals were randomly assigned to either condition. The dependent variable was the time that it took participants to complete the CCT. A female experimenter conducted the research in one session in the Green and Gold Board Room on the third floor of the Union at California State University, Sacramento. Participants were randomly assigned to either the Alone or Audience condition.

The study took place in a small room containing 12 chairs facing each other surrounding an oblong table. The study was conducted on Friday, March 9th from 10am to 3pm. Two research assistants (one male and one female) handed out flyers in the Union to recruit participants. These flyers depicted information on location and time of the study, and advertised that researchers were giving out free candy bags in exchange for participation.

Researchers informed participants they would complete a Color Categorization Task as a measure of performance. After completing the informed consent form,
participants sat at a table with a laptop computer placed to their left and six labelled containers, plus an additional container containing candy pieces on the right. Thirty M&M’s were used in the CCT; five red pieces, five blue pieces, five green pieces, five orange pieces, five brown pieces, and five yellow pieces. Six 3-inch plastic cups labelled with the seven M&M colors, and one cup without a label, were used as containers. The participants used an online stopwatch application to time their performance on a standard laptop. The application took up the entire computer screen. The researcher conducted a pre-trial with each participant to ensure participants knew how to use the stopwatch. The researcher gave participants directions on how to accurately time themselves by pushing the left mouse key to start and stop the stopwatch.

Participants were told to start the stopwatch, categorize thirty M&M pieces by color using their index finger and the thumb of their dominant hand to pick up each M&M. They were instructed to place one piece of candy at a time in its respective container as quickly and accurately as possible. When finished they were instructed to end the stopwatch. The experimenter waited outside while the participant completed the experiment. The participant then alerted the researcher standing outside the room upon completion of the task.

In the Alone condition participants completed the CCT solitarily in the experimental room during testing. In the Audience condition, participants completed the CCT in the presence of two spectators, one male, and one female. Audience members sat three feet in front of the participant across the table. The experimenter instructed the audience and the participant not to converse. The participant completed the task while the audience timed the participants. In the audience condition, the researcher explicitly told the participant that the audience was there to evaluate and time his/her performance. After completing the CCT, participants completed a demographic questionnaire. They were then debriefed about the nature of the study and thanked for their participation.

Results

In order to examine whether participant gender influenced strength of social facilitation via a complex task, the researcher conducted a 2 (Participant gender) x 2 (Audience: alone vs. audience) ANOVA on participants’ responses on the Color Categorization Task. There was a main effect for condition, $F(1, 58) = 15.10, p < .001$. Participants completed the CCT more slowly in the audience condition ($M = 47.32$) than in the alone condition ($M = 34.60$). There was also a significant main effect of participant gender, $F(1, 58) = 9.40, p = .03$. Women ($M = 45.98$) completed the CCT more slowly than men ($M = 35.94$). There was also a marginally significant interaction of gender and condition, $F(1, 58) = 3.04, p = .08$. In order to test the a priori research hypothesis, follow-up tests were conducted. Findings indicate women completed the CCT more slowly in the audience condition than the alone condition, $F(1, 40) = 24.61, p < .001$. However, men’s response time on the CCT was not significantly influenced by audience condition, $F(1, 18) = 1.70, p = .20$.

Discussion

It was hypothesized that compared to men, women are more influenced by social facilitation effects in the presence of an audience when completing a complex task. The findings of this research support the hypothesis that women completed the Color Categorization task more slowly in the presence of an audience than men did, illustrating a greater impairment of performance when an audience was watching than when they were alone. This suggests greater social facilitation effects in women.

There were limitations that constricted experimental control within this study. In addition, a few methodological issues of procedures regarding sample population, task type, and time measurement would improve future research studies looking to replicate this study. One major limitation in this study was that there were more female participants than male participants. Furthermore, in both conditions males’ overall performance on the CCT indicates that this specific task was easier to complete for the male group than the female group.

Another restriction to this study is that the participants were responsible for their own time scores. Although this method was chosen to preserve a true alone condition, the researcher did not have a way to verify that these results were in fact accurate time scores. The researcher attempted to alleviate this drawback as much
as possible via a pre-trial to confirm participant competence with the stopwatch application, however there are ways to improve this method. Conducting the study in a laboratory with a two-way mirror would allow for greater experimental control, subsequently allowing the researcher to confirm accurate time scores. However, participants performing the task in the presence of a mirror might be suspicious of researcher evaluation, perhaps skewing measurement of the dependent variable because of social facilitation effects.

In addition, utilizing a time sensitive keyboard would allow computation of response time with confirmed precision and accuracy. A computer program without this capability may produce slight error in time scores. Ameliorating limitations regarding time score accuracy may improve methodological measurement. Recruiting more male participants, procedurally constructing a more gender-neutral motor task and a time sensitive key board, as well as conducting the study in the setting of a laboratory with a two-way mirror might produce better experimental conditions and result in greater significance and accuracy.

Furthermore, future research could examine social facilitation in regards to age stratification and differences throughout the lifespan. Perhaps reducing social facilitation effects to major developmental categories (early childhood, late childhood, adolescence, early adulthood, mid-adulthood, and late adulthood) would produce interesting results providing insight into age differences regarding behavior, cognitions, and motivations. In addition, the participants in the study were Sacramento State students. University students in Western society maintain a more independent self-construal than the general population (Cross and Madson 1997a). This study should be replicated in the general population to investigate whether these results will differ. Other studies could examine if results hold consistent in Eastern countries, illustrated in previous literature to be more interdependent compared to Western countries (Cross and Madson 1997a).

Future research directions could also investigate possible performance differences between men and women while completing a simple task. Previous research illustrates how compared to women, men have greater confidence in the uniqueness of their abilities as a self-enhancement strategy (Cross and Madson 1997b). Research also illustrates how compared to men, women are more susceptible to audience evaluation (Cross and Madson 1997b). These concepts provide the rationale for the current hypothesis suggesting female performance is more impaired in the presence of an audience via a difficult task. Perhaps these concepts also provide rationale for a future study examining if male performance is more enhanced in the presence of an audience via an easy task.

Future research strategies include replicating this study with a larger population and administering questionnaires that measure self-construal differences to add validity to the hypothesis justification. Some variables that could be addressed in later research are the influence of confidence levels and motivation on task performance in the presence of an audience. Social efficacy theory predicts that efficacy expectancy and outcome expectancy influence the resulting outcome (Sanna 1992). Efficacy expectancy is the personal belief of capability at executing a behavior, and outcome expectancy is the belief that a specific set of steps will result in a specific outcome. Sanna (1992) conducted a study to examine the role of self-efficacy on social facilitation effects, and found that compared to individuals with a low self-efficacy, individuals with a high self-efficacy exhibited greater performance enhancement in the presence of an audience than when alone (Sanna 1992). The implications of this study illustrate how confidence in one’s set of skills and having a clear path to an attainable goal influence performance effects. Perhaps controlling for self-efficacy, men and women may illustrate more similar social facilitation effects. Future studies could investigate the role of increased self-efficacy on performance effects between genders.

Conclusion

The researcher examined gender effects on levels of social facilitation, the phenomenon responsible for performance outcomes in the presence of an evaluative audience (Aronson, Wilson, and Akert 2010). The audience condition elicited stronger social facilitation effects than the alone condition. In addition, social facilitation effects were more significant for the female group than the male group. Males took less time to complete the task in both conditions than females. To produce more statistically significant results, methodological issues regarding population size, type of task, and time measurement should be addressed. Future researchers should analyze male performance enhancement in the presence of an audience, and should replicate the current study in a multitude of different contexts.

By demonstrating how men and women diverge in performance effects resulting from spectator evaluation, this study manifests an important paradigm that existing literature has not addressed. Furthermore, this study suggests support for previous literature concerning apparent gender behavioral differences due to divergent gender self-construals (Cross and Madson 1997b). The real world implications of this research are illustrated in every social context in which a task is required to be completed, such as in male-dominated fields of employment. In a competitive job market, the highest performing individual often dominates. Tasks that need to be completed in the presence of an audience, such as public-speaking, may result in different performances. If male performance is more significantly influenced by social facilitation in comparison to males, then females may have a disadvantage when competing for a professional position. Positions that require consistent public evaluation may be reserved for males who are perceived to be more qualified due to better performances with spectators. Another area that this research expands on is the area of male-dominated athleticism and sport psychology. Replicating the current research study would allow insight into
possible gender differences in employment statistics, areas of sport psychology, as well as possible solutions to address these discrepancies.

References


The purpose of this article is to explore possible relationships among religion, food rules, and compulsive overeating within the African American community. Although previous studies have examined eating disorders, there are still large gaps in the literature. Past research has primarily been limited to middle-class white women with anorexia or bulimia nervosa. In this article, a model was developed to show the hypothesized directional influence of primary factors (religion, food rules, and compulsive overeating) and secondary factors within the African American community. This article will explore possible links among the three primary factors by highlighting how identified factors may influence each other, and will also explore possible implications for future research on this topic.

Though research in the area of eating disorders has been fairly robust, the focus has been limited. Little attention has been given to racial or ethnic communities other than white Americans or to types of eating disorders other than anorexia and bulimia nervosa (McLain 2007; Power 2005); previous studies focused predominately on white, upper-middle class females (Wiederman 1996). By exploring possible relationships between religious practices and “food rules” (attitudes or ideas about food and eating that are passed down from one’s caregivers) (McLain 2007; Mintz and DuBois 2002), this article focuses on two areas not emphasized in earlier studies: the African American community and compulsive overeating.

Compulsive overeating is an eating disorder similar to bulimia in that individuals with both disorders consume large amounts of food in a short time period, but it is different from bulimia because there is no purging (Power 2005). In these instances, food is a means for self-soothing. Fatty foods can release the same chemicals in the body as narcotic drugs (Fortuna 2012; Johnson and Kenny 2010). Compulsive overeaters who often eat past the point of individual comfort (Puhl and Schwartz 2003) can become addicted to this chemical release in a capacity similar to drug addicts. This article attempts to connect compulsive
overeating habits to food rules by proposing links among the three factors of religion, food rules, and compulsive overeating.

The origins of some food rules can be found in Christianity (Grenfell 2006). Several significant Christian practices involve food; for example, the taking of the body of Christ on first communion (Miles 1995). From practices such as this one, rules about what, how and when someone eats, begin to develop. Examples of food rules this researcher has experienced are, “You must eat everything on your plate before you can get up from the table”; and dinnertime is a certain time -- “once dishes are washed, the kitchen is closed.”

Information explored in this article is both pertinent and significant to the advancement of a culture. Previous studies pertaining to African Americans and food have not focused on food rules and compulsive overeating. A database search for literature on African Americans revealed that past research focused on deviant behaviors including topics such as drugs, criminal behavior, absentee fathers, sexual behaviors, and teen pregnancy. This article intends to add to African American research topics by presenting information that may enhance our understanding of eating disorders within the African American community, a topic that has been vastly overlooked and highly understudied.

**Research Questions**

This article explores factors that may contribute to eating disorders within the African American community. Do the identified factors have a relationship among them that could possibly help explain eating disorders within the African American community? Are the connections between Christian food rules and eating behaviors strong enough to contribute to compulsive overeating? Does the frequency of attending religious functions contribute to compulsive overeating?

**Literature Review**

"Can we all bless the food?": History of Religion and Food

Religion has served as a stable foundation for societies throughout history, offering pre-formed thoughts, ideas, and norms, for civilization to build upon (Dingley 2011). Religious practices influence daily life and religious themes are apparent in many everyday activities. Dingley (2011) cites evidence of religious influences in practices such as the ringing of bells from buildings, in calendar days devoted to Saints, in institutions of higher education (e.g., private Catholic colleges and universities), and in health care systems through the establishment of church related hospitals.

Partially because of increased accessibility, food has become one of the most versatile substances in the world today (Miles 1995). Food can be used in a wide variety of ways: a peace offering, a representation of sympathy, or a token of love. Religion has a long affiliation with the development of eating habits, aiding in the development of eating customs and norms around the world (Dell and Josephson 2007). Interwoven in religious doctrines are lessons about food as a source of power and as a miracle worker. Christianity particularly uses food manipulation as a form of control, with the power to connect believers with the Lord because He is the ultimate supplier of it (Dell and Josephson 2007). Food, “the body” of the Lord and Savior, is to be blessed before feasting and eaten with grace and humility. It is used to symbolize appreciation, make connections (such as marriages), mark a separation or departure (such as graduations), and can be a gift, reward or punishment (Dell and Josephson 2007). These food and eating practices are adopted through repetition and tradition; used at each function, at home, and taken into adulthood.

Either as a form of worship or celebration, congregation members prepare, bring, or share food (Dell and Josephson 2007). Group meals, eating, and the sharing of food, are viewed as a “sacred communal [act]...”(Dell and Josephson 2007, 628). The presence of food is a reflection of God’s acceptance and favor upon His followers, bestowed to them by God as a symbol of Him, the definitive supplier of life (Dell and Josephson 2007). Conversely, a lack of food represents disobedience, shame, and defiance. Man, who cannot live without food, has the least amount of power over it; on the contrary, God, the supplier of food, does not need it to live (Dell and Josephson 2007). His control over food shows man to never attempt to stray from His word. In the King James Bible, there are numerous stories of foods’ alternative uses, including as a mechanism for healing and as a tool to work miracles.

People in America are more involved in religious activities than in any other voluntary event (Steenland et al. 2000). Americans spend more time in church and at religious related functions than in any other type of function, thus increasing the likelihood of religious influence. This high involvement may be, in part, due to participation expectations Christianity has (Ellison and Sherkat 1995). In addition to participation expectations, Judeo-Christianity has beliefs about food and eating which have evolved into food rules. There are certain ideas (food rules) that religion ingrains into our beliefs. These beliefs influence how, what, when, and with whom we choose to eat. Hinton (2008) describes the influences that food has in religious practices: “...our food rituals are borne from and reflect our religious rituals...” (470). It is reasonable, therefore, to connect religious practices and related food rituals with eating behaviors, including the development of eating disorders.

Religion and religious involvement are also tied to the development of ethnic identity (Counihan 1992). Within the Christian community, there are ethnic cultural sub-communities. Each one of these sub-communities develops additional rules, expectations, norms, and responsibilities, some regarding ideas about food.
and eating (Steenland et al. 2000). Often, these cultural additions develop symbolic meanings through practice, rituals, and prayer (Pattillo-McCoy 1998). One of these ethnic cultural sub-communities is the African American community where ethnicity and race have been found to have a strong influence on eating patterns (Counihan 1992; McLain 2007). In ethnic religious communities, food takes on a role beyond that of a substance for body nourishment; it transforms into an extension of one’s expressions and feelings. Understanding how food influences identity is important in understanding Black culture (Counihan 1992). These relationships among food, culture, and identity have formulated over time, imprinting themselves within African American history.

“My Sista, my Brotha”: African Americans and the Role of Religion

African Americans, “the most religious” race in the world (Gallup and Castelli 1989, 122), attend church and religious functions in higher frequencies than any other races or ethnic groups (Pattillo-McCoy1998; Power 2005). Pattillo-McCoy (1998) found that African Americans prayed daily at higher rates and had a greater number of church memberships than other racial ethnic groups. Even 40% of those with low religiosity (described as having not attended a church service since the age of 18), reported that they still prayed daily (Pattillo-McCoy1998). In comparison to Whites, Blacks held “more church affiliated” (Ellison and Sherkat 1995, 1415) memberships. Blacks also participate more frequently in religious related activities (Ellison and Gay 1990; Ellison and Sherkat 1995; Power 2005) which would lead one to question whether in this population, religion also affects attitudes about food and eating more than it does in other populations. Religion permeates every aspect of the Black culture. It has been found that in times of stress, high or low, this population chooses prayer more often as a form of coping than any other activity (Chatters et al. 2008). Furthermore, the “importance of prayer when dealing with stressful situations” was surveyed and 90.41% of Blacks responded that it was “very important” (Chatters et al. 2008, 379). Faith is a significant part of Black culture and because of that relationship, church is at the center of Black society.

Concepts of ethnic identity and ethnic awareness taught from the Black church in previous generations can still be seen today (Ellison and Sherkat 1995). These concepts include how to coexist with society, how to mobilize politically and how to move up socio-economically. Another reason for the strong influence of Christianity on cultural identity is the historical prestige and reputation the Black church holds within the community (Ellison and Gay 1990; Ellison and Sherkat 1995). When virtually no external resources were available, the church provided safety and respect. There has been a strong bond between black identity and religious identity (Hinton 2008). African Americans formed a united identity with the church centuries ago, during the 1700s, when religious practices had to be hidden (Ellison and Gay 1990; Ellison and Sherkat 1995). Church buildings were places that lacked oppression and had an abundant supply of hope (Hinton 2008). Thus, the church building itself was a concrete object Blacks could turn to in a shaky world.

The central hub of African American culture lies in religion (Ellison and Gay 1990; Ellison and Sherkat 1995). The church was a place organized and preserved for the enrichment of Blacks, through opportunities like educational enhancements (teaching them to read and write) and political advancements (rallying around political leaders). This deep-seated relationship has historically caused Blacks to rely on religion to guide life and to provide a sense of societal direction (Ellison and Gay 1990; Ellison and Sherkat 1995). Specifically in the South, world events, local debates, and political rallies all were arranged and promoted through religious involvement (Ellison and Sherkat 1995). This is where Black identity and the church began to merge (Ellison and Sherkat 1995). The Black church was somewhat parallel to a superstore, a place where everything one could need for growth was obtainable. It was a place to go for prayer, clothing, and sometimes shelter, but always for food. Furthermore, because of limited opportunities for upward social mobility, the leadership hierarchy within the church became a symbolic social ladder, further solidifying religion in Black culture (Ellison and Sherkat 1995). Only members who were the most involved could hold leadership positions, making participation become more of a necessity. Participation includes... “membership, attendance, service, and financial support” (Ellison and Sherkat 1995, 1417). Some members of the community who experienced this historical relationship firsthand may still be alive, sharing their stories and spreading the word about the support the Black church gave African Americans not so long ago. Many African Americans hold dear the support that the Black church provided over time and this type of historical bonding extends into current generations. Without understanding how these roles interact with each other, comprehensive studies on this population cannot be completed. This role extends much further than opening The Bible and reading with the congregation (Nelsen 1991). Political, social, and economic spheres develop from ideas taught and learned from the Black Church. Congregation members look for leaders in these arenas that most resemble themselves, in faith and affiliation (Nelsen 1991).

During slavery, it has been depicted that African Americans were forbidden from activities considered “enrichment” which included praising God and attending religious functions. This may have possibly been done because slave owners considered educated slaves a threat; one able to read and write would disrupt the “natural” order of life. From this oppressive atmosphere, the “invisible institution” formed secret church services held and operated by slaves (Ellison and Sherkat 1995, 1416). It was considered an honor to be a part of these institutions. For freed and escaped slaves, food became a symbol of “home” (Hinton 2008).
Filled with stories of triumph and victory of the meek, *The Bible* tells of miracles that likely helped slaves find inspiration. Following the days of the “invisible institution” and slavery, churches became one of the only private institutions Blacks could independently own and operate (Pattillo-McCoy 1998). This historical relationship symbolically transformed a simple building from a place of worship into a community beacon of social change, a concept that has continued until today.

During the Civil Rights era of the 1950s and 1960s, the sacredness of the Black church only deepened. Participation was a way to non-violently combat Jim Crow, a violent and dangerous practice imposed on African Americans of the 1950s and 1960s (Ellison and Sherkat 1995). During a time of racial inequalities and ever-changing regulations from outside influences, the church and its rules were a constant (Cavendish 2000). In spite of oppression and substandard education, Blacks had a place where they could still rejoice and read. Acting as a buffer to segregation, the church evolved into an institution for learning (Steensland et al. 2000), for banking, as a safe zone, and as a non-judgmental arena (Pattillo-McCoy 1998). Establishing church as a “safe house” led to the intermingling of religion and social ideas (Steensland et al. 2000). A rally around the church formed for this reason. Used as a way to show appreciation, to celebrate, to mourn, to soothe, and to rejoice, food rules are important to the African American’s everyday life.

"Finish it all": Food Rules and the Links to Religion

Puhl and Schwartz (2003) define food rules as rules, guidelines, or ideals learned about food and its consumption. These attitudes and ideas are learned young (McLain 2007; Mintz and DuBois 2002), and stay with individuals for a lifetime. Of the examples used in the McLain (2007) study about common food rules, “clean your plate” and “no dessert until you finish your vegetables” were the most common. Another rule that was present in this researcher’s home was, “Once you ask for it you have to eat it all.” Food rules contribute to the formation of societal norms by linking food to meanings; these meanings are connected to social issues through social constructs (Counihan 1992). This is important because these learned food-related social constructs influence how we view the world around us and how the world views us in it (Counihan 1992). A popular example of this idea can be found in the fast food industry. Synonymous with American capitalism, fast food emblems have taken on similar social constructs as food rules. Children who cannot yet speak can recognize McDonalds and Kentucky Fried Chicken logos (Arredondo et al. 2009). Because food is so easily manipulated, it begins to develop regional flares; flares that can represent an entire culture. With just its taste and color, food can act as a non-verbal communicator and representation of the preparer (Counihan 1992). This versatility has some religious roots.

Tracked back to the establishment of Christianity (McLain 2007; Mintz and DuBois 2002), the relationship between food and religion is one that is long standing (Grenfell 2006). Found both in writings and practices, food rules are present all through Christian life. From the opening passages of *The Bible* to its final chapter, there are symbols and imagery related to food (Hinton 2008). Baxter (2001) found that patients suffering from eating disorders have common justifications from religion that validate their addictions. These justifications may have come from modeled behavior that those patients observed while attending religious functions. Miles (1995) discusses the transformation food takes in the Christian faith, describing the most notable as the transformation of crackers into “the body” of Christ.

Within the Christian faith, a high ratio of religious functions center on or around food and eating; functions that require participation and promote food rules as a norm. Rules alter food from its pure nutritional function into a mechanism attached to emotional meanings. Congregation members are rewarded for eating with the crowd, which teaches social cues for eating instead of organic cues for hunger (Nelsen 1991). This teaches them to eat by sight (of food) or dictation (to eat when told) rather than by biology. Non-participation is not common due to the fear of isolation from the group (Nelsen 1991).

Examples about how food is used as a tool of control in Christianity have been chronicled in *The Bible*, such as in the story of Adam and Eve (Miles 1995). Eve, tempted by a serpent, eats the forbidden fruit, infuriating God, who forces both her and Adam into exile. In this story, food has the power, the control over the occurrences in life, and possesses “bad” qualities, qualities that humans naturally do not have. Only because of the consumption of this food does the disgrace happen. The disobedience of the food rules leads to human suffering. There is a parallel between Eve’s actions, which Christians believe caused no end to human suffering, and those of a modern patient with an eating disorder who, in an attempt to gain control, though a false control, manipulates food.

Christians also have a high number of group activities, much higher rates than other religions (Grenfell 2006). Christian celebrations and ceremonies all have symbolic meaning attached to them (Grenfell 2006) and participation in celebrations teaches norms and rules. According to Christian beliefs, these rules and norms establish preservation and salvation for the group. Some rules (observed by this researcher at these functions) include:

1) All members who attend must eat at a certain time (whether hungry or not);
2) Food is restricted to one area (whether appropriate for eating or not); and
3) Food is a privilege that God has allowed us to have, so none must be wasted, do not throw anything away.
Because of the enmeshment between ethnic identity and religion, the boundaries of where church ends and everyday life begins are blurred, which can make people feel a loss of control in their lives (Grenfell 2006). Trying to establish boundaries becomes hard, because little identity is formed outside of the group (Grenfell 2006). One finds it difficult to distinguish what is good for oneself and what is good for the group. It is possible that this reliance on the group creates feelings of resistance toward seeking help. Obtaining help could be viewed as a deviation from the group focus. Because of religion’s rigid guidelines, when people try to form rules outside that realm, they can feel out of control. In an attempt to gain inward psychological control, compulsive overeaters outwardly, consume their world through food (Grenfell 2006). These concepts are important in understanding eating disorders because it helps explain why Black Christians who are compulsive overeaters can endure in silence so long and find biblical justification for their addictions. Failing to understand the role cultural identity contributes to people’s thinking and behavior may be hindering further research on ethnic minorities.

“Just baby fat”: Food Rules and Eating Disorders
Food rules affect every aspect of daily eating (McLain 2007). Counihan (1992) studied college students in the U.S. and found that how food and eating are viewed stems from cultural backgrounds. From the cultural background of the southern Black church, there is no separation between social norms and religious expectations (Ellison and Sherkat 1995). Religious ideas enmeshed into cultural norms make non-adherence rare, and make church attendance almost an involuntary act (Ellison and Sherkat 1995). Pressures for church participation do not solely come from the church. Southern Blacks receive “encouragement” from family, neighbors, and friends (Ellison and Sherkat 1995). Most members participate one to two times a month. Those that attend weekly events less frequently still feel obligated to attend larger annual celebrations (e.g., Christmas celebrations, Easter events) (Ellison and Sherkat 1995). Separation from this norm is uncommon and when it happens, it is not a complete split (Ellison and Sherkat 1995). In other words, African Americans in the South still use faith in some aspect of their life even when church participation or attendance is low. When religious separation does occur, church is attended less for personal growth and more because of religious expectations (Ellison and Sherkat 1995) including the expectations around food rules.

McLain (2007) found a link between food rules and eating disorders. Prior eating disorder studies have been limited to anorexia nervosa and bulimia nervosa; the two most widely researched eating disorder topics (Wiederman 1996). Anorexia is characterized by excessive weight loss and self-starvation, while bulimia involves consuming larger amounts of food in a short time, followed immediately by purging (Power 2005). The most common form of purging for bulimics is vomiting (Power 2005). Recently added to the eating disorders spectrum are binge eating disorder (BED) and compulsive overeating (Power 2005). Power (2005) describes BED as a disorder similar to bulimia in that large quantities of food are consumed within a short period, but BED differs from bulimia in that there is no purging. Compulsive overeating is also similar to bulimia because food is consumed past individual comfort levels, but it is different from bulimia in the duration of the binge (Power 2005). Compulsive overeaters will continuously eat whether or not they are biologically hungry (Power 2005). Few studies cover binge eating disorders and compulsive overeating and even fewer link these eating disorders to food rules (McLain 2007; Mintz and DuBois 2002). Even fewer studies connect ethnic cultural practices to reasons of disordered eating, an area in need of further investigation.

“Who wants seconds?”: Compulsive Overeating
Influenced by learned behaviors, compulsive overeating is a newly recognized eating disorder. The development of compulsive overeating is the attempt by an individual to obtain inward control through outwardly consuming food (Roth and Armstrong, 1990). Roth and Armstrong (1990) found that women suffering from a pattern of disordered eating had low levels of perceived control in other aspects of life. Substituting for factual/concrete controls, individuals used eating as a false control (Roth and Armstrong 1990). This transfer of a false sense of control does not work; rather it leads to more feelings of being out of control. Compulsive overeaters consume food to calm feelings of angst caused by the fear of group isolation and anxiety caused by following the group (Nelsen 1991). The more restrictions on food, the more compulsive overeaters seek food, and the cycle continues. Suffering individuals are able to soothe anxiety by eating because food releases dopamine, the same brain chemical as in narcotic drugs (Fortuna 2012; Johnson and Kenny 2010). This chemical release may feel like a rush and may stop feelings of nervousness, but only temporarily. Increasing food consumption in response to food restrictions appears to drive a pattern of disordered, compulsive eating. Food is being manipulated into a mood altering substance that compulsive overeaters use to self-soothe and fill emotional voids (Roth and Armstrong 1990).

It has been established that most people suffering from eating disorders have a binge eating disorder (McLain 2007). Despite that fact, data base inquiries on the topic of binge eating yielded limited results and the relationship between binge eating and cultural influence has been largely overlooked (McLain 2007; Mintz and DuBois 2002). Few studies on eating disorders include how culture influences African Americans’ eating habits, and even fewer touch on issues of religion and food rules. Differing from other binge eating disorders in that there are no uses of purging techniques, compulsive overeaters usually are overweight, sometimes excessively. Compulsive overeating driven by cultural norms may...
be contributing to these numbers and to the increase in obesity in the African American community. According to the National Center for Health Statistics, in 2009 and 2010 African Americans out ranked any other ethnic group in their rates of being overweight or obese. This report goes on to state that in 2010 African Americans were one and a quarter times more likely to be obese than other ethnic groups (National Center for Health Statistics 2012).

**Hypothesis**

The hypothesized relationships presented in this article examine the possible connections between compulsive overeating binge eating, culture and religion. This researcher hypothesizes that high religious involvement in conjunction with the presence of food rules can result in African Americans suffering from compulsive overeating.

**Research Goals**

To promote understanding of the proposed relationships among religion, food rules, and compulsive overeating, this researcher developed a conceptual model to depict hypothetical links in the relationships among religious practices, food rules, and compulsive overeating. There are three main goals this researcher has in presenting the information in this article: 1) address gaps in previous research, 2) highlight hypothesized relationships among factors, and 3) show how relationships may build upon each other. The following list of questions helped guide this research through the exploration of the factors and led to the development of the model depicted in Figure 1 below.

1. What are food rules? How have prior studies defined them?
2. What is the definition of an eating disorder vs. disordered eating?
3. What is compulsive overeating?
4. What level of influence does religion have within the African American community?
5. How do food rules affect Christians’ patterns of behavior?
6. What relationships are present between food rules and cultural practices?
7. How do these foods rules found to be present influence cultural ideas about eating?
8. How do food rules appear in the eating habits of African Americans?
9. Are African Americans possibly experiencing compulsive overeating as an eating disorder?

**Conceptual Model**

Since the intersection of culture and religion has been neglected in previous research, it was necessary to construct an original model depicting the relationship between those aspects. Within Figure 1, there are three primary factors: (1) religion, (2) food rules, and (3) compulsive overeating. Theorized directional contributions of secondary factors also appear in Figure 1.

**Figure 1**

*Exploratory Model of Compulsive Overeating in the African American Community*

**Important Aspects to Consider**

This article’s content was specifically developed to explore certain factors. When using the information in this article to guide research, it is important to consider the primary findings, the assertions made in this article, and the methods by which further information should be gathered. This article highlights the fact that eating disorders other than anorexia and bulimia nervosa need exploration, an idea supported in the proposed model. In exploring eating disorders that affect ethnic minorities, cultural norms are an important influential consideration. Also established is that religion and food rules influence eating behaviors. Furthermore, the ideas that ethnic and cultural practices contribute to cognitive thinking about food (Counihan 1992), and that past oppressions still have social influence for African Americans (Ellison and Gay 1990; Ellison and Sherkat 1995; Power 2005; Stevensland et al. 2000) are important to identifying and understanding eating disorders that affect African Americans.

Exploring the intersection of cultural and religious influences on eating is important because it helps explain how ethnic minorities experience eating disorders. This model (Figure 1) infers that African Americans may suffer from compulsive overeating due to the strong impact that religion has on that culture (Ellison and Sherkat 1995). Also highlighted in the model (Figure 1) are both single and bidirectional arrows that show the expected directional relationships among factors. Each factor, primary or secondary, has a relationship with at least one other factor. Showing the hypothesized influence that these factors have on African American eating begins to help explain how religious practices may lead to compulsive overeating.
Understanding ethnic and cultural practices and past oppressions, and the influence they have on current mindsets, is important because these practices are linked to cultural identity. Preceding studies have failed to incorporate how societal interactions are influenced from the Black church. Future studies need to focus specific attention on gathering information about how the Black church and cultural identity link together and affect eating. This relationship began during slavery (Ellison and Gay 1990; Ellison and Sherkat 1995; Steensland et al. 2000) and overlooking this relationship will result in inaccurate, out-of-context information.

Expectations for religious involvement vary regionally and by congregation across the United States. Previous studies have shown that the highest concentrated area of religious involvement in the United States is in the southern region: “The Bible Belt” (Chatters et al. 2008; Ellison and Sherkat 1995). This area additionally holds the largest population of African Americans (Chatters et al. 2008; Ellison and Sherkat 1995). Gallup and Castelli (1989), Pattillo-McCoy (1998), and Power (2005), found that in general all African Americans pray more than other races or ethnic groups. Ellison and Sherkat (1995) and Ellison and Gay (1990) found that the southern region has the strongest retention of “traditional” Black church ideals. In the southern Black church, few separations between social and religious expectations exist (Ellison and Sherkat 1995). In southern churches, attendance is not as voluntary as it is for other portions of the nation (Ellison and Gay 1990; Ellison and Sherkat 1995). According to Chatters et al. (2008) “Among African Americans only, Southerners were more likely,... to endorse religious coping” (371). An example of religious coping is reverting to prayer to change hardship. Also, Ellison and Sherkat (1995) found that southern Blacks attended church “nearly every day” at a higher percentage than other Black populations. For this reason, studies exploring the hypothesized relationships among religion, food rules and compulsive overeating, need to include populations in the southern portion of the United States. Further recommendations regarding population selection include:

A. This article focuses on college-aged respondents because Counihan (1992) found that college students understand punishments and reward systems placed on food by parents.

B. The model was precisely designed to show the influence that the factors have with Black adult females. African American women are highlighted because of higher rates of obesity in this community than other racial groups. Also, this article is tailored to women because of the high rates of eating disorder cases in females compared to males.

C. Lastly, because there are few church leadership roles available to black females, this gender may be more likely than males to be affected by food rules. Traditionally, black women were pushed into the kitchen (cooking, preparing, and serving food) to offer a supporting role in the church as there were few formal leadership roles available to them (Ellison and Sherkat 1995).

This researcher believes that the most efficient way to collect data for this hypothesis is by employing the use of surveys and personal interviews. The use of both qualitative and quantitative data collection methods best reveals the existence of and strength of relationships between the various factors (for examples of questions by topic, refer to Appendix).

Limitations

Limitations of this paper can be divided into two general sections: perceived personal bias and lack of generalization. Personal bias may be perceived as a limitation due to the author’s personal characteristics. Because the author is both African American and Christian, the information and conclusions presented in this article may be viewed by some as biased. The inability to generalize relates to the fact that research reviewed for this article relied heavily on Christian practices as the religious component. While food rules are clearly present in other religions, the proposed model does not account for relationships between those other religions and cultural practices and how they may contribute to eating disorders. The Exploratory Model of Compulsive Overeating in the African American Community was designed to show the directional influence of the primary factors on Christian African Americans, not taking into account any other forms of religious beliefs that African Americans participate in.

Christianity heavily influences this culture, which may present limitations when trying to duplicate findings with another racial, ethnic, or religious group.

Related Research Questions

Future research aspirations include (all will pertain to African Americans):

1. What are the commonalities reported about what constitutes a dysfunctional family for the modern family?
2. How do food rules and dysfunctional families affect sexual anorexia and compulsive overeating?
3. How do eating disorders and sexual dysfunction co-exist as addictions?
4. What stigmas exist about receiving help for addictions and dysfunctions? How have these stigmas halted personal and community growth or development?
5. Has religion influenced higher educational objectives of women?
Research Implications

If research is able to demonstrate support for this model, society stands to learn three new ideas about the African American community: 1) Religious practices and food rules affect eating behaviors, 2) Religious practices and food rules influence compulsive overeating, and 3) Religious involvement contributes to eating disorders. Importantly, this model and proposed related studies will broaden cultural understanding and research on ethnic populations, specifically African Americans.

The benefits of using information contained in this article to conduct research are:
1. gaining cultural awareness;
2. expanding obesity prevention programs and eating disorder rehabilitation capabilities and
3. filling the research voids in the area of eating disorders.

References


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**Appendix**

**Religion**

1. What are some themes related to food that you remember from The Bible? Why do you think those stuck out to you?
2. How have religious food rituals been integrated into your adult life? (e.g., Sunday dinner, praying before eating)

**Food Rules**

1. What are common rules conveyed from your childhood pertaining to mealtimes?
2. Were there any rules from your family or the community about finishing food on your plate? Has this affected how much you eat now?

**Compulsive Overeating**

1. What messages, if any, were given to you about eating?
2. Can you describe the difference between feeling “stuffed” and feeling full? Do you typically stop eating at the feeling of being full?
The Effect of Video Games on Memory: A Meta-Analysis

Carmen Lidia Tavárez
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Abstract

There is an extensive amount of research on video games (VGs) and their effects on aggressive behavior in teens and children. However, research on the influence of VGs on cognitive abilities has been limited, but there are numerous articles suggesting VGs may enhance memory in both children and adults. Therefore, in this study, the researcher conducted a meta-analysis and used a Cohen’s d to measure the effect size of eight previously published articles to obtain a better understanding of the impact VGs have on memory in participants. The researcher hypothesized that there would be an enhancement of memory. Results indicate a positive effect on memory post playing a VG, regardless of the age, gender of the player, or the type of game played. Although the meta-analysis demonstrated a positive relationship between VG playing and memory, results were only based on eight peer-reviewed articles.

The wide-ranging amount of research that has been realized on the effects of video games (VGs) on cognitive abilities is overwhelming. Studies on memory (Roberts et al. 2011), attention (Irons, Remington, and McLean 2011), response time (Graves et al. 2007), executive control (Liu, Saito, and Oi 2012), and accuracy/processing speed (Dye, Green, and Bavelier 2009) can be found throughout scientific journals and on the internet. However, the results on whether or not playing video games enhance memory have been mixed.

Therefore, a meta-analysis will be utilized to collectively examine the results of eight studies, measuring the effect that video games have on memory subjects ranging from 10-65 years of age. The studies that were utilized in the meta-analysis had to meet criteria including the use of VGs (including interactive games such as Wii) as their independent variable and a measure of memory (spatial) as their dependent variable.

The use of VGs is growing in popularity throughout our society, especially in this decade, with the introduction of interactive video games like Wii and Xbox. Many argue that children who play VGs do not spend enough time on other important tasks such as homework (Williams 2006). When it comes to parents and educators, this topic regarding the use of VGs is controversial. However, some parents feel that their children benefit, and even learn, from VGs, while others feel that their children are being set back and not learning as well.

In reality, VGs play a different role in every life. Most students use them to take a break and to relax, but sometimes the games are more of a distraction (Richtel 2012). Others engage in VGs to exercise, learn, or even to connect to other individuals (Baxter 2011). The researcher of the present study defines a VG as an electronic game displayed on a screen, which involves the player to be able to visually see a screen and move items or characters that are displayed by using a device such as a remote or mouse. The types of screens VGs are displayed on can vary: TV, computer, specific game devices (PSP, DSi, etc.), or even a cell phone.

The age of the average gamer is 32 years, and two out of five gamers are female (Online education.net). This demonstrates that the demographics of the VG audience have expanded significantly in the past decade. This may be why so many studies are devoted to understanding the attraction VGs have to humans and how games stimulate the brain.

Liu, Saito, and Oi (2012) conducted research that explains the brain activity during a session of VG playing. In their study, they used the simulated activity of driving a car, which mimics a natural environment. During a turning period of the driving VG, the prefrontal activations of the left hemispheres were higher than before turning. Also, cerebral blood oxygenation changed in the prefrontal cortex (PFC). Their results indicate that brain activity enhances during a task carried out virtually over the same task carried out physically.

Other research replicates natural environments by using virtual ones as well. Baumeister et al. (2010) sought to find the brain activity of a simulated game of golf on a Nintendo Wii console system. Since the participants were more accustomed to a natural setting of golf, they had to activate unfamiliar cues to respond better during the golf game, which required more neuronal resources in their parietal cortex (Baumeister et al. 2010). This explains that brain activity occurs when performing a task, but when the task is simulated through an electronic device or a VG, such as playing Wii golf, the brain activity increases. Perhaps if playing Wii stimulates the brain, it may facilitate memory as well?

Some researchers have found that there is a benefit of playing VGs. Boot et al. (2010) explored what skills would transfer in different contexts of training rather than by the amount of practice during training. They had a group perform tasks in Full Emphasis Training (FET) and another in Variable Priority Training (VPT). FET and VPT had the same training, just different environments (physical vs. virtual). VPT used a VG (Space Fortress) which not only accelerated their learning, but also produced superior mastery of tasks involving manual control and memory. This shows that the VG aspect enhances the brain activity, thus possibly benefiting learning and memory.
Previous studies including a meta-analysis study conducted by Sherry (2001) found that the effect of playing violent video games increased aggression and had a small effect size with a Cohen’s $d = .30$ (424). Sherry’s meta-analysis was based on 25 articles retrieved from scientific journals, with a collective sample size (N) of 2722. The benefit of a meta-analysis is that it can take many studies collectively so there is a larger sample size to determine if there is a cumulative effect of size from many studies.

In summary, the research question for this study is whether or not VGs have a positive or negative impact on memory. Therefore, the purpose of this meta-analysis is to determine whether or not VGs enhance memory in those who play, or interfere with memory storage. The statistics and the number of subjects will be considered in the overall analysis. However, the type of VG, either interactive or non-interactive will both be included.

**Literature Review**

There are many past studies suggesting that playing video games improves cognitive abilities in both children and adults. When examining the effect these VGs have on memory alone, the researcher faced a challenge for this study. The broad amount of information available does not focus solely on VGs and memory, but on other cognitive abilities as well, such as attention, response time, performance, task-switching and emotional memories.

Many investigators have studied attention and how it is affected by VGs. Green and Bavelier (2003) found that attentional capacity is enhanced by VG playing after conducting two experiments with the same participants (between participants method). This is not surprising because in reality, when an individual is playing a VG, the concentration level is high, such that s/he may hardly notice those around them. Trying to get the attention of a video game player (VGP) away from the game can be a difficult task and annoying to parents and friends. When the player is concentrating, s/he not only focuses his/her attention, but can also keep track of multiple objects and tasks within the game. In Green and Bavelier’s (2003) experiments, VGs showed more accuracy and obtained better scores than Non Video Game Players (NVGPs). However, NVGPs gained the ability to enhance their attention due to the experiment.

Attention goes hand in hand with response time as well. If an individual is engrossed in a VG, they are more likely to respond faster than those who are not concentrating on a game. Green et al. (2012) studied response time between VGPs and NVGPs. VGPs had shorter response times than NVGPs. The researchers concluded that playing a VG makes one’s reaction time faster.

In the study conducted by Barlett et al. (2009), cognitive performance in the form of reaction time is measured. The findings display an increase in cognitive performance after five trials of a VG, each trial score higher than the previous one. However, the researchers found no significant difference in the scores of VGPs and NVGPs, indicating that the players had similar cognitive gain. Another finding of Barlett et al.’s (2009) research was that the amount of time spent on playing a VG did not significantly affect the final scores of the participants. This information is important to the present study because it reflects what the researcher seeks through the hypothesis of the effect of moderate VG playing on the chosen cognitive ability of memory. It does so in the way that VG playing will have a positive effect on memory with little time spent playing the VG.

VGPs tend to multi-task a great amount of time when engaging in a game. Green et al. (2012) call this ‘task-switching’. The authors state,

> Results demonstrate that the increased ability a VGP to switch was not restricted to the manual response mode that is likely highly over-trained in AVGPs [Average Video Game Players], but also generalized to vocal responses, which are not part of the typical game activities. The strong positive correlation across all subjects between manual and vocal response switch costs ($r = .59$) is also consistent with the idea that these tasks are tapping a similar underlying mechanism. (987)

This idea that VGPs can react to stimuli quickly, even novel stimuli, such as vocalization is also consistent with previous research indicating that VG playing enhances cognitive performance, possibly by stimulating the brain (Liu, Saito, and Oi 2012). Also, Green and his colleagues (2012) found that the average VGPs were more accurate on tasks as well as quicker. In addition, Garcia, Nussbaum, and Preiss (2011) found that VGPs performed better on a digit span test (the longest list of numbers a person can repeat back in correct order), which is included in part of the Wechsler’s Intelligence Scale for children.

In summary, the main cognitive ability the researcher focuses on in this current study is the influence VGs have on memory. Memory can be triggered or stored in different forms: short-term, long-term, verbal, visuospatial and emotional. Emotional memory is often triggered by images. Bowen and Spaniol (2011) utilized VGs to find which images aroused the participants’ emotional memory. They utilized violent, negative, positive, and neutral images within the VGs. Bowen and Spaniol (2011) found that the violent images rated more arousing than the rest. However, the researchers claim the number of images showed to the participants was too small, and the stimulation of memory cannot be directly linked to violent images.

Other research has focused on analyzing memory in the form of recognition. Seung-Chul and Peña (2011) studied the number of brands their participants
recalled after playing a VG. The brands (logos) were encountered during the
time of play of the VG. Seung-Chul and Peña (2011) focused on the difference
between a violent VG vs. a non-violent VG and found that the players engaging
in the non-violent games had a higher recall of brands. However, they could
not link this finding to the experience of play (amount of time spent on playing
the VG) participants, which reflects the present study’s hypothesis of moderate
playing. Maass et al. (2011) conducted similar research, but used a list of words
for the participants to recall instead of images. The results indicate an increase in
memory recall post playing a VG, with female participants scoring higher than
male participants.

Caglio et al. (2009) conducted a case study on a participant who had suffered a
brain injury and had damaged his verbal memory. With the use of a VG, which
virtually mimicked driving a car, the participant was given tests to enhance his
verbal memory. The researchers found that the participant’s verbal memory
improved significantly and even after months of the experiments, the verbal
memory remained stable. The participant’s score for the Rey Auditory Verbal
Learning increased from 0 to 3.

However, not all research has positive findings regarding playing VGs and
cognitive improvement. A study on computer gaming and memory load displays a
negative relationship between the two variables. Porter (1991) found significantly
negative results in the measure of memory load after his participants played the
VG and linked this to the participants’ verbal knowledge. Porter (1991) states,
however, that “there was no significant difference in subjects’ performance of the
side tasks itself across either practice or priority conditions” (7).

Other research presents similar results. Valadez and Ferguson (2012) researched the
effect violent VGs have on visuospatial memory and concluded that there was no
effect. The researchers stated, “the current study did not find evidence for a causal
link between violent video game exposure and visuospatial cognition” (Valadez and
Ferguson, 2012, 615). However, these findings could be due to the type of VGs the
researcher utilized. When subjects engage in an interactive game, spatial memory
indicates improvement (Richardson, Powers, and Bousquet 2011).

The purpose of this meta-analysis is to collectively analyze research that has
measured memory in VGPs in order to determine whether or not VGs enhance
memory in those who play, or interfere with memory storage. The researcher
hypothesizes there will be an enhancement of memory (positive effect).

Methods

For this study, a meta-analysis of previously published research was conducted.
Therefore, no human participants were necessary to collect data. In order to

Sample/materials

Eight published articles were used for this study. Each article met the criteria
of researching the effect of playing a VG on the cognitive ability of memory in
human participants. The participants within the studies were between the ages of
10 and 65.

Procedure

Each study was carefully analyzed to make sure it met the inclusion criteria. The
number of subjects and the strength of the relationship from each subject was
then recorded and used to calculate the overall effect of size using a Cohen’s d.

Results

A total of eight studies pertaining to video games and memory were obtained. Most
of the studies analyzed collectively utilized an ANOVA. Based on the F values
and df from each study, the formula below was used to establish an r value for each
experiment. A Fisher’s Z was then calculated (see Table 1) Z = .618+.05+.618+.05+
+.151+.151+.151+.485/8 = .28, which is equivalent to r = .273 (Rosenthal and
Rosnow 2008, 682). The overall effect of size or Cohen’s d was .50, indicating that
playing VGs have a moderate effect on memory in the subjects tested.
Table 1

Previously Published Articles: Authors, Sample Sizes (N), F Values (ANOVA) and r Values

<table>
<thead>
<tr>
<th>AUTHORS</th>
<th>SAMPLE (N)</th>
<th>F</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marina Krcmar, Kirstie Farrar, Rory McGloin (2011)</td>
<td>130</td>
<td>F(3, 76) =3.03</td>
<td>.04</td>
</tr>
<tr>
<td>Santha Kumari, Simerpreet Ahuja (2010)</td>
<td>400</td>
<td>F(1, 396) =443.16</td>
<td>.53</td>
</tr>
<tr>
<td>Eui Jun Jeong, Frank A. Biocca (2012)</td>
<td>30</td>
<td>F(2,537) =3.13</td>
<td>.006</td>
</tr>
<tr>
<td>Christopher J. Ferguson, Amanda M. Cruz, Stephanie M. Rueda (2008)</td>
<td>73</td>
<td>F (1, 70) =8.51</td>
<td>.11</td>
</tr>
<tr>
<td>C.S. Green, D. Bavelier (2006)</td>
<td>20</td>
<td>F(1, 18) =9.2</td>
<td>.33</td>
</tr>
</tbody>
</table>

Discussion

The meta-analysis resulted in a Cohen's $d$ of .50, indicating that playing VGs had a moderate effect and improved cognitive function in subjects tested. This suggests there is a moderate effect size indicating that playing VGs has some impact on memory. On the effect size scale of 0-2.0, .50 is only at a quarter of the scale. In order to have a significant effect size, the desirable results should fall anywhere from .70 and above. The $d$ of .50 is positive, but not significant. Therefore, the hypothesis of video game playing having a positive effect on memory was not supported.

Limitations

The researcher feels that the number of articles available to conduct this research (literature review and meta-analysis) was not enough. This could be due to the limitations of the databases the researcher had access to. Also, the time available to carry out the research (approximately four months) could have been another factor that limits the findings. In addition, the researcher included interactive VGs (e.g., Wii) and non-interactive VGs (e.g., Nintendo). Another limitation is the fact the studies included in this meta-analysis included experiments that measured spatial memory, Digit span memory and Group embedded figures tests (Garcia, Nussbaum and Preiss 2011) as well as Multiple object tracking test (Green and Bavelier 2006).

Direction for future research

Now that there is some evidence of the effect video games have on memory, researchers can set up experiments to further study this phenomenon and perhaps determine if interactive VGs on devices like Wii and Xbox are more likely to enhance memory compared to VGs on devices like Nintendo.
References


Posttraumatic Growth Themes: An Analysis of Oral Histories of OIF Service Members and Veterans


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Abstract

There is an ongoing growth of literature that examines the negative effects of war among service members and veterans of Operation Iraqi Freedom (OIF). For example, there have been unprecedented occurrences of posttraumatic stress disorder (PTSD) and traumatic brain injury (TBI) among those who have served in OIF. While these studies identify the deleterious effects of deployment in war zones, consideration of the possibilities of posttraumatic growth (PTG) related to war zone deployment may be beneficial. This study analyzes collections of oral histories for themes of PTG among veterans and military service members who served in OIF. An analytical template based on six themes taken from an abbreviated version of the Post-Traumatic Growth Inventory (PTGI) originally developed by Tedeschi and Calhoun (1996) is used. Using the PTGI model, this study contributes further data to the growing body of research that is attempting to address the possibility of positive effects of struggling with traumatic war zone experiences.


The war of Operation Iraqi Freedom (OIF) is one of the longest combat operations since Vietnam (U.S. Department of Veterans Affairs 2011). The OIF war was one of the first wars fought with an all-volunteer military force; most have served multiple deployments in combat (Hosek, Kavanagh, and Miller 2006). More than 1.64 million soldiers have served in the OIF war (Tanielian and Jaycox 2008). The effects of war on fighting forces have included psychological wounds. In fact, an estimated 25–40 percent have less visible wounds—psychological and neurological injuries associated with posttraumatic stress disorder (PTSD), traumatic brain injury (TBI), and other psychiatric disorders have developed post deployment (Hoge et al. 2004). The general mental health conditions commonly associated with the deployment have left an overflow of veterans and service members of the OIF struggling when searching for mental health care (Seal et al. 2010). These invisible wounds and conflicts of mental health care accessibility have been the focus of recent and increasing literature about today’s service men and women returning home from the war zones.

Efforts have been made in treating those who served in OIF and return with mental health conditions. In an attempt to address these unprecedented mental health needs, the Veteran Affairs (VA) agency has added 4,330 mental health enhancement positions and lightened clinicians’ caseloads (Yoss Horelle et al. 2011). In addition, the Department of Defense (DoD) implemented mandatory PTSD screenings that are completed upon return from combat and 3-6 months post deployment (Milliken, Auchterlonie, and Hoge 2007). The DoD implemented reassessment because clinicians have found that mental health issues may not surface until several months after the veteran’s return (Hoge, Auchterlonie, and Milliken 2006). Although there has been unprecedented attention and resources focused on addressing mental illness conditions (Defense Centers of Excellence 2007), more work needs to be done. Soldiers are not responding or accessing services due to barriers to care: access and stigmatization (Hoge et al. 2004).

Researchers have found that among the military service members who have returned from OIF and reported symptoms of mental illnesses, only a few more than half have sought treatment (Tanielian and Jaycox 2008). Even when soldiers decide to seek help, they are hindered by a lack of access. According to an assessment of the soldiers who served in the OIF war, National Guards and Reserve soldiers seemed to score higher in reported mental health problems than Active duty soldiers (Milliken, Auchterlonie, and Hoge 2007). This is concerning when one considers that approximately 40% of US OIF troops are Guard or Reserve service members (Milliken, Auchterlonie, and Hoge 2007). Active duty soldiers have ongoing access to health care, while reservist standard health insurance benefits (DoD) expire six months after return to civilian life (Milliken, Auchterlonie, and Hoge 2007). The National Guard and Reserve soldiers are mostly affected by the barrier of access; securing ongoing health care may be a more prevailing concern because of limited care (Hoge et al. 2004).

Stigma is another barrier that suppresses all military service members (Hoge et al. 2004). Over half of surveyed soldiers who tested positive for mental illnesses thought they would be perceived as weak, treated differently, or blamed for their illnesses if they sought help (Hoge et al. 2004); the soldiers thought seeking help would cause them to feel ashamed and embarrassed. Military culture and careers have been reported as a reason not to seek help. Some mental health treatments under present military policies trigger automatic involvement of a soldier’s commander, which can lead to negative career ramifications if the soldier fails to comply (Milliken, Auchterlonie, and Hoge 2007). Service members believe that seeking care will change others’ perceptions of themselves, threaten career advancement and security clearances, and cause possible removal from their unit (US DoD Task Force on Mental Health 2007).

There has been a large amount of research focusing on the negative effects of war, but recent research suggests that all effects of war do not have to result in permanent negative changes (Tedeschi and Calhoun 1996). There has
been a growing interest in studying the possibility of positive psychological changes after trauma. The term posttraumatic growth (PTG) refers to positive psychological change experienced as a result of the struggle of highly challenging life circumstances (Tedeschi and Calhoun 2004). Examples of PTG include a new appreciation of life, change in priorities, increased confidence, relating to others, and new positive spirituality (Tedeschi et al. 1998). In fact, there have also been studies exploring OIF service members’ experiences of PTG (Benetato 2011; Pietrzak et al. 2010). Such studies have utilized surveys and mental illness assessments rather than interviews with U.S. troops. This study intends to build on the PTG body of knowledge by adding an investigation of oral histories.

Recently there have been books published of oral histories shared by troops who served in OIF. For example, What Was Asked of Us: An Oral History of the Soldiers that Fought in it by Trish Wood (2006) provides a collection shared by service members who had deployed to OIF. Analysis of oral histories of U.S. service men and women opens up a new way to identify themes of PTG that may emerge from experiences of war. Content analysis of narratives enables the researcher to identify emerging themes from the personally recounted stories of OIF service members. This research project analyzes a collection of oral histories from Wood’s (2006), What Was Asked of Us: An Oral History of the Soldiers that Fought in it for themes of posttraumatic growth among veterans and military service members who have served in OIF. Through this analysis, the researcher addresses the following question: Is it possible for soldiers and veterans who served in the OIF war to have experienced posttraumatic growth when overcoming post traumatic experiences of war and combat zone deployments?

**Literature Review**

Though studies are slowly increasing in the area of positive growth after trauma, the deleterious effects of war trauma most definitely remain. Therefore, to fully understand PTG it is necessary to identify the types of trauma which create opportunities for posttraumatic growth among OIF service members. The following literature review includes a brief discussion of psychological wounds of war, barriers to care, background of PTG and PTG among combat service members.

**Psychological Wounds**

Studies of recent military operations in OIF have found that deployment stressors and exposure to combat result in considerable risks to mental health. The primary psychological wounds of war are posttraumatic stress disorder (PTSD), traumatic brain injury (TBI), substance abuse, major depression, suicidal thoughts and anxiety (Hoge et al. 2004). For example, mental health issues can be estimated to range between 16% to 49% for anyone who has been deployed (Tanielian and Jaycox 2008). PTSD, in particular is thought to affect 11% - 20% (U.S. Department of Veterans Affairs 2011). PTSD can occur after exposure to a traumatic event like combat, assault, or disaster. While stress and anxiety are typical reactions to trauma, more severe and unrelenting symptoms can result in a diagnosis of PTSD (U.S. Department of Veterans Affairs 2011). Symptoms of PTSD vary from person to person, but essential features include re-experiencing trauma, avoidance, and hyperarousal (National Council on Disability 2009). Re-experiencing trauma is the most disruptive of the symptoms of PTSD, and it involves flashbacks, nightmares, and intrusive memories of the disturbing event. A noise, an image, certain words, or a smell can trigger a memory of the original traumatic event. Avoidance refers to evasion of thoughts or activities that could remind them of the traumatic event. In addition, they may lose their ability to experience pleasure and they can become nonresponsive. Hyperarousal is the experience of being constantly in danger. Experiencing increased arousal may disrupt sleep, to irritability and anger, and impair concentration. Most recent estimates of PTSD among those who served in OIF indicate that 11% - 20% may be suffering from PTSD (U.S. Department of Veterans Affairs 2011).

TBI is the signature injury of the OIF war, with blast related brain injury as the most common (Elder and Cristian 2009). Improvised explosive devices (IEDs) have proven to be the major cause of blast injuries in OIF and have been estimated to be responsible for approximately 40% of coalition deaths and TBIs in returning soldiers (Elder and Cristian 2009). TBI can cause changes in a person’s ability to think, control emotions, walk, or speak, and can affect sense of sight or hearing (Cernak et al. 2001). The full extent of the TBI among soldiers is not fully known but it is estimated that approximately 22% of wounded service members of the OIF wars have experienced TBI (Bowling and Sherman 2008).

Other psychiatric injuries found among OIF soldiers and veterans include anxiety, depression (Bowling and Sherman 2008) substance abuse, and suicidal thoughts (Voss Horrell et al. 2011). A study of 1,700 Army and Marine personnel who had served in OIF found that 15%-17% met criteria for major depression and anxiety disorder (Hoge et al. 2004). There have also been a percentage of service members that have experienced high levels of anxiety post deployment. This has been seen as a result of their need to be on guard and alert during combat (Bowling and Sherman 2008). Depression often emerges, during the process of reintegrating into civilian life (Bowling and Sherman 2008). Common depressive symptoms often include fatigue, failure to concentrate, sleep disturbance, social withdrawal and suicidal thoughts (Hoge et al. 2004).

Substance abuse (alcohol and illegal drugs) often emerges post deployment as negative coping mechanisms (Hoge et al. 2004). In a study of 88, 235 US soldiers returning from OIF, 56,350 active duty soldiers were assessed for substance abuse, and 6,669 reported alcohol abuse (Milliken, Auchterlonie, and Hoge 2007). Out of these, 6,669 soldiers, 134 were referred to treatment, and only 29
actually followed through with an alcohol abuse treatment program (Milliken, Auchterlonie, and Hoge 2007). One prominent reason for lack of follow up with referrals is the lack of confidentiality under military policies (Milliken, Auchterlonie, and Hoge 2007). Suicidal thoughts and suicidality have emerged as a significant problem among those who have been deployed to OIF (Hoge, Auchterlonie, and Milliken 2006). While it is difficult to measure the number of veterans who have suicidal thoughts, a recent study found a substantial number of suicides among OIF Army service members (Bowling and Sherman 2008). Bowling and Sherman (2008) conducted a survey of OIF Army soldiers and found that 13.1 per 100,000 committed suicide. Suicide rates were higher for all Army soldiers with approximately 19.9 per 100,000 suicides confirmed (Bowling and Sherman 2008).

Barriers to Care

Service members (Active, Guard, and Reserve) have a variety of health care coverage including Civilian insurance (Medicare, Medicaid, or private insurance), VA, DoD, or they may be uninsured (Hoge et al. 2004). Even though service members have access to care, each health care system has fallen short in delivery of care (National Council on Disability 2009). A large percentage of OIF veterans rely on civilian insurance because a large amount of the soldiers are Reservist or National Guard and their care eventually expires (National Council on Disability 2009). As a result, many providers treating these service members are not part of the military or VA system, and may not be familiar with the unique needs of the military population (National Council on Disability 2009). Relative to Active duty service members, members of the National Guard and Reserve have limited access to military health services (US DoD Task Force on Mental Health 2007) because their military health services benefits expire once they return to civilian status. Civilian insurance is the final option after military benefits expire and due to lack of military treatment competency among civilian providers, this may not guarantee access to quality mental health services (National Council on Disability 2009).

The VA operates the nation’s largest integrated health care system with over 210,000 employees and has given care to millions of veterans at 157 VA Medical Centers and 875 community based outpatient clinics nationwide (National Council on Disability 2009). However, there is a concern that the VA is not geographically accessible to all veterans. According to the VA, over 92% of enrollees reside within one hour of VA facility, and 98.5% are within 90 minutes, which offers very limited or no mental health care services (National Council on Disability 2009). In addition, Guards’ and Reservists’ access to VA services is limited for only 24 months after they return from deployment. Active duty service members have ongoing health care for deployment related problems (Milliken, Auchterlonie, and Hoge 2007).

The DoD provides health care to over 8 million service members. The DoD medical health system ensures service members “readiness” for deployment and provides medical “benefits” and support to service members (National Council on Disability 2007, 39). The Standard DoD health insurance benefits for Guards and Reservists include 180 days of premium-free coverage (Milliken, Auchterlonie, and Hoge 2007). While Active duty soldiers receive ongoing care, once Guards’ and Reservists’ benefits expire they must pay for additional coverage (National Council on Disability 2007). In addition, there is also a concern with DoD’s shortages of mental health care providers because they are spread about military bases and deployment missions (National Council on Disability 2007). Some service members may have to wait weeks or months for available appointments (National Council on Disability 2007).

Mental illness despite centuries of research is still perceived as an indulgence, a sign of weakness (Byrne 2012). Self-stigmatization has been described, and there are numerous personal accounts of psychiatric illness, where shame overrides even the most extreme symptoms and prevents those who suffer from receiving treatment (Byrne 2012). The stigma of mental illness also affects many soldiers, preventing them from accessing mental health care. Often experienced as a sense of shame or discredit, stigma often results in marginalization from one’s peers (Byrne 2012). While mental illness has long been stigmatized in society, military members carry an additional burden as it relates to stigma and psychological wounds.

The additional potential for such stigma is found in the significant training that service members receive that steadfastly grounds them in their branch’s military core values. For example, the core values of the Marines are Honor, Courage, and Commitment and are considered to be the foundation of each Marine’s character (U.S. Marine Corps 2012). Honor requires that each Marine live life according to the highest standards of moral and ethical conduct (U.S. Marine Corps 2012). Courage is the moral, mental and physical strength that is ingrained in each Marine. The guardian of all other values, Courage drives the Marine to hold the highest of personal standards and to act under great stress (U.S. Marine Corps 2012). Commitment is the spirit of determination found in every Marine and compels them to never accept defeat (U.S. Marine Corps 2012). The core values of Marines and other military branches are honorable and provide the foundation to act under the stress and pressures of war, but these same values may also hinder service members from seeking help (National Council on Disability 2007). For instance, an Army survey of soldiers who served in OIF, found that male soldiers who met the screening for mental disorders express concern that they would be seen as weak and 40% believed that their commanders would blame them for the problem (US Army Surgeon General 2008). Reducing the perception of stigma and barriers to care among military should be a priority for the military, health care systems and clinicians who are involved in providing care for those who have been in war zones.
Posttraumatic Growth and the PTG Model

The notion that people can grow psychologically in the aftermath of trauma is not new. Some studies have explored the phenomenon known as posttraumatic growth (PTG) (Tedeschi and Calhoun 1996) but others have used different terms. The present research uses the term PTG (Tedeschi and Calhoun 1996) as the ability to increase one level of positive change following traumatic experiences. PTG has been observed in various trauma-experienced populations, including survivors of medical illnesses (cancer and HIV/AIDS), rape, disasters (Tedeschi and Calhoun 1996), and military service members (Benetato 2011). Trauma can be experienced by all and can be a catalyst for personal and social transformation (Tedeschi and Calhoun 1996). Studies that are more recent have developed a model to measure PTG. The Posttraumatic Growth Inventory (PTGI) (Tedeschi and Calhoun 1996) assesses the positive changes reported by people who experienced traumatic events. The PTGI model points to five categories of growth: new appreciation of life, change in priorities, increased confidence, better acceptance of how things play out, and new positive spirituality. Tedeschi and Calhoun (2004) argue that PTG is more than moving beyond the ability to resist and not be damaged by traumatic experiences: it is personal and psychological growth that moves the individual past pre-trauma levels. According to Tedeschi (1999), survivors of trauma often self-report positive changes in identity, philosophy, and goals. Through Tedeschi (1999) examining survivors’ narratives, he concluded that trauma survivors report skills of wisdom and empathy; however, in contrast, he stated that individuals who do not grow from trauma develop the damaging effects from anxiety, depression and PTSD.

Posttraumatic Growth of Combat Service Members of OIF Wars

Researchers have been interested in comprehending PTG among survivors of traumatic combat experiences. One of these examined PTG among soldiers who deployed to combat in the Operation Enduring Freedom (OEF) and OIF (Pietrzak et al. 2010). The authors surveyed 272 combat veterans and used the PTGI to analyze data. Findings indicate that 72% of study participants showed significant PTG in at least one of the six dimensions of PTG. The most common areas of growth were found in the PTG dimensions of changing priorities about the important areas of life (52.2%), appreciating each day (51.01%), and ability to cope with difficult situations (48.5%). Results of hierarchical regression analysis revealed that younger age and increased feelings of being supported were significantly associated with PTG (Pietrzak et al. 2010). Another survey based on OEF-OIF veterans focused on soldiers with amputations (Benetato 2011). The focal point of the survey was on the amputees’ social support received and self-reflection of their traumatic experiences (Benetato 2011). The strongest correlation was between PTG and self-reflection; the veterans showed PTG through a way of responding to and comprehending their distresses (Benetato 2011). Benetato (2011) found that the relationship between social support and PTG was particularly small. These studies suggest that the support soldiers receive from their unit members or in other social relationships helps in the development of positive growth.

The concept of PTG is being researched among a diversity of traumatic events from divorce and death to natural disasters and terrorist attacks (Haidt 2006). More recent studies have begun to identify the PTG effect among OEF-OIF service members. Many of these studies either interviewed or surveyed OEF-OIF veterans as the method of data collection (Benetato 2010; Pietrzak et al. 2010). No published studies, however, have examined PTG in OIF soldiers and service members’ analysis of oral histories of their traumatic experiences. Is it possible for soldiers and veterans who served in the OIF war to have experienced posttraumatic growth when overcoming posttraumatic experiences of war and combat zone deployments? This study addresses this research question.

Research Design

This study, an exploratory research project, is best conducted using a qualitative research design. The qualitative design is best suited for this project because so little is known about posttraumatic growth in general and specifically among soldiers and veterans who have been deployed to combat. In addition, and perhaps most significantly, this researcher wishes to give voice to the subjective experiences of these military service persons and the qualitative method allows for this process.

Methodology

This is a research project that used qualitative methodology to examine the research question. This researcher chose to analyze entries in the oral histories published in the book What Was Asked of Us: An Oral History of the Iraq War (Wood 2006) because the book consists of the personal stories written by soldiers of the OIF war. What Was Asked of Us: An Oral History of the Iraq War is a collection of oral histories that captures various personal narratives told by men and women who served in the OIF war. This study analyzes eight randomly selected oral histories from this collection. A qualitative research method is used to explore these oral histories for themes of PTG. Specifically content analysis of the stories is used to identify themes of PTG.

To examine the oral histories of OIF service members, the method of qualitative content analysis is used. The narratives are analyzed for themes of posttraumatic growth. Qualitative content analysis is a research method that involves analyzing and interpreting qualitative data such as interviews and written accounts in order to discover emergent meaningful patterns descriptive of a particular phenomenon (Auerbach and Silverstein 2003).
Sample
In the present study, eight oral histories of OIF service members were used. These oral histories were selected from the text, *What Was Asked of Us: An Oral History of the Iraq War* (Wood 2006). The text contains forty-one oral histories that reflect experiences which occurred between the dates of March 2003 through April 2006. Due to the limitations of this study, it was not possible to analyze all of the oral histories in the book. The researcher identified the sample of eight oral histories by randomly selecting eight narratives from *What Was Asked of Us: An Oral History of the Iraq War* using Mads Haahr’s (1998) Dice Roller. The Dice Roller is a form of rolling dice virtually. For every chapter in the book the researcher virtually rolled dice. The number of dice that would be rolled was determined by the number of personal narratives in each of the 4 chapters in the book. For example, in chapter one there were only five narratives, so only one die was rolled. The researcher virtually rolled one die for chapter one and it landed on two indicating that the second narrative in that chapter was to be selected for analysis. The same process was repeated to select the remainder of the sample of oral histories.

Assessment Instrument
To analyze the collection of oral histories for themes of PTG this researcher used the main thematic dimensions of the Posttraumatic Growth Inventory (PTGI) (Tedeschi and Calhoun 1996). There are five main thematic dimensions in the PTGI model that this study used as the template for identifying PTG themes within the personal narratives (Tedeschi and Calhoun 1996). The five dimensions of PTG are New Possibilities, Relating to Others, Personal Strength, Appreciation of Life, and Spiritual Change. The thematic dimension, New Possibilities, represented the process of engaging in positive change and making meaning of trauma. For example, discovering positive aspects of oneself that they did not realize before the trauma is a new possibility. Relating to Others represented the ability to accept needing others and having compassion for others. Personal Strength is defined as being positively affected by personal evaluations of competence after a traumatic experience. The category Appreciation of Life is demonstrated by making a change in personal value of life and appreciation of everyday. Lastly, Spiritual Change is represented by the ability to struggle and make sense of trauma, which can lead to a strengthening of personal beliefs.

Data Analysis
The process of content analysis as developed by Auerbach and Silverstein (2003) in their text, *Qualitative Data* was used to analyze each of the eight oral histories. The researcher developed a template consisting of the five main thematic categories of the PTGI. Each oral history was analyzed for any content that related to any of these PTG dimensions. In addition, the oral histories were analyzed for any themes of posttraumatic growth that may or may not fit one of the PTGI dimensions. Following the procedure of Auerbach and Silverstein (2003), themes were identified through the process of data coding and grounded theory, which were derived from and grounded in, service members’ personal narrative understandings. Data coding is a procedure of first organizing the relevant text of the oral histories, and discovering patterns of themes within the relevant text. It was through the coding process that the researcher found recurring themes that represented PTG amongst the service members’ narratives.

The process of data coding as outlined by Auerbach and Silverstein (2003) is depicted in Figure 1. Figure 1 shows the process of how the researcher analyzed the data by using the coding procedure. After the oral histories (raw text) were selected by the Dice Roller method (Haahr 1998), each narrative was then read through and analyzed for relevant text that reflected PTG. Once the relevant text information was identified, it was then analyzed for repeating ideas that were emergent in the relevant texts. The researcher found that the service members had similar themes of PTG emerging from their narratives. These similar themes reflected the dimensions of Tedeschi and Calhoun’s (1996) five thematic dimensions. The final step was to identify the thematic dimensions that represented PTG amongst OIF service member’s experiences.

**Figure 1**

*Process of Data Coding*

Source: Auerbach and Silverstein, 2003.

Findings
The findings of this research are contextualized along with repeating ideas and themes found within the eight raw texts of oral histories sampled from *What Was Asked of Us: An Oral History of the Iraq War* (Wood 2006). The main purpose
of this study was to address the research question: Is it possible for soldiers and veterans who served in the OIF war to have experienced posttraumatic growth when overcoming traumatic experiences of war and combat zone deployments? The content analysis of the eight oral histories revealed that themes of PTG emerged. Using the template of the Tedeschi and Calhoun (1996) dimension of PTG, the analysis found PTG themes reflecting four of the five dimensions. In addition, another dimension emerged. The researcher will discuss the themes that emerged from analyzing the narratives and explain the significance of the posttraumatic growth from the soldiers’ combat experiences.

**Discussion**

**New Possibilities**

The first thematic dimension of Tedeschi and Calhoun’s (1996) themes of PTG was new possibilities. PTG can be seen though individual identification of new possibilities. A new possibility theme that emerged from the data was that of understanding the enemy. The OIF service members were putting into perspective their own feelings of their enemy during their traumatic experiences. The personal narratives expressed their frustration of being in Iraq but they also expressed that they had to really put themselves in the enemy combatants’ and the Iraqi peoples’ situations. The narratives expressed that they coped with some traumatic experiences by allowing themselves to observe the situation from the perspectives of the enemy and the Iraqis who were being invaded by Americans. For example, Justin LeHew (Marine) expressed “When we assaulted Kuwait, we were pushing Iraqi forces out of a country they had invaded. But now we are invading their country, and so if somebody’s coming into my backyard, why should I surrender?” (Wood 2006, 17). Being able to make an effort to understand why a traumatic event is in progress is a sign of PTG. Establishing personal interpretations of a traumatic experience can keep service members safe. The service members expressed traumatic events where they risked their lives to keep the Iraqi people safe. Tania Quinones (Army National Guard) was a part of the team that operated a diner exchange where people traded their money because it was not worth anything in Iraq during the war. She expressed “We are making their lives really difficult, and they’re pissed at us, and I’m pissed that they’re pissed at me because I’m trying to help them out. At the same time I’m pissed that we’ve put all this on them....” (Wood 2006, 69). Tania’s open-minded emotion of what the Iraqi people were experiencing reflects self-reflection needed in developing PTG. The personal narratives expressed efforts in understanding the enemy will in the end keep them safe because once they comprehend they will be able to better protect themselves from traumatic experiences and harm. A new possibility like understanding an enemy is a PTG coping strategy to help manage distress and doubts of why the service members were even fighting in the war.

**Appreciation of Life**

The second thematic dimension captured the idea that appreciating life coexists with positive thinking. Service members expressed positive thinking and living in the moment. An increased appreciation of life is a personal change in what is important when someone has experienced a traumatic event. Daniel B. Connoir wrote about his experience of witnessing Marines that were blown up in their vehicles. He expressed that “It’s just a matter of luck that you are not that guy. No one wants to be that guy, so you beat around in your head how lucky you are” (Wood 2006, 220). It is not uncommon to have a feeling of being lucky. Seth Moulton (Marine) expressed that “there is a part of it, because of the adrenaline rush and excitement, that you can even enjoy. So you don’t commiserate about your predicament, you make light of it. You can joke about the most terrible thing...Gee, its great to be alive; I’m one lucky son of a bitch with a grin on your face” (Wood 2006, 128). Even the smallest things increase the service member’s value in their appreciation of life. Witnessing and participating in actions of war zones can create a positive outlook and joy in life. Gregory Lutkus expressed he “always liked riding in the turret just because I thought it was the wildest to be in this country that most people have never seen before, and you’ve got the blast of this sweltering heat in your face...I just thought it was so cool that we were getting to be here” (Wood 2006, 82). Turning traumatic experiences into positive experiences by focusing on controllable experiences rather than uncontrollable situations is a key factor in PTG. Lutkus expressed in his narrative about uncontrollable traumatic experiences and coped with it by having a more positive outlook. He said “...I’m glad that we all got him out of there. And that’s going to have to be – it’s got to be good enough for me to go on with my life. Otherwise, I’ll spend the rest of my time analyzing it and I just try to get past it” (Wood 2006, 87).

**Personal Strength**

A general sense of individual resilience or recognition of possessing strengths is a theme of PTG that emerged from the personal narratives. The service members were faced with traumatic experiences and showed resilience when under pressure. Tania Quinones and her partner were being surrounded by sharp concertina wire and a huge group of angry civilians advancing towards them. She found strength within herself and said “You bet your ass I’m going to fight my way out” (Wood 2006, 68), even though it was insane and they nearly got trampled. Another expressed the same feeling of resilience “I would say that was one of my proudest moments of my entire career. That in that kind of a hellish situation, we got everybody, and we turned north to go up Ambush Alley” (Wood 2006, 25). Another common theme of personal strength among the service members was the ability to accept the way things worked out. The service members had strong mentality that “Right now there’s this cold and calculated side of war that just accepts tragedy for what it is, and
Pride represents a positive attachment toward one’s own or another’s choices and actions, or toward a whole group of people. For example, in the Marines, Mortuary Affairs is tasked to recover the bodies of all fallen soldiers. Daniel B. Cotnoir (Marine of Mortuary Affairs) expressed “The Marines always get their guys off the battlefield; we always remove those that are killed” (Wood 2006, 111). Another Marine, Justin LeHew was on site of an AAV tank accident to help with triage. Triage is the process of sorting victims. During the process of triage LeHew went to pull a Marine out and his upper torso separated from his bottom half. LeHew did not hesitate and reacted by saying “Put this in the back of the Humvee because Marines don’t leave our dead and wounded on the battlefield; everybody comes home. Even if it’s a piece of you, I have responsibility to your mom and dad to bring everything back” (Wood 2006, 22). The service members expressed great pride in being in the military because they saw their caring acts as just doing their part as a Marine.

Other personal narratives expressed pride in their branch through positive sense of attachment: their duty to care and be able to depend on others (military peers). Themes of pride emerged in their narratives as the ability to depend on others in time of danger. Gregory Lutkus (Connecticut Army National Guard) was on a battle field and taking care of an injured soldier. He was surrounded by gun fire and suddenly Marines and Army arrived and secured where he and the soldier were located. Lutkus expressed that he “remember[ed] looking up and seeing all these people were here to help this one soldier. And they didn’t know the soldier; they didn’t know anything about him. But they were all here to help us. It kind of got me a little choked up because they’re putting their lives on the line now” (Wood 2006, 85).

Methodological limitations of this study include a small sample size which limits generalizability of the findings. More research using a larger sample which includes oral histories of OEF and Afghanistan is needed to further explore the themes of PTG. Despite these limitations, this study is among the first to analyze OIF oral histories for PTG. This study was exploratory in nature and the results support the experiences of posttraumatic growth. All of the thematic dimensions that emerged from this study bring to light the different experiences and perceptions of PTG. However, the presence of growth does not necessarily signal an end to psychological wounds accompanied by traumatic experiences. It is important to know that service members facing devastating tragedies do experience positive growth arising from their struggles. Research on preventative treatment could enhance PTG and influence positive outcomes, such as resilience to traumatic stress in the military. Additional research is needed to examine some pre-trauma characteristics in order to further the development of PTG among military members who experience combat.
References


Beyond the Slots:
Exploring Cultural Narratives within California Indian Casinos

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Abstract

Some tribal communities have begun to use their gaming facilities as venues for cultural exhibits, a phenomenon that dovetails with two pieces of federal legislation. Passage of the Indian Gaming and Regulatory Act (IGRA) provides federally-recognized tribes with the opportunity to establish casinos; while the Native American Graves Protection and Repatriation Act (NAGPRA) enables them to reclaim objects of cultural patrimony held by museums. Some gaming tribes, like the Mashantucket Pequot, have used a portion of their gaming revenues to embark upon sophisticated projects of cultural self-representation. This research explores the extent to which similar projects exist in California Indian casinos and can be understood to serve as tribal alternatives or intermediaries to actual museums. The researcher conducted fieldwork at twelve North-Central California casinos and created a typology of representational forms to aid in analysis. Findings demonstrate that tribal gaming facilities instantiate one site of contemporary California Indian cultural production.

The history of California Indian conquest is unique in comparison to the rest of the United States, mostly because the United States government never ratified the treaties it made with California Indian groups (Phillips 1996). This meant that the land originally delineated in the treaties for these California Indian groups was never granted despite having signed these treaties. However, a major victory occurred for California Indians with the U.S. Supreme Court decision supporting the Cabazon Band of Mission Indians in *California v. Cabazon Band of Mission Indians* (Darian-Smith 2004; Lane 1995). This ruling opened the door for California Indians to have a means to promote economic growth and create revenue through the creation and use of gaming facilities. IGRA in 1988 followed suit and allowed for the creation of American Indian casinos (Darian-Smith 2004; Lane 1995). Gaming was seen as a way to hopefully improve the impoverished conditions that indigenous people had endured within their communities for centuries (Goldberg and Champagne 2002). These facilities have been used as a means to establish economic independence (Darian-Smith 2004). Despite the fact that not all tribes are recognized by the federal government (and
unrecognized tribes cannot have a casino), many Indian casinos now draw visitors from across the state and country.

This research explores the possibility that gaming facilities are being used as a means for cultural self-representation. Specifically, this study examines gaming facilities within North Central California. Casinos are public venues that provide revenue for local indigenous peoples and can potentially be used to express Native American identity. The portrayal of Native Americans within the context of a museum space has been a topic of great concern and controversy among and between anthropologists and indigenous communities (Clifford 2004; Jones 1993; Lonetree 2006). Therefore, it is important to investigate the degree to which Northern California Native Americans use gaming facilities to engage in cultural representation, creating an identity within a non-museum public space.

**Literature Review**

This literature review covers an array of topics pertinent to understanding the importance of cultural self-representation. It is organized chronologically, providing historical context to the evolving relationship between anthropologists, museums, and indigenous communities. It continues by demonstrating the various attempts to represent indigenous communities and finally, the intersection of two public venues: casino and museum.

**Historical Relationship between Anthropology, Museums and Indigenous People**

To understand the tension between anthropologists, museums, and Native Americans, one must look at the origins of the discipline, especially the role of museums and anthropology in the conquest and colonization of indigenous peoples around the world. From the 15th to 19th centuries, European countries expanded their territories through exploration and discovery (Asma 2001; Mihesuah 2000). Asma (2001) outlines the birth of various scientific disciplines, including anthropology, out of the broader field of natural history. Natural history was based on the development of knowledge gained by collecting and classifying biological, geological, and cultural material specimens from all over the world. While conquest and colonization had obvious political and economic benefits for imperialist countries, they also benefitted the development of science (Asma 2001).

Two venues that promoted new scientific knowledge were world fairs and expositions (Castaneda 2008; Henare 2005). Rydell (1984) traces the history of world fairs held in the US between 1876 and 1916 as sites for the display of imperial prowess. By the mid 1800s, world fair exhibits included displays of colonized people and their material culture (Rydell 1984). Museums like the Field Museum, the Smithsonian Institution, and the National Museum played important roles in collecting material culture for exhibits that were intended to teach the public the latest about the “primitive” people and places under colonial rule. Imperial nations, like the United States and Great Britain, competed with one another to develop the most impressive displays (Rydell 1984). Anthropologists collected material and developed exhibits that sometimes put living colonized people on display. For instance, Rydell discusses the US “Philippine” exhibit at the 1904 World’s Fair, which featured an entire Igorot village, complete with Igorot tribesmen (Rydell 1984).

**Collecting**

As a part of the collecting trend that emerged out of exploration and conquest, wealthy private collectors also took part in purchasing various items that were locked away in storerooms and private museums. Private collections often developed into private museums. Whether private collectors had hired anthropologists or not, by this time, American Indians had come to associate museums with the ethnographers who studied them (Krech and Hail 1999; Mihesuah 1998).

In the 19th century, anthropologists developed a theory of unilinear cultural evolution that ranked all societies along a continuum that ranged from Savagery to Barbarism to Civilization (Stocking 1974; Thomas 2000). Collecting and organizing the material culture of so-called savage societies was deemed necessary for the cause of “proving” this scientific theory (Henare 2005; Thomas 2000). Thomas (2000) also demonstrates how this process worked to help develop both museums and the discipline of anthropology. Nevertheless, even when new theories of multi-linear cultural evolution emerged as superior explanations for cultural differences, collecting continued for different reasons. For instance, as American Indian societies started to change under pressure of missionaries and government efforts to acculturate them, anthropologists began to see them as vanishing societies that needed to be documented for science before they completely disappeared (Thomas 2000). This mentality led to a period of salvage ethnography, in which anthropologists scrambled to collect and study everything they possibly could, from myths and artifacts, to even live people; in this way, anthropologists imagined they were salvaging indigenous culture (Castaneda 2002). Harper (1986) looks at the history of one such living exhibit housed in the American Natural History Museum. Originally brought back from Greenland by explorer Robert Peary, an Inuit named Qisuk, along with other Inuit, was “given” to the museum as part of this collecting trend. Qisuk was kept as part of the museum and when he died, his remains stayed as part of the museum’s collection. Only after Harper’s legal efforts were the remains of Qisuk and others repatriated; that is, transferred to the lineal descendants, culturally affiliated tribes, and Native organizations (Harper 1986).
Another classic example of salvage anthropology involves Ishi, a Yahi Indian found and later taken to be studied by Alfred Kroeber at the University of California, Berkeley (Kroeber 1961). Kroeber was interested in Ishi because Ishi appeared to be authentic and not acculturated like other Indians. Kroeber and his colleagues worked directly with Ishi up until Ishi’s death, upon which Kroeber sent Ishi’s brain to the Smithsonian to be preserved (Clifford 2004; Scheper-Hughes 2004), despite knowing how Ishi wished his remains to be treated. This decision demonstrates that the anthropology of the time adhered to the ideas that indigenous people were vanishing and thus must be studied and preserved.

These ideas, that American Indians were primitive, savage, and disappearing from the face of the earth, helped to romanticize Indians among the mainstream public (Mihesuah 2000). This romanticization further exacerbated the tension between anthropologists and indigenous people (Jones 1993). Continuing through the 18th century onward, another product of the colonization process was the false concept of a single “Native America” (Lawlor 2006). The stereotype of the “Indian” became pervasive, embedded within American, non-Native culture. There is enough material culture from throughout American history that depicts this romanticized stereotype, from children’s toys to sports mascots to marketing campaigns for products, all depicting the generic construct of “Indian” (Castaneda 2008).

**Collaboration**

Nearly a century after the collecting trend of world fairs, NAGPRA called for the repatriation of ancestral remains and cultural patrimony (Bruchac 2010; Graham and Murphy 2010; Rose, Green and Green 1996). Cultural patrimony, as defined by NAGPRA is:

An object having ongoing historical, traditional, or cultural importance central to the Native American group or culture itself, rather than property owned by an individual Native American, and which, therefore, cannot be alienated, appropriated, or conveyed by any individual regardless of whether or not the individual is a member of the Indian tribe or Native Hawaiian organization and such object shall have been considered inalienable by such Native American group at the time the object was separated from such group [25 USC 3001 (3)(D)].

Since NAGPRA’s enactment in 1990, a significant amount of literature has looked at the new relationship between anthropologists and American Indians that passage of NAGPRA has helped to create. For instance Rose, Green, and Green (1996) explore how the passage of this act has affected the field of osteology (the study of bones) and brought forth an increase in the specimens being studied by osteologists. They go onto discuss how this act looks at the history of osteology and how it has provided funding and opportunities to improve relationships with Native Americans (Rose, Green, and Green 1996).

Graham and Murphy (2010) investigate and document, upon the occasion of the 20th anniversary of NAGPRA, how NAGPRA has played a key role in improving the relationships between tribal representatives and museums. Graham and Murphy (2010) use the relationship that developed between the American Museum of Natural History and the Caddo Nation of Oklahoma, and between the Confederated Tribes of the Grande Rhonde Community of Oregon and Kootznoowoo, Inc., as examples of these growing relationships. These cases provide a tribal perspective on how some Native Americans look at the issue of repatriation (Graham and Murphy 2010).

Mihesuah (2000) provides archeological, cultural, and Native American perspectives on the changing relationships between anthropology and indigenous groups. The changing dynamic in power relations that repatriation spurred is particularly apparent in the new Museum of the American Indian (NMAI), which opened in 2004 (Isaac 2006; Lonetree 2006). The NMAI is the largest museum in the United States housing indigenous artifacts and exhibits (Isaac 2006; Krech and Hail 1999). In Krech and Hail (1999), Clara Sue Kidwell traces the collecting career of George Heye, whose fortune allowed him to develop one of the largest private collections of American Indian materials in the United States. Heye displayed his collection to the public in a private museum, The Museum of the American Indian, but after he died, the museum struggled financially for many decades and eventually his collection became the basis for the NMAI. For many Native Americans, having a Smithsonian museum dedicated to them represented real progress, especially since they were asked to collaborate in the development of exhibits and other programming (Krech and Hail 1999).

**Cultural Self-Representation**

Beyond the issue of having their deceased ancestors and artifacts removed from their communities and locked away in museums, American Indians have also expressed frustration with the ways that they are portrayed in exhibits (Lonetree 2006). Museums—so often seen by the public as representatives of science—have long engaged in the misrepresentation of Native cultures and histories as static and unchanging, thus bolstering the stereotypes Native Americans fight so hard to escape. Lonetree (2006) argues that for many indigenous people, museums are still sites of trauma. She also notes that museums leave out much of the true history involving indigenous people, especially controversial issues such as their genocide (Lonetree 2006).

The rise of collaborative exhibit development as a strategy for the NMAI and other museums across the country coincided with a growing academic movement to decolonize academic disciplines and methodologies. Indigenous
activist scholars like Smith (1999), who is Maori, and Mihesuah (1998), who is Comanche, have explicitly targeted anthropology and other social sciences for reform. Mihesuah’s (1998) work is a collection of perspectives on the research that has been conducted on Native Americans by Native scholars. These perspectives provide critical insight about the way Native Americans have been represented in academia and they call for a change in the relationships previously established with Native Americans (Mihesuah 1998).

Smith (1999) examines the history of research and how it is connected to colonialism and imperialism. She emphasizes the way in which the connection between research and colonialism/imperialism has tainted social scientific research and notes that many indigenous communities associate research with the legacy of colonialism (Smith 1999). However, she also shows new ways to express knowledge to make sure that research conducted also benefits the indigenous people that contributed to the research (Smith 1999). Smith is a proponent of collaborative museum and exhibit development; which includes the idea that research projects should benefit the communities being studied (Smith 1999).

Fienup-Riordan (1999) collaborated with the Yup’ik Eskimo community to produce the exhibit, Agayuliyararput (Our Way of Making Prayer). This exhibit, which traveled to three different museums, provides an example of the collaboration occurring between Native communities and anthropologists. Clifford (2004) also examines collaborative efforts among anthropologists and indigenous communities. In Looking Several Ways: Anthropology and Native Heritage in Alaska, Clifford refers to Fienup-Riordan’s discussion of “heritage,” and how it is important to creating a “conscious culture” (as quoted in Clifford 2004). Looking Several Ways featured both elder and scholarly interpretations, and was successful in showing Alutiiq cultural heritage collaboration between anthropologists and indigenous people.

The debate continues as to whether or not tribal collaboration with Western-style museums is appropriate. However, collaboration represents an important opportunity to move beyond the limited sphere of small tribal museums in reservations. Simpson (1996) documents and describes the differences between traditional and tribal museums. Tribal museums are typically small, remote, and underfunded. Simpson (1996) characterizes tribal museums as collaborative efforts of non-Native people with Native people. As an example, Simpson (1996) considers the development of a community museum for the Ak-Chin community, in Arizona, which was created as a way to preserve Ak-Chin material culture. The museum is not limited to traditional exhibits, but rather is used to both preserve and maintain the Native culture (Simpson 1996). Members actively participate in language classes and collecting archival items like photographs; in this way, the museum serves as part educational center and part traditional museum, working to ensure that cultural knowledge is preserved and passed on to future generations (Simpson 1996). Tribal museums and cultural centers like that of the Ak-Chin are valuable, as both independent and collaborative ventures. While some of these sites are small, remote, and still underfunded, others are gaining in size and popularity based upon gaming revenues.

Tribal Gaming and Self-Representation
While NAGPRA gave tribes hope for the return of ancestral objects, lack of sufficient economic resources often makes it difficult to claim, store or display such items. IGRA, enacted in 1988 (Goldberg and Champagne 2002), states that 70 percent of gaming revenues must be reincorporated into the community, promoting economic development within these typically disenfranchised and fiscally-challenged communities. Thus, Indian gaming led to a rise in political power for many tribes, creating an opportunity for well-financed self-representation (Cattelino 2009, 2010). The timing in the creation of these casinos coincides with a period in which NAGPRA is helping Indians to reclaim what has been stored away in museums. To date, there are only two scholars who have conducted in-depth ethnographic studies of the relationship between gaming revenues and cultural self-representation: John Bodinger de Uriarte and Jessica R. Cattelino.

Bodinger de Uriarte (2007) looks at the difference between the commercial representation of the Pequot in their casino, and the more ‘academic’ representation of their culture in the Pequot Mashantucket museum, which was made possible by the revenues generated by their very successful Foxwoods Casino. Cattelino (2008) provides a full-scale ethnography of the Florida Seminole tribe’s development of economic and political sovereignty through their early and very successful operation of bingo, and later casino, operations. While Cattelino’s (2008) ethnography touches on how casino funding has helped the tribal museum, Ah-Tah-Thi-Ki Museum, and language revitalization efforts, she does not explore the role of cultural exhibits in Seminole casinos, as either a precursor or alternative to a tribal museum or cultural center. The present project aims to do this in North Central California.

This research explores the intersection of IGRA and NAGPRA to reveal how they have created the opportunity for indigenous people to engage in self-representation. Economic fortunes have resulted from IGRA and have brought some tribes revenue not only to improve reservation housing and healthcare, but also to preserve languages and lifeways and to be further able to interpret their culture through tribal museums that they fully control (Cattelino 2008). NAGPRA has brought forth a return of material culture to tribes and has allowed indigenous people the right and choice on how to represent their culture. This research aims to discover the extent to which exhibits and displays
in California Indian casinos exist and can be understood as tribal alternatives or intermediaries to actual museums.

Methods

The methodology consisted of fieldwork conducted at California Indian casinos. Fieldwork involved discovering and documenting a variety of material references to Native culture in California Indian casinos. These ranged from subtle abstractions embedded within the casino to museum-style displays and exhibits. Fieldwork focused on qualitative data collection. To create a sample, the researcher surveyed casinos within a 3-hour driving radius from the researcher’s home institution, in Sacramento. The website www.indiancasinos.com was used to establish the geographic radius. Fieldwork was conducted on three separate days and involved the researcher documenting various forms of representation through field notes and photography. No photographs were taken of the people inside the facility (casino staff or patrons). Field notes were used to record additional information regarding the various representations. For instance, in cases involving material culture, the researcher recorded artifact type, cultural attribution, and whether or not an explicit interpretive paradigm (economic, historic or social) was present. Based on this information, the researcher organized the data according to cultural content. The first level of analysis involved creating a typology of representational genres indicating various elements at the casino that incorporated cultural representation. The second level of analysis examined the representations as references to either the tribe’s own ancestral heritage or to a generic American Indian/pan-Indian theme.

Findings

The present study examines 12 casinos within North-Central California, including: Black Oak Casino, Cache Creek Casino, Chukchansi Gold Resort and Casino, Colusa Casino Resort, Feather Falls Casino, Gold Country Casino and Hotel, Jackson Rancheria Casino and Hotel, Red Hawk Casino, Rolling Hills Casinos, Table Mountain Casino, Thunder Valley Casino and Win-River Casino. The data are organized into two tables, each showing the casinos and their affiliated tribes. Table 1 presents the data in the context of physical form, while Table 2 categorizes the data according to its affiliation with either ancestral heritage or pan-Indian motifs.

Table 1

<table>
<thead>
<tr>
<th>Casino Name/Tribal Affiliation</th>
<th>Decorative Elements</th>
<th>Architectural Elements</th>
<th>Exhibits/Displays</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Oak Tuolumne Band of Me-Wuk Indians</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Cache Creek Yocha Dehe Wintun Nation</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Chukchansi Picayune Rancheria of the Chukchansi Indians</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Colusa Cachil Dehe Band of Wintuks</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Feather Falls Concow-Maidu of Mooretown Rancheria</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Gold Country Tyma Maidu Tribe Berry-Creek Rancheria</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Jackson Rancheria Jackson Rancheria Band of Miwuk Indians</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Red Hawk Shingle Springs Band of Miwok Indians</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Rolling Hills Paskenta Band of Nomlaki Indians</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Table Mountain Table Mountain Rancheria: Chukchansi Mono Tribe</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Thunder Valley United Auburn Indian Community</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Win-River Redding Rancheria: Pit-River, Yana and Wintu</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

The following definitions clarify the data categories utilized in Table 1.

Decorative elements are items that are used to decorate the casino that have some form of association with native culture. Such items include, but are not limited to light fixtures, paintings, and signs.

Architectural elements are any cultural representations related to the architecture and layout of the casino, including the building interior, exterior and landscaping. Fountain designs, pillars, and railings are examples of such elements.

Exhibits/displays are any items found within a display case present, anywhere in the casino, used for the purpose of educating the public or commemorating heritage. Most of the displays include material culture such as...
as basketry, mortars and pestles, drums, and any other items that pertain to the specific native nation associated with the casino.

As Table 1 demonstrates, decorative elements were present at every casino site. Architectural elements were present at one-half, with a one-third of the casinos having actual exhibits and displays.

Table 2

<table>
<thead>
<tr>
<th>Casino/ Tribal Affiliation</th>
<th>Tribal Ancestral Representation</th>
<th>Generic/Pan-Indian Representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Oak</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Tuolumne Band of Me-Wuk Indians</td>
<td></td>
<td></td>
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<tr>
<td>Cache Creek</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Yoche Dehe Wintun Nation</td>
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<tr>
<td>Chukchansi</td>
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<tr>
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<tr>
<td>Colusa</td>
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<td>X</td>
</tr>
<tr>
<td>Cachil Dehe Band of Wintuns</td>
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<td></td>
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<tr>
<td>Feather Falls</td>
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<td>X</td>
</tr>
<tr>
<td>Concow-Maidu of Mooretown Rancheria</td>
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<tr>
<td>Gold Country</td>
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<td>X</td>
</tr>
<tr>
<td>Tyme Maidu Tribe Berry-Creek Rancheria</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Red Hawk</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Shingle Springs Band of Miwuk Indians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rolling Hills</td>
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<td>X</td>
</tr>
<tr>
<td>Paskenta Band of Nomlaki Indians</td>
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<tr>
<td>United Auburn Indian Community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Win-River</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Redding Rancheria: Pit-River, Yana and Wintu</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data in Table 2 classify the documented instances of representation according to whether they reference the tribe’s ancestral heritage or a more generic, pan-Indian identity. These two categories are defined as follows:

**Tribal Ancestral Representations** pertain to the tribe or tribes that are affiliated with the casino. Examples include cultural items such as baskets, language use, and mortars and pestles.

**Generic/Pan-Indian Representations** involve a more stereotyped or generic reference to Native peoples. Examples include dream catchers, feathers, and “Indian” headdresses.

Table 2 demonstrates that the two categories of cultural representation are not mutually exclusive. One-half of the casinos featured both tribal ancestral representations and generic/pan-Indian representations. One-fourth of the casinos had only generic representations present, whereas the remaining one-fourth featured specific instances of tribal representation.

For example, the Black Oak Casino affiliated with the Tuolumne Band of Me-Wuk Indians, houses a cultural exhibit within the structural pillars at their casino buffet. The pillars are solid, with the middle section made of clear tubing that displays various tribally-specific items, including acorn sifters, baskets, mortars, and pestles. Each pillar comprises a different exhibit, clearly labeled along with a description of what the items are used for. Throughout the casino, baskets are used subtly as décor, but they are very prominently featured in museum-style exhibits near the buffet.

As one enters the Feather Falls Casino, affiliated with the Mooretown Rancheria of Concow-Maidu, there is no denying the presence of material culture as a direct representation of the tribe. On the left side of the lobby, photographs of the Tribal Council members line the wall. Juxtaposed on the right, one encounters a historical exhibit. Placards telling the story of the Concow-Maidu peoples line two display cases housing a basket, a hand drum and bone ear spools. Photographs of historically significant Concow-Maidu community members are displayed on the wall nearby. Above the second set of doors leading into the casino, a colorful mural features four men, in dance regalia, overlooking their ancestral landscape. In the corner, an eagle’s head draws one’s eye away from the men illuminated in the foreground, to the mountain, skies, and eagle itself. On the casino floor, one encounters a generic Indian representation in the form of a neon bow and arrow sign marking the entrance to “Bow and Arrow Lounge.”

The Gold Country Casino also houses various representational forms. Structural pillars throughout the gaming floor feature oversize abstractions of Maidu baskets that join the pillars to the ceiling, drawing the eye from the busy casino floor upward to these clearly cultural references. Scattered across the ceiling are massive light fixtures that incorporate large basketry motifs. As one takes the stairs to the second floor, metal arrows, complete with feather fletching, form the banister and railings. On the second floor of the casino is a prominent, museum-style basket exhibit flanked by two Frank Day paintings. Day is a well-known Concow Maidu artist who painted aboriginal historical scenes (Dobkins 2000). A historical photograph centered above the exhibit and a personal message from a prominent elder to his fellow tribal members is probably the most notable element of this display. In contrast with more...
tribally-specific representations is the casino’s logo, which features the image of a bear visible through the webbing of a large dream catcher.

The Win-River Casino on the Redding Rancheria of Yana, Pit-River and Wintu bands, embodies a variety of representational elements. As one approaches the casino, one encounters an “Indian Burial Ground,” preserved in front of the casino that has been clearly fenced off and labeled as such. In the distance, one can see the casino, with a large Wintu basket sculpture fixed atop the roof. Inside the facility, more basketry is incorporated as part of the décor. Win-River’s logo is also rendered in the form of a basket weave pattern. This casino makes specific reference to the tribe’s ancestral heritage through the use of multiple cultural references in the architecture and décor.

Discussion

This research sought to discover the degree to which gaming tribes might be using the public venue of the casino as a site for exhibiting traditional arts and material culture in museum-style educational and celebratory contexts. More specifically, the research aimed to discover whether the legislative confluence of IGRA and NAGPRA might be inspiring gaming tribes to exhibit cultural heritage in their public gaming facilities and ultimately to develop their own museums. Fieldwork yielded a far more complicated image of cultural representation, not all of which can be understood as cultural self-representation. While some tribes clearly exhibit objects of cultural heritage and contemporary artistic expression, gaming facilities often feature numerous other references to American Indian culture. While some facilities had no museum-style exhibits, the findings outlined in the previous section demonstrate that examples of cultural representation were present at every site, however subtle and abstract. That cultural representations of any kind are present in California tribal gaming facilities is perhaps the most striking and significant finding of the research. Leaving aside for the moment the equally important issues of why, by whom, and to whom these representations are being made and targeted, the very fact of their presence deserves discussion.

By making any reference to Native heritage, casinos become sites of cultural production, reproduction, and consumption. That is, the public encounters and engages, whether consciously or not, with imagery, textual information, and material culture that either bolsters or challenges popular cultural notions and stereotypes. Further research is necessary to discover the varied intentions behind these cultural representations, but it is important to acknowledge that casino patrons encounter, and thus consume, them. A range of interpretive responses to representations that invoke ancestral heritage, pan-Indian motifs, and a combination thereof is discussed below.

Museum-style exhibits and displays, when present, were typically situated near the dining establishments on the gaming floor. These exhibits usually featured tribally-specific material culture, such as baskets, grinding tools, musical instruments, and traditional gaming items. While the location of the exhibits may be similar from one venue to the next, each exhibit offered more cultural “content” than manifested in the material culture alone. A distinct narrative was produced at each casino exhibit. In one instance, labels incorporated aboriginal translations for object names, alongside English language wording. Descriptive labels provided a social or economic context for the featured items. Some artifacts related directly to traditional food and means of subsistence, like the processing of acorns. Others explained games and the significance of the beads and shells associated with them. Historical narratives were another component that accompanied some of these exhibits. These narratives took form through art, photographs, and explanatory text panels. These narratives provided a tribal history; sometimes sharing the story of their ancestors as an acknowledgement of their often misrepresented past. Other exhibits used text panels and placards to welcome their patrons, conveying the tribe’s hope that the exhibit served as a reminder to all that this venue is part of their tribal lands and assets. This use of indigenous language and descriptive text provided a voice for the community by allowing them to comment on and inform others about their histories and cultures. The very nature of these exhibits constituted an educational environment created for the public. Deliberate use of this venue by the tribe to teach the public demonstrated that tribes recognize their gaming facilities as more than just places for economic self-determination. These exhibits, while not present in every casino, demonstrated that many tribal communities engage in museum-style cultural self-representation in their gaming facilities.

Baskets appeared to be the most frequently referenced object of traditional material culture deployed within California Indian casinos, but use of basketry is not limited to museum-style exhibits. Basket motifs are often incorporated as borders on signs or as decorative elements atop rows of slot machines. Incorporation of baskets throughout these gaming facilities is also embodied in large-scale sculptural representations, lighting fixtures, and carpet designs. These representations range from realistic to highly abstract, such as the use of a weave pattern in the carpet design. The use of baskets is present on such a grand scale that the public cannot help but consume these representations, baskets are clearly deployed as explicit references to California Indian culture and heritage.

Other cultural references also demonstrated thoughtful consideration by tribes, including use of aboriginal language, information about tribal government and even ancestral burial grounds. For example, one gaming facility lines the road up to the main entrance with welcome signs in English, Spanish, and Miwok. Upon leaving this casino, one encounters tri-lingual “thank you” signs. Language can serve as a powerful reminder of one’s specific culture. Here, tribes are not only making reference to their own languages, but also acknowledging the languages of many of their patrons. Displays that feature the photographs and titles of tribal council members reminds the public that they are on sovereign land, reflecting...
yet another way in which these gaming facilities are seen by tribes as more than just economic institutions. At least one gaming facility deserves further discussion for the fact of its presence on the group’s ancestral Rancheria lands. This casino’s ancestral burial site is situated between the entrance off the main road and the parking lot of the gaming facility. While this element falls outside the scope of the typology of cultural representation, it must nonetheless be recognized as an instance of cultural reference. The fact that it is protected and clearly labeled signifies its importance, and one can hope that the public understands this visible reminder of the respect Native people hold for their ancestors.

The examples above demonstrate the richness and complexity of the tribally-specific representations found at many of the gaming facilities. However, some casinos feature only generic, pan-Indian references to culture, the most common being the use of feathers. These are found as chandelier light fixtures, incorporated into carpet patterns, or embedded in casino logos. Even more revealing are instances where highly caricatured depictions of Native Americans are present in the casino. For instance, these include a wooden Indian head bust with exaggerated features and feathers adorning long, pulled-back hair, and a casino logo sporting a facial profile with similarly exaggerated features. Gift shops cannot be overlooked for their relevance to issues of cultural representation. They often include merchandise that is clearly “American Indian-inspired” T-shirts with wolves, Native-themed artwork, dream catchers, and plenty of feather and beaded jewelry fill these shops. These generic, stereotypical representations of American Indians seem to represent important merchandising opportunities, drawing on the romanticized imagery associated with Native Americans to court patrons to spend dollars on and off the casino floor.

However, more often than not, these more generic examples are found in combination with tribal ancestral representations. Such combinations may be seen in casinos that incorporate both discrete, museum-style exhibits showcasing tribal heritage, alongside more generic/pan-Indian logos or gift shop signage featuring California Indian basketry, but having only dream catchers and feathered jewelry for sale inside. There are various ways to interpret the simultaneous presence of these two different types of representations. The simplest response to this combination of imagery is to note that such representations are contradictory and send mixed messages. An alternative response is to note that while they appear to be contradictory, in fact, they may reflect a host of historical and contemporary realities, including:

- That corporate entities deploy this stereotyped romantic material to appeal to the public (i.e., as seen at gift shops), and/or
- That contemporary tribes are not bothered by the use of this imagery as it simply supports their economic self-determination (i.e., they separate their own heritage and cultural practices from their revenue-generating operation) and/or

Cultural production and consumption occurs in many public forums. Museums and cultural centers are traditionally recognized as the principal sites of deliberate cultural representation. However, cultural production and consumption can occur in non-traditional venues as well, especially in venues that are already associated with culturally-distinctive communities. Tribal gaming facilities exemplify this reality, as economic venues associated with California Indians. The complexities of these findings call for further investigation. Are there economic reasons for culture in casinos? Are corporations and/or tribes playing into the romanticization of Indigenous peoples? What is the level of involvement of cultural committees in the decisions about cultural content in the context of the casino? Interviews with tribal members and elders will help to answer some of these questions. Equally important will be research designed to find out how patrons variously interpret the material and the extent to which stereotypes are being challenged or reinforced at casinos. This researcher hopes to expand on the study through longitudinal research that will explore the evolution of tribal museums and gaming facilities as sites for the production and consumption of culture.

Conclusion

Representations of Native culture are consistently present and visible within California Indian casinos. The gaming facility comprises a distinctive context of indigenous cultural representation. Whether documented instances of cultural self-representations are designed to educate the public about ancestral tribal heritage or are economically-motivated representations of Native peoples as stereotypical others designed to appeal to romantic stereotypes of American Indians held by the casino-going public; it can be argued that tribal gaming facilities instantiate one site of contemporary California Indian culture. Representations shape the way we view and understand the world; they can buttress or collapse preexisting orientations, attitudes, and behaviors. For this reason, it is important to acknowledge and critically examine all contexts of representation. This is particularly true in the case of indigenous communities. Indigenous communities have suffered from pervasive prejudice and discrimination, and have struggled to gain self-determination. Given this history, it is important to recognize how these communities—as they become politically empowered by IGRA, NAGPRA, and the new possibilities and contexts for self-representation embodied in both tribal museums and/or gaming facilities—negotiate the challenges associated with balancing their tribe’s varied economic and cultural concerns. This study underscores the need for further research to understand how Native and non-Native casino patrons engage with and respond to the cultural imagery and narratives they encounter in gaming facilities.
References


