2001 AAPP Monograph Series

John McFadden
*University of South Carolina* - *Columbia*, jmcfadde@mailbox.sc.edu

Terry Carter
*University of South Carolina* - *Columbia*

Brian L. Johnson
*University of South Carolina* - *Columbia*

Christopher Leevy Johnson
*University of South Carolina* - *Columbia*

Tracy Harrell Dunn
*University of South Carolina* - *Columbia*

*See next page for additional authors*

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Authors
John McFadden, Terry Carter, Brian L. Johnson, Christopher Leevy Johnson, Tracy Harrell Dunn, Joyce D. Jackson, Robert Ware, Shundelle Tjuan Dogan, Phyllis Weaks Sanders, Sirena C. Hargrove, Michael D. Amiridis, Maxime Henry, Vicki M. Young, Phyllis I. Perkins, and Monique E. Davis

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*The Benjamin Elijah Mays Professor*  
*Director, African American Professors Program*  
*College of Education*

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FOREWORD

It is a pleasure and an honor to write this foreword to the African American Professors Program monograph. It represents the work of developing, young, African American scholars and future professors who will fill critical needs within American universities, e.g., the need to provide professorial diversity among the ranks of professors in the United States of America, as well as the necessity to replenish the general reserve of professors who will continue to diminish in the near future due to attrition.

Dr. John McFadden, Director of the African American Professors Program at the University of South Carolina, has done an excellent job in administering a fine program toward the recruitment and development of future African American professors. His efforts certainly would not have been possible without the support of the University of South Carolina, the efforts of the South Carolina General Assembly, and the dedicated funding from the W. K. Kellogg Foundation. As editor of this fine monograph, Dr. McFadden has pulled together talented graduate students who have authored a variety of chapter titles reflective of their respective academic disciplines.

Upon reading the manuscripts, I find it appropriate to commend the graduate students for their creative issues, command of knowledge in their fields, and the conceptualization of their individual chapters. Equally, I applaud and salute faculty mentors and the Program Director for mentoring these student authors toward developing and honing their chapters to final products for publication. The chapters within the 2001 African American Professors Program monograph contain a wide array of themes that reflect scholarly topics from the disciplines of applied sciences, business, education, health and biomedical science, English, literature, the arts, statistics, social work, and technology. Surely, the publication serves as a testimony of excellence as well as a platform for demonstrating the promise of future American scholars and professors across the ranks of academe.

Frederick D. Harper, Ph. D.
Professor, Howard University
Managing Editor
International Journal for the Advancement of Counselling

AFRICAN AMERICAN DOCTORAL STUDENT DEVELOPMENT ix
PREFACE

The African American Professors Program (AAPP) at the University of South Carolina is pleased to produce this premier edition of its annual monograph series. It is fitting that the program assume a leadership role in promoting scholarly products that will prove to be useful in future research efforts by faculty and students in higher education.

Scholars who have contributed manuscripts for this monograph are to be commended for adding this additional responsibility to their academic workload. Writing across disciplines adds to the intellectual diversity of these papers. From neophytes, relatively speaking, to an array of very experienced individuals, the chapters have been researched and, comprehensively, written.

AAPP was created in 1997 under the leadership of Drs. Aretha B. Pigford and Leonard O. Pellicer, Department of Educational Leadership and Policies. It was designed to address the underrepresentation of African American professors on college and university campuses. Its mission is to expand the pool of these professors in critical academic and research areas. Sponsored by the University of South Carolina, the W. K. Kellogg Foundation, and the South Carolina General Assembly, the program recruits students with bachelor’s, master’s, and doctoral degrees for disciplines in which African Americans, currently, are underrepresented.

An important component of the program is the mentoring experience that is provided. Each student is assigned to a mentor professor who guides the student through a selected academic program and provides various learning experiences. When possible, the mentor serves as chair of the student’s doctoral committee. The mentor, also, provides opportunities for the student to team teach, conduct research, and co-author publications. Students have opportunities to attend committee, faculty, and professional meetings, as well as engage in a range of activities that characterize professional life in academia. Scholars enrolled in the program, also, are involved in programmatic and institutional workshops, independent research, and program development.
The establishment or genesis of this monograph series is seen as responding to an opportunity to be sensitive to an academic expectation of graduates as they pursue career placement and, also, one that allows for the dissemination of AAPP products to a broader community. We hope that you, likewise, will read this premier monograph of the African American Professors Program with enthusiasm or enlightenment.

John McFadden, Ph.D.
The Benjamin Elijah Mays Professor
Director, African American Professors Program
University of South Carolina
ACKNOWLEDGMENTS

The support the African American Professors Program receives from the University of South Carolina, the W. K. Kellogg Foundation, and the South Carolina General Assembly is invaluable.

In addition to authors of chapters, their mentors, and editorial reviewers, the following persons contributed significantly toward the preparation of papers for publication of this monograph and are, therefore, acknowledged for their indefatigable efforts of advice, reviewing, and literary support.

Charles E. Durant
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Mary Anne Banich
Faye O. Hardy
Rhittie L. Gettone
Phyllis W. Sanders
Kenneth R. Stevenson
Amanda B. Thompson
Rashida H. McFadden
Andrea L. Stewart
Theophilus Sanga
AFRICAN AMERICAN DOCTORAL STUDENT DEVELOPMENT

John McFadden, Ph.D.
The Benjamin Elijah Mays Professor
Director, African American Professors Program
University of South Carolina
Between 1960 and 1976, the United States experienced significant social change primarily as a result of the Civil Rights Movement (Branch, 1988). During this era of advances in self-determination, along with political and social change, African Americans began to take advantage of expanding educational opportunities at all levels, including that of the doctoral degree. The fundamental step toward this upward mobility in the United States is the acquisition of the high school diploma with the African American community making tremendous strides in high school graduation rates (Gardner and Jeweller, 1992).

What happens to African American students after high school graduation? In 1980, only 41% of all African American high school graduates enrolled in college. From the mid-1990s, college enrollment among African American students was at an all time high (Office of Education Research and Improvement, 1992). Although, the overall number of both African Americans and Whites entering college decreased during the later years, the percentage of White high school graduates enrolling in college exceeded by far the college enrollment of African American high school graduates. This comparison illustrates the importance of college enrollment and retention of doctoral students from the African American community. With a comparatively small pool of potential doctoral graduates available, it is critical that as many African American students as possible be encouraged to succeed in college regardless of where they enroll.

Throughout most of the 20th century, Black colleges and universities shoul­dered primary responsibility for educating African Americans beyond high school. But, research shows that during the past 30 years, African American college students were more likely to be enrolled at predominantly White institutions (PWI’s) than at historically Black colleges and universities (HBCU’s) (Prillerman, Myers, and Smedley, 1999 and Allen, 1997). Although, the actual number of African American doctoral students has been increasing through the 1990s (Chronicle of Higher Education, 1997). These same students at PWI’s do not perform as well academically and have slower rates of progress toward graduation, higher attrition rates, and lower enrollment in post-baccalaureate programs as their counterparts (Prillerman, Myers, and Smedley, 1999; Allen, 1997; Lunneborg and Lunneborg, 1996; and Nettles, 1991).
Whatever the reason for their relatively low numbers, African American students who do arrive on the graduate campus may elicit special nurturing to assist them in adjusting and adapting to the collegiate community. One very critical adjustment lies in the campus environment itself: to make the campus environment less hostile than is the prevalent American community to African Americans. An appropriate place to begin this re-education of the American general public is among the faculty, staff, and students of PWI's. Research by Ross-Gordon (1998) shows those graduate students who are minority adults, confront even more unique needs as they experience a dual status on campus. For example, students in the Ross-Gordon sample talked about feeling different from younger students because of factors like commuting status, having multiple roles, and struggling to provide for themselves and their families in addition to remaining in school. Hence, the question then becomes: What is involved in the educational success of African American doctoral students at PWI's?

**FACTORS RELATED TO EDUCATIONAL SUCCESS**

One of the most important findings on educational success for African American doctoral students is to be integrated into overall campus life (Jackson and Smith, 1991). This includes assessment of factors related to person-environment interactions such as perceived support, degree of alienation felt by African American students, minority status-related stress and coping strategies. Satisfying interactions with university faculty and staff may, also, play an important role in the academic success of African Americans (Allen, 1997). In addition, Allen, also, found that African American students who performed well, academically, also, had satisfying relationships with faculty and staff members. Related, Nettles (1991) found that African American students who had positive connections with faculty and staff were academically successful.

Many African American doctoral students at PWI's report social support being virtually non-existent in their college environments (Waters, 1996). The same research found that African American students at PWI's who do not perceive adequate social support as being available to them, exhibit fewer constructive coping behaviors when dealing with stress. For this population, an unsupportive
social environment has been linked to feelings of alienation, isolation, decreased academic performance and increased psychological stress (Steward, Jackson, and Jackson, 1990).

Evidence in support of racial consciousness or racial identity as being strongly related to doctoral academic success is contradictory. According to Smith (1991), the region of the United States where one attends school and the concept of gender (i.e., being a African American male) are significantly related to higher academic performance, but not African American racial identification. On the other hand, racial consciousness was found to enhance academic performance among African American women (Jackson and Smith, 1991).

UNIVERSITY DEVELOPMENT

Those campus administrators concerned about African American student development issues are presented with a two-fold agenda: First, the need to provide a nonthreatening environment for African American students where their expectations of success can be nurtured and reinforced; and second, the task of re-educating the majority of the community about the inaccuracy of generally held perceptions about African Americans. To address the first matter, the campus must become a place that solidly conveys positive reinforcement for African American students, not the unsupportive, unsympathetic, and unapproachable environment described in some of the research (Cuyjet, 1997). Campus administrators have a clear obligation to overcome the common message often transmitted in most aspects of American life, convincing inner-city African Americans "that they are merely an 'endangered species,' expected to drop out of school, forbidden to apply to college, destined to be unemployed, and somehow to be excused for not accepting responsibility as men [and women]" (p. 7). Student affairs administrators and their academic administration counterparts should take great care to develop an understanding of African American culture and thereby develop effective interventions based on that new understanding. Such efforts need not always be separate and discrete; they can be the same as those used to assist other minority students; they may be adaptations of majority programs with certain accommodations to African American culture or certain situations may call
for unique efforts focused on the specific needs of African Americans.

To address, comprehensively, the second part of this agenda regarding perceptions of African Americans, an overt dialogue and campaign must be initiated on PWI's to counter the institutionalized, generally negative image of African Americans. Hopkins (1997) reminds us that African American “culture is almost always interpreted to mean dire trouble and social unrest, and, seemingly, most Americans are comfortable with this perception” (p. 78). One of the first things that may need to be addressed in making the college experience less marginalizing for African American doctoral students is to recognize the broad acceptance and institutionalization of these negative perceptions that are threatening, unfriendly, and less intelligent than any other distinguishable segment of the American population (Guyjet, 1997).

Ironically, one of the more critical populations requiring assistance in changing attitudes about the merits and abilities of African Americans is that of African Americans themselves. Kunjufu (1986) documents the “failure syndrome” by which African Americans become aware that schools do not invest in their learning process. Many young African Americans internalize these attitudes and develop a deflating perception of their own abilities and aspirations as compared to others. Success in this effort could make the college environment the first community in which some African American doctoral students encounter a positive perception of themselves and their culture as they progress through their rigorous doctoral programs.

STUDENT DEVELOPMENT THEORY

An examination of contemporary doctoral college student development theory might provide a coherent framework to understand more clearly African American students’ academic difficulties at PWI's. Throughout the history of the U.S., participation in higher education had been a privilege traditionally reserved almost exclusively for White males. During the past 30 years, the composition of undergraduate populations at predominantly White colleges and universities has changed dramatically. Not only have there been major changes in the racial, ethnic, and gender backgrounds of contemporary college students, but there, also,
have been transformations in the level of academic preparation and career goals of these students (Sanders and Ervin, 1994). As a result of such demographic changes, recent political movements and economic necessity, PWI's have been compelled to recruit increasing numbers of African Americans and individuals from other racial and ethnic groups traditionally underrepresented among college populations.

The foundations of PWI’s are based on Anglo-Saxon, Euro-American values (Boyer, 1997). McEwen, Roper, Bryant, and Langa (1990) observed that the values that are perpetuated in this educational milieu reflect the values of mainstream American society. These authors, also, state:

The cultural values of institutions affect what students are taught, how they are taught and how their learning is evaluated. Most importantly, cultural values influence the direction in which educators attempt to move students, how student behavior is evaluated and what knowledge base is used to explain [doctoral] student behavior. Because educators at [PWI's] have, historically, relied upon a body of knowledge that supports and reinforces Euro-American values, they often prove unsuccessful in responding to the educational and cultural needs of [African American] students (p. 429).

If the above statement is valid, it is necessary for administrators and educators to explore new ideas about doctoral student development that take into consideration issues that are unique to the African American student population.

Until recently, only factors associated with the developmental issues of White Americans have been considered and included in models of doctoral student development. One example of this is Chickering's Vector Model (1967) of student development. Although, the model addresses a wide range of developmental concerns, issues related to racial and ethnic group membership, are not discussed (Cheatham and Cross, 1992). Recognizing this developmental concern, McEwen (1990) proposed a conceptualization of student development that is more consistent with experiences of African Americans. Suggested in this model are nine important factors in positive African American doctoral student development:
(1) developing ethnic and racial identity, (2) developing identity, (3) interacting with the dominant culture, (4) developing cultural aesthetics and awareness, (5) developing interdependence, (6) fulfilling affiliation needs, (7) surviving intellectually, (8) developing spiritually, and (9) developing social responsibility. In contrast to Chickering's model, the above factors incorporate developmental tasks that may be essential to African American doctoral students if they are to cope with and survive the persistent effects of a deleterious socio-political history which include discrimination, racism, poverty, and even a racially-negative university climate.

An alternative approach to traditional student development theory is provided by Tinto (1987). Unlike traditional approaches to student development that focus either on individual skills and abilities or the impact of social economic forces on student behavior, Tinto emphasizes institutional factors that contribute to doctoral student departure from higher educational institutions. He views departure from college as resulting from a lack of college integration that is the absence of a satisfactory level of involvement in the intellectual and social systems of a college campus. He concedes that individual characteristics are important in departure, but they cannot be fully understood outside the context of the intellectual and social context of the institution.

Without question, intellectual integration is a prerequisite for doctoral academic success in college, whereas, social integration is not. Although, social integration may be considered non-essential for intellectual integration, it may play a critical role in facilitating college persistence and overall success among doctoral students. According to Tinto (1987):

Experiences in the informal-social world of the campus are more likely to affect one's social integration into the college, especially in the communities of one's peers...Social experiences (negative or positive)...may reinforce persistence through their impact upon heightened intentions and commitments both to the goal of doctoral completion and to the institution...Negative or malintegrative experiences serve to weaken intentions and commitments toward the institution (p. 113).
The literature is replete with evidence of these “malintegrative” experiences that were suffered by African American students at PWIs. Credle and Dean (1991) observed that often institutions themselves are the source of barriers to African American doctoral students’ social integration. These authors cite some of the following as barriers: (a) lack of orientation toward the culture of African American students, (b) lack of awareness of the needs of African American doctoral students, (c) inability to help African American students survive in the complex systems of the institution, and (d) negative attitudes toward African American students by faculty, staff, and administrators. Additional malintegrative factors noted by other researchers include: perceived hostility and racial discrimination (Allen, 1997), feelings of alienation (Nottingham, Rosen, and Parks, 1992), and perceived lack of support, (Cheatham, 1990).

**Fostering the Development of African American Doctoral Students**

Understanding the uniqueness of what African American students encounter in their doctoral program is important for faculty and staff when viewing these students from cultural, historical, psychological, social, scientific, and ideological perspectives; hence, viewing their transcultural development (McFadden, 1999). In examining the African American Professors Program (AAPP) at the University of South Carolina, previous reports show mentoring as a crucial component to their students’ success (Pellicer, 1999). Mentoring allows for a sharing of the aforementioned perspectives while, also, offering guidance. As an illustration, former AAPP data collection from mentors and scholars (students) showed that mentoring provided a variety of supports: “Teaching and shared scholarship, advice and counsel, assistance and support, motivation and encouragement, sponsorship and facilitation of a career, scholarship and criticism, and protection that facilitates the success of students in the attainment of their professional goals” (Pellicer, 1999, p. 23).
THE MENTORING RELATIONSHIP

Mentoring dates to the ancient Greeks; the term is linked to Greek mythology and the character of Odysseus. The virtues of mentoring have withstood the test of time and have been found to be applicable in a variety of situations, including graduate education experience (Jacobi, 1991). Primarily, two types of mentoring, formal and informal, are used in doctoral-level education (LaVant, Anderson, and Tiggs, 1997). Formal mentoring programs are designed to increase enrollment and retention of students and to increase student satisfaction within academic experiences. Informal mentoring is a “spontaneous relationship, established by two or more individuals for the benefit of those involved” (LaVant, Anderson, and Tiggs, p. 45). The extent to which informal mentoring is applied in higher education is unknown; however, evidence does support the notion that informal mentoring positively influences the establishment of formal mentoring initiatives. Since many informal mentoring relationships are reported to promote academic success, more extensive and formally structured models have resulted following their lead (Jacobi, 1991).

TRANSCULTURAL DEVELOPMENT

If doctoral student mentoring is as powerful as research states (Pellicer, 1999; Isaac, 1998; Cuyjet, 1997; LaVant, Anderson and Tiggs, 1997; and Jacobi, 1991), mentors should help foster students’ transcultural development as seen in a model for transcultural counseling, namely, the Stylistic Model (McFadden, 1999). The structure of this stylistic model for transcultural counseling is composed of three dimensions: cultural-historical, psycho-social, and scientific-ideological. These dimensions allow doctoral students to progress in an ascending manner from cultural-historical to psycho-social and finally to the scientific-ideological level. Helping students understand each ‘dimension’ of their transcultural development as doctoral students, mentors can guide their students through many other cubical descriptors, such as: ethnic/racial discrimination, psychological security, self-inspection, family patterns, social forces, historical movements, economic poverty, language patterns, and institutional goals.
The cultural-historical dimension is the underlying foundation of the stylistic model where focus lies on culture and how history for doctoral students evolves during time, especially throughout their doctoral program. It incorporates concepts of how individuals relate to their heritage, how they perceive themselves within social settings, and how they see the norms of their culture evolving. McFadden (1999) assumes "one cannot [mentor] effectively in terms of developing a style or communicating with [students], unless one has an intuitive, accurate perspective and identifies with the culture of the particular ethnicity or race one is [mentoring]" (p. 64).

The psycho-social dimension of the stylistic model relates to the psychological persona and social relations that make up each doctoral student. McFadden believes that, "When we examine ethnic, racial, and cultural aspects of a [student's] development, we see that there are varying forms of pressure that affect the psychological framework of the individual’s identity, and how each begins to interact in terms of social influence or various stimuli" (p. 64).
The third dimension of the stylistic model refers to the mentor taking an action-oriented approach. McFadden recommends that if mentors are to be effective, they must encourage students to “have a grasp of how various ethnic, racial, and social groups perform, speak, behave, and interact among themselves as well as with others” (p. 64). This perspective will allow doctoral students to interpret behaviors of others and serve as better communicators. Reaching this level of mentoring and helping doctoral students understand their own ideologies only can be effective if the mentor-scholar relationship has ascended from the cultural-historical and through the psycho-social dimensions of transcultural development.

**IMPLICATIONS**

The current African American Professors Program at the University of South Carolina is in a distinctive position to address and employ the many models and strategies found to be crucial of African Americans completing their doctoral programs effectively and positively. Throughout the mentoring, advising, tuition assistance, research, workshops, reports, guest speakers, and publications, AAPP aims to provide student support within an array of institutional limitations. Within the context of such limitations, a few implications for a successful education experience for African American doctoral students are offered (Ross-Gordon, 1998):

Faculty initiatives and staff development are critical elements in creating a welcoming environment for African American doctoral students.

Campus efforts to maintain diversity among faculty and staff are important even in an era where some of the strategies traditionally used to achieve such diversity have been eliminated or challenged.

Support services aimed at helping doctoral students develop and improve study skills and learning strategies seem to be among the most used and valued. The small group format for study skills and learning strategies development may afford a welcome opportunity to corroborate with others of similar needs while meeting a personal goal.

Campus-based research should be used to determine the most effective methods to communicate important information regarding services and programs to students whose time on campus often is limited and focused, making conven-
tional modes of communication with students of limited value. Direct-mailed newsletters and/or on-line messages may be more likely to get the desired attention.

**CONCLUSION**

Interacting with students through the African American Professors Program and helping them to understand their stages of transcultural development are two approaches toward ensuring them of taking charge of their personal and professional growth throughout their doctoral studies. Mentors should help graduate students appreciate the difficulties that often reflect the oppressive power of academic-biased situations. The reality is that many traditionally White colleges and universities are White-normed spaces that are more than demographically White; they are White in their basic cultural components and indigenously reflect oppression. African American doctoral students entering such campuses often find that they are expected to accept positions as racial subordinates and to accept one-way cultural assimilation as a legitimate goal. Because of these standards and related situations, these students may be tempted to blame others for problems encountered or even blame themselves too harshly. This is not unusual and can be frequently justified relative to the cultural-historical base of the institution. Therefore, African American doctoral students who believe in their own competence, effectiveness, and control will cope better and achieve more when they are guided through the dimensions of their own transcultural development via dedicated, experienced, liberated, and passionate educators.

**REFERENCES**


EXPLORING ACADEMIC IDENTIFICATION:
EXPERIENCES OF AN AFRICAN AMERICAN MALE IN HIGHER EDUCATION

Terry Carter
Department of English Language and Literature
College of Liberal Arts

As an African American male, my path into academia has been a learning experience. I now realize that the culture of academia must be learned for those without the privilege of coming into it naturally. Yet, perhaps no one comes into academia naturally. I am convinced that values of academia—much like school systems across the United States—are more in sync with White middle-class values than those of low-income African Americans like myself. Shirley Brice Heath (1983), a respected ethnographer, conducted a study that examined the cultural influences of students and the effect of those influences on students’ academic performance. Heath’s study shows that African Americans from low-income environments experience and participate in school in a different manner than Whites from affluent environments; often this difference takes on pejorative connotations.

My experience in academia has been one of a divided-self, as an African American male from a low-income cultural background, and I see my life as an African American male in an affluent and predominantly White academic environment. My home and academic lives have always been separate, and the two lives will remain separate; however, I now realize that the academy is a place that needs new knowledge and experience to sustain itself in the midst of drastically changing demographics. The remainder of this essay, which is a revision of the introductory chapter of my Master of Arts thesis, chronicles my journey into the academic environment. My intentions are to reveal how I am beginning to make sense of my place and purpose in higher education.
AN ACADEMIC PAST AND PRESENT

During the early part of July 1998, I began reading about Dr. Martin Luther King, Jr., because his written works represented another possible idea for a thesis topic. This was a master’s thesis that I had hoped to finish during the earlier part of my summer break. But after my failed attempt of combining two graduate coursework papers in an effort to produce an acceptable thesis, I became frustrated, confused, and embarrassed. What was I doing wrong?

This question weighed heavily on my mind. I resorted to scanning several books on how to write a thesis. However, even after reading them, I was not sure that they were providing me with the right information for my field of study: Composition and Rhetoric. I found myself questioning my own academic training and my career choice. Later, in my research journal, I recorded my frustration with the following question: “Shouldn’t I already know enough about composition, having studied and taught the subject matter, to produce a thesis without difficulty?” (10/21/98). Had I made the right choice?

The reason I had chosen to study Composition and Rhetoric in the first place is because I believe that writing is my special talent. This talent developed in elementary school when I first started to receive good marks for my nice handwriting. Mrs. Barnes, my fourth grade teacher, always praised the quality of my handwriting. Her praises made me feel good and motivated me to practice my writing often. Like most children, I enjoyed doing things that I could do well.

Ironically, in spite of Mrs. Barnes’s praises, two years later, in the sixth grade, I received shocking news: My BSAP (Basic Skills Assessment Program) test scores for writing were poor. I can still remember feeling the heat rise to my face as our homeroom teacher explained the consequences of poor results: (1) Retesting (which meant that we would be singled out on a special day to march to the school cafeteria, the retesting location, like guilty criminals) and (2) Remediation (which would mean that we had failed the retesting and would have to go to a special class, “The Slow Class,” for help).

According to the results of the BSAP Test, I scored a 2.0 on the writing section, which meant that I needed improvement in this area. However, I couldn’t

believe this because, after all, I had a nice handwriting. I took pride in my writing; this was the one thing that I could do well. As a sixth grader, on the verge of going to the seventh grade, I swore to myself that I would show those BSAP people that I could do well on their test, and did not need their remediation.

Of course, I now realize that there is more to writing than penmanship, but, as a sixth grader, I did not see how they could label me as a bad writer. This was not the image that I had of myself. Thus, during the summer before my next BSAP testing, I practiced my ability to write five-sentence paragraphs repeatedly. Almost every day, I would sit in my grandma’s backyard beneath the giant pecan trees and read the model paragraphs that were in the BSAP self-study guides, which came along with the stigma of remediation.

The model paragraphs that I remember described favorite rooms or favorite places. The writers of these model paragraphs had their own rooms with dressers, study desks, and interesting toys that produced, idealistically, written content. When school was closed for the summer, they went on vacations to the Grand Canyon and Disney World with their parents. The contents of these model paragraphs were not in my realm of experience, but, with simple reasoning, I figured this was the content that made good writing. Therefore, with constant reading and writing practice, I learned how to imitate them in style and content. Basically, I “made up” things.

My hard work that summer paid off. My score on the writing portion of the BSAP test increased from 2.0 (Needing Improvement) to a 3.0 (Above Average). However, I think I came away from that experience with a bad lesson. I received positive benefits for my fake stories. I began to associate good writing with the idea of fabrication. (Writings that were void of the self would lead to academic success.) I learned that I did not have anything worth saying or writing about from my own cultural environment and experience. In hindsight, my real answer to one of those questions that asked for a description of a favorite place should have read:

I do not have a favorite place of my own. I live with my father, paternal grandparents, two great aunts, and two brothers in a three-bedroom home. My grandparents each have a room and
a bed to themselves (but I am too young to question the unfairness of this), my brothers and I sleep with our father, and my two great aunts sleep on a pallet on the kitchen floor. My mom lives in a four-bedroom home with her mother, her four sisters, her four brothers, and my other three brothers. Favorite places of my own really do not exist; I live in a completely shared environment.

My version of what I should have written is the result of adulthood, maturity, and the ability to understand cultural differences. However, as a sixth or seventh grader, I could neither see nor appreciate the value in writing about my own cultural experiences.

I have digressed this far to explain that my interests in composition began at this point in my life. Mrs. Barnes had instilled in me a sense of pride about my writing. The BSAP Test had taken away that pride. However, I realized I could control and recapture it by means of self-discipline and imitation; in essence, I could forge a positive academic persona. As a young compositionist, I had found a method for producing good academic writing, but I had lost the ability to value my "own" voice and background.

After that summer of practice, I continued to develop my writing. When I entered high school, I enrolled in the college-track and took the top English classes. My ninth grade English teacher, Mr. Rimer, taught grammar, syntax, and punctuation. Most of the writing we did in his class consisted of fill-in-the-blank type exercises and sentence-level writing. In tenth grade English, Mr. Downey started out as my teacher, but I complained until I was removed from his class. He wanted us to keep a journal of our everyday activities (school, home, sports, and such), but I thought he was crazy. Simply, I wanted to keep my home environment and school environment separate. Besides, the other tenth grade English teacher, Mrs. Spratt, already had introduced her class to Romeo and Juliet, and they were about to read other interesting books such as Fahrenheit 451 and The Time Machine. Also, she didn’t require her students to keep the personal kinds of journals that Mr. Downey wanted.
In eleventh grade English with Mrs. McAlister as my teacher, I worked on paraphrasing sources, outlining, and doing research, which were all necessary for our first typed research paper. Mrs. Noeldechen, who had taught at Clemson University, was my twelfth grade AP English Teacher. I remember reading for her class *The Great Gatsby, Crime and Punishment*, short stories by Edgar Allen Poe and Mark Twain, and poems by Emily Dickinson and Robert Frost. Although the reading was heavy, the writing assignments were fairly easy. There would be directions such as “describe the plot and explain the theme of a particular work” or “compare and contrast the differences in a set of characters.” Usually, most of the writing that I did for her class was in the form of paraphrases. I would read and respond to formulaic writing prompts by paraphrasing and using key literary buzz words like “irony, foreshadowing, omnipotent narrator, satire, or protagonist.” Paraphrasing and using literary buzz words made my writing sound like good academic writing.

My high school performance in English went from a little above average to excellent. During the past three years of school, I finished each year with an “A” average in English. High-school grammar and composition were not a challenge. I was much too disciplined by then. I graduated with honors from high school in 1988 and applied for admission to the University of South Carolina. I was accepted, and my good writing skills helped me to exempt and receive credit for English 101; therefore, English 102 was my first college-level composition course.

The assignments in English 102 were similar to the ones in Mrs. Noeldechen’s class—writing about literary themes and comparing and contrasting—but it was not as much work, since Mrs. Noeldechen had required us to read and write about literature for the entire year. In English 102, I remember reading Frost, Dickinson, and Poe, just like Mrs. Noeldechen had prepared us to do. I felt overly prepared for my first writing course at USC. I finished the course with an easy “A.”

However, in spite of my obvious love for and interest in writing, I declared as a computer science major. I chose this major because of a desire for money. I wanted to make lots of money, and computer technology seemed to be the best
route. But, during my fourth semester of course work, I had a serious change of heart. I looked deep inside myself for something that I enjoyed and felt comfortable doing, and writing surfaced at the top of my list. Thus, I changed my major to English and convinced myself that I could be a writer.

Eventually, I graduated in December of 1992. I earned a Bachelor of Arts degree in English with a concentration in writing. This was supposed to be one of the happiest moments in my pursuit of educational excellence, but my graduation was clouded because I could not find a job in the field of writing. Moreover, I knew I only had myself to blame because I had not properly prepared for a career in writing. Originally, I thought I would find a job as a writer quickly, since I had a degree in English. However, I learned that most employers wanted people with experience and professional writing portfolios. I had neither.

To add to the pressure of my graduation were high expectations of me, Terry, the first college graduate in my immediate family. My brothers and cousins kept asking me when was I going to find that job that would make us rich? Why didn’t I have a full-time job yet with “all that education?” My mom was the only one who did not pressure me about finding that “big job.” She seemed content with my having graduated from The University of South Carolina, and displaying her Garnet and Black USC Donor sticker on her green, 1985, Chevrolet Caprice.

After several months of unanswered letters to my applications, strange yet curious looks as I inquired about jobs within the writing field, and rejection letters from various companies in South Carolina, I gave up on turning my special talent into a career. I rationalized my situation: I had experience in banking and was still working part-time in that profession. I had a good amount of experience using computers, and I did have a cognate in computer science. Thus, I decided to concentrate on finding a job in an office setting where I could market these skills.

In the mean time, I applied for and received a job within the company, South Carolina National Bank (SCN), where I was currently working on a part-time basis. My new job title was Subpoena Research Clerk, and it was a thirty-hour per week job. (The supervisor who hired me said that I could work up to 40 hours
as long as I had enough work to keep me busy.) My previous part-time position, Bank Proof Operator, was only twenty hours per week.

My new job responsibilities included using microfilm and microfiche to make copies of checks and bank statements for court cases. The job was not a dream come true, but it would be enough to keep most of my family members from asking me that belittling question: "When are you going to find a job with your college education?"

About six months after I became a Subpoena Research Clerk, I applied for and accepted a job at another bank, Carolina First Bank (CFB). In November 1993, I started working for CFB, and I was finally "getting paid." I negotiated for a salary of eighteen thousand dollars with the potential for overtime pay. I was pleased because the most that I could have made with SCN (six dollars and thirty-one cents per hour) was approximately twelve thousand dollars.

At CFB, I started with the title of Inclearings Representative. My responsibilities, from a nontechnical viewpoint, were to balance large computerized accounts. My training for the job was minimal, but I learned quickly because I knew enough about computers to teach myself what I needed to know. After about two months, I became Inclearings Coordinator, and I trained and supervised two people for my department. About seven months after that promotion, I became the Automated Clearings House (ACH) Coordinator, and my new responsibilities were supposed to be more challenging. The new responsibilities included balancing electronic deposits and sending and retrieving electronic files. Again, I performed my job well. About a year later, CFB promoted me to Supervisor of the Proof Department. I was now in charge of managing people.

I had been out of school for two years when I became a supervisor for the Proof Department. My supervisor position was a night-shift job, and it was straight salary. I would sometimes work twelve hours during one day and on other days I would only work five or six. Therefore, on some days I had lots of time to think, and it was on those days that I begin to realize that I had given up on my goals of being a writer. Yes, I had money in the bank, and the 401K investments that I had wanted, but this was not enough. I needed to fulfill my dreams of
being a writer. Not long after having those thoughts, I decided to enroll in graduate school for advanced academic and professional training in the field of writing.

In the spring of 1996, I visited the English Department at The University of South Carolina. My intentions were to seek help and guidance from a former English professor, Dr. Dianne Johnson. I told her about my desires of being a writer and possibly a writing teacher. With Dr. Johnson’s help, I decided that composition and rhetoric was the right course of study to help me achieve my goals. By enrolling in this program, I figured I could learn more about writing and become a writing teacher.

After choosing my course of study, I decided that I needed to talk with the Director of Graduate Studies in English, Dr. Cowart, because my GRE scores did not meet the admission standards. However, my grades in my English courses were good. I had completed my undergraduate English courses with a grade point average of 3.5. Nevertheless, I felt I needed to explain to Dr. Cowart my deep desire for graduate study. I wanted him to see the person when he made his decision and not just paper work and numbers.

On the day of my meeting with Dr. Cowart, I arrived “dressed to impress.” I wanted to look professional. My experience in banking had taught me that first impressions were very important. I wanted him to see that I was serious about my studies. The scheduled meeting with him had been rehearsed repeatedly in my mind: I would introduce myself, explain my objectives, ask him about the nature of his job, mention my low GRE scores, hope that he would know about and explain the unreliability of the GRE test for measuring the academic success of African American students, stress my deep desire for graduate study, ask for his advice, and let him know that I wanted to start graduate school, if possible, at the next Fall semester.

That day, Dr. Cowart had my graduate application and GRE scores in front of him. I was not sure what kind of impression I made on him with my professional attire and carefully planned conversation, although, he did know about the statistical unreliability of the GRE test for determining the success of African American graduate students. However, he explained that I would need strong letters of rec-
ommendation from two of my former professors because of my low scores. I smiled (inwardly) and felt a sense of relief because I already had taken care of this. Dr. Johnson already had agreed to write a letter on my behalf, and I had contacted my English 288 (British Literature) professor, Dr. Henry Matalene, who was teaching in Finland. My letters of recommendation were being written by two professors whom I felt could validate my ability to do good academic work.

In May 1996, I received my letter of acceptance into the composition and rhetoric program. I was pleased, but not surprised. In the fall of 1996 I enrolled in my first graduate course, English 790 (survey of composition studies). I had a rocky start because I had been out school for almost three years. My writing skills needed much fine tuning, but I managed. Two years later, I had experience teaching freshman composition and business writing, and I had completed all the necessary course work for my degree in composition and rhetoric. Also, the graduate English program had accepted me into their Ph.D. program, and I had been chosen to receive a graduate fellowship to continue my studies.

The only task that separated me from receiving my Master's degree in Composition and Rhetoric was the writing of a master's thesis. My friends in the English program said it would be easy. They said that usually your thesis came from former graduate papers. I was confident that I could complete my thesis before the end of the summer of 1998. I was wrong and became frustrated.

I already had spent countless hours working on two projects that were fruitless. My first project focused on Ebonics. My goals were to see if I could show how the African American community felt about Ebonics and how it related to academic success. I abandoned this project because I didn't think I would have enough time to do the linguistic research that would be needed to understand the concept of Ebonics fully. My second project was a spin-off of papers written in two graduate courses. I had done research on Frederick Douglass, Zora Neale Hurston, and Jesse Jackson; therefore, I thought I could do a rhetorical analysis of their writings. This project was too big, and the focus was too broad. It became obvious that I would not complete my thesis by the end of the summer, and I felt at a loss for a true thesis topic (a topic that would be a reflection of my aca-
Demic training and experience). Anxiety and fear of failure started to overwhelm me.

Eventually, I went through all the psychological phases that one endures at the loss of someone or something important: denial, anger, depression, and acceptance. I had lost my confidence as a writer. Nevertheless, after some soul searching, friendship counseling, and self-motivation, I decided to gear up for another go. I felt I had come too far to give up.

During my crisis, I had begun another job at USC’s Graduate Office where I met Dr. Anthony Edwards, who specializes in Southern Educational History. He was kind enough to help me in my hunt for a good thesis topic and suggested that I consider a work by Martin Luther King, Jr. (MLK). I took his advice and a copy of MLK’s “Letter From Birmingham Jail,” which he downloaded for me from an Internet search bank.

I began reading MLK’s “Letter From Birmingham Jail” with the idea of doing a rhetorical analysis on it. Not surprisingly, MLK’s Letter instilled in me a greater sense of determination to complete my own work. His powerful and elegant style of writing communicates to Blacks, especially, that they must continue to work toward their goals of bettering themselves. As I read about the struggle of the Civil Rights Movement from his viewpoint, I became aware of how much I take for granted my presence at USC, formerly a school not open to Blacks. I could see how my attendance at this university was connected to MLK’s hard work. His reference to Rosa Parks’ words, “My feet is tired, but my soul is at rest,” immediately flooded my brain with memories of older relatives and great aunts who often spoke wisely of this, as MLK describes it, “grammatical profundity.” Yes, I felt a sense of familiarity, in spite of the obvious distance between my era and MLK’s. In short, I became excited about doing a rhetorical analysis of “Letter from Birmingham Jail.”

However, after reading several articles—Clark (1993), Hoover (1993), Miller (1986), Snow (1985)—over a short period, I began to feel that a purely rhetorical analysis of MLK’s letter might not be the best route for my thesis topic. There just didn’t appear to be anything more to say about MLK’s letter that had not

I will often refer to this document as MLK’s Letter.
already been written. But I knew that MLK's writings were a topic of interest for compositionists because some of the articles about MLK's letter that I had read were written by scholars in the field.

I faced the fact that I needed some guidance before continuing with my readings. I placed my ego aside, and I asked my thesis director, Dr. Carolyn Matalene, for help. (Help is a small word, but often it is difficult to use.) When I finally spoke with Dr. Matalene, in an effort to focus my ideas about my thesis topic, the issue of MLK's originality surfaced. She said that I sounded as if I were talking and reading about issues that questioned MLK's originality.

In retrospect, I had been reading about issues that questioned MLK's originality, but I failed seriously to pursue the idea. I kept thinking that I needed to imitate or model my thesis after the articles that I had read. I never stopped to consider that I might have something original to say about MLK's writing. I only wanted, somehow, to imitate what I had been reading, but I began to realize that I did not have the voice nor the desire to imitate anymore. The modeling that I had depended on for so long, since my victory over basic skills writing in the sixth grade, was beginning to fail me.

Nevertheless, Dr. Matalene and I agreed that I should explore this idea of MLK's originality. I remember her looking at me with a concerned look and saying, "And, Terry, I want to know what you think." I thought to myself as I walked out of her office, struggling to hold on to my sense of pride in my writing, "What do I think? Does she really want to know what I think? What does she mean by that? Why does she want to know what I think? Is this some kind of trick?" Honestly, I was afraid because I had never told any professor what I thought about any subject. I was used to telling them about what I had read. I was used to arguing from the text or performing close readings. I never considered revealing the other thoughts that crossed my mind when I was reading. These thoughts were mine. They were personal. They were not academic subject matter—or so I thought.

In spite of all my doubts, however, I knew that I needed to honor Dr. Matalene's request, if I were going to write a real thesis. I had to trust and
believe that she was trying to guide me to another level of experience as a writer. I had to believe that she was trying to help me add something new to the field of composition. Thus, I let go of my need to imitate and begin to truly explore.

With this exploration, something happened that I did not expect. I started to find my voice. My experience as an African American began to surface in my written responses to readings about MLK's writings. Yes, I was exploring ideas, not trying to imitate them. There was a sense of freedom in this that I had never experienced before in my academic writing. I could see the manifestations of my inner thoughts. I began to strike cords about my own writing process and how it related to MLK's. I started to make connections that were outside the printed text that I was reading. This may sound a bit unbelievable considering that I was a twenty-nine-year-old graduate student, but it's the truth. I was able to interpret my readings from a personal perspective as an African American male, at a predominantly White university. Equally as important, I was able to interpret my readings from my background as a student and as a teacher of composition.

CONCLUSION

As a result from writing my master's thesis, what I realized is that I, as a writer, need to value the importance of being original and true to myself as I continue my scholarly work in higher education. The university needs African American scholars and others who are willing to share their personal insights, in order to learn from people of diverse backgrounds. Too often, I think minority students, undergraduates as well graduates, believe that writing and research cannot originate from cultural experiences. Many of them, if they are like me, might have the notion that their cultural experiences will not be valued or understood in the college classroom. However, perspectives from all races and classes are important for the continual development and growth of higher education. Furthermore, new perspectives are needed to help educators prepare for incoming students from all backgrounds. As a compositionist, I am beginning to realize the potential power of writing to serve as the gateway to understanding the needs and identities of what many educators call nontraditional students.
REFERENCES


In a reply written to Lord Carlisle of England in 1852, Harriet Beecher Stowe outlines what effects she had hoped *Uncle Tom's Cabin* might have on the American public. She writes, “1st. To soften and moderate the bitterness of feeling in extreme abolitionists. 2nd. To convert to the abolitionist view, many of whom this same bitterness had repelled. 3rd. To inspire the free colored people with self-respect, hope, and confidence. And 4th To inspire universally through the country, a kindlier feeling toward the Negro race.”1 While the degree to which Stowe’s novel successfully achieved all four of these aims is a separate discussion, the fictional devices Stowe employed in trying to attain these objectives is the subject that has garnered the most critical attention during the past 150 years. Three years prior to Stowe’s publication of *Uncle Tom’s Cabin* (1852), the Rev. Josiah Henson, a former slave, published his life story, which became the basis, in part, for the most infamous African American characterization in American literary history—Stowe’s ‘Uncle Tom.’ In 1849, the year Rev. Henson’s autobiography was published, Stowe visited twice with Henson, once at her home in Andover and a second time in 1850 at her brother’s house in Boston. These meetings forged a bond between Stowe and Henson that would eventually lead to Stowe writing the preface to the 2nd edition of Rev. Henson’s autobiography in 1858. Subsequent to that, in his third autobiography written in 1879 with John Lobb, Henson boldly announces that “I am the personage of Uncle Tom and I feel proud of the title.”2

I offer this brief history of some of the circumstances surrounding Stowe’s writing of *Uncle Tom’s Cabin* and the depiction of “Uncle Tom” to suggest that the use of a Black masculine figure who was a participant in the evangelistic faith

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of Stowe and many of her nineteenth-century Christian readership was, in fact, the only fictional conduit of African descent that could accomplish her goals of: (1) Softening the bitterness of extreme 19th Century abolitionism. (2) Persuading her Christian readership to the cause of abolitionism that extremists like, Nat Turner, David Walker and John Brown had made impalpable. (3) Inspiring colored people to the highest virtues of life found in the Christian faith. (4) Provoking, throughout all of 19th century America, a kindlier feeling towards the Negro race through the auspices of Christian faith. In short, the Black Christian preacher was the most fully developed, noble, heroic, pious, literate and widely recognizable individual of African descent that was available to Stowe for a characterization that sought to accomplish what the annals of history have marked as the greatest upheaval in all of American history—the dismantling of the “peculiar institution of slavery.”

Black masculine Christian engagement in literature, since *Uncle Tom’s Cabin*, has become the most complex and authentic material that African American fictional writers have been able to draw upon in order to address a variety of issues pertaining to the standing of Blacks in America. Charles Chesnutt’s *The Marrow of Tradition* (1901) also exists in this tradition, having negotiated the African American relationship to larger societal concerns through their handling of Black male participation in Christianity. Eric Sundquist proposes about Charles Chesnutt’s *The Marrow of Tradition* that “the Black Methodist, Sandy Campbell’s place among the range of Black characters that Chesnutt presents is worth more attention.” In the novel, Sandy Campbell is the trustworthy Negro servant of old Mr. Delamere whose grandson Tom Delamere frames Sandy for the robbery and eventual death of Aunt Polly by dressing in a black face and acting as a double to Sandy Campbell throughout the narrative. Although Tom Delamere’s crimes were discovered, the results of the false implications led to many grievous events for Sandy: He was forced to stand trial for immoral conduct and eventually was banished from his church because Tom Delamere imitated his likeness in a cakewalk. He began a gradual moral decline due to intemperance, and, finally, White local authorities condemned him to death for a crime he did not commit.

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All of these events led up to Chesnutt's fictional Wellington race riot, which was based on the Wilmington, North Carolina race riots of 1898. In spite of the fact that Sandy Campbell often is treated as a character of minor importance in *The Marrow of Tradition* and the fact that Chesnutt possessed a political desire to expose the racial atrocities of the Wilmington Riots, a closer examination of Chesnutt's ideological concerns alongside of Sandy Campbell brings us closer to aligning *The Marrow of Tradition* with its literary predecessor *Uncle Tom's Cabin*. Both novels employed Black masculine characterizations that exhibited the highest degree of Black humanity with the hopes of facilitating a societal change.

Two of Charles Chesnutt's often-cited journal entries in the year 1880 offer a revealing look into what might be considered the kernels of *The Marrow of Tradition*. On May 29, Chesnutt wrote, "I think I must write a book...if I do write, I shall write for a purpose, a high holy purpose...and I would be one of the first to head a determined, organized crusade against it. Not an appeal to force for this is something that force can but slightly affect; but a moral revolution which must be brought about in a different manner." On March 14, Chesnutt wrote, "why could not a colored man, who has lived among colored people all his life; who is familiar with their habits, their ruling passions, their prejudices; their whole moral and social condition; their public and private ambitions; their religious tendencies and habits...why could not such a man, if he possessed the same ability, write a far better book about the south than Judge Tourgee or Mrs. Stowe has written?...I shall leave the realm of fiction, where most of this stuff is manufactured, and come down to the hard facts." In addition to these entries, Chesnutt writes in a letter to his publisher, Houghton, Mifflin and Company, dated October 26, 1901, that "if *The Marrow of Tradition* can be lodged in the popular mind as the legitimate successor of *Uncle Tom's Cabin*...it will make the fortune of the book." These writings disclose the chief characteristic of Chesnutt's novel. Namely, Chesnutt's novel was devoted to a "holy purpose" that sought societal change through a moral force similar to Stowe. Nevertheless, while Chesnutt was...
greatly indebted to Stowe’s work, and impressed by its enormous success, *The Marrow of Tradition* sought to accomplish the same with a more veritable model of Black “religious tendencies and habits” with which Chesnutt was all too familiar.

Charles Chesnutt lived in Fayetteville, North Carolina between the years 1866–1883. During this period, he became a pupil teacher at 14 years of age and eventually became the principal of Normal School at the age of 22. However, what is most significant about his time spent in Fayetteville is the fact that “religion had long been a part of life in Fayetteville,” and this was especially the case with Chesnutt. Chesnutt’s journal of June 7, 1875, reveals that he lived with a preacher named Mr. Davidson who was a presiding elder of a Methodist church. Further, Chesnutt’s journal entry, dated March 11, 1880, suggests that he had a personal relationship with “Elder Davis” who was the minister of the (Methodist) A.M.E. Zion church in Fayetteville in the early 1880s. Chesnutt also implies that he was a member of Davis’ Methodist church in his journal entry of March 25, 1880, when he refers to the church that Davis ministered at as “our church.” Chesnutt’s familiarity with the doctrinal practices of the Methodist Church fuels the realistic narration of Sandy Campbell.

Tom Delamere’s imitation of Sandy in a cakewalk performed before Northern visitors, foreshadows a more significant mimicry that implicates Sandy in the robbery and death of Aunt Polly. As a result, Sandy was required to stand trial for a criminal offense; however, Tom’s earlier mimicry of Sandy in a cakewalk, also, forced Sandy to stand trial for immoral conduct in his church. Tom’s ability to impersonate Sandy during the commission of a crime spurs Chesnutt’s realistic depiction of the Wilmington riots of 1898, and it, also, provided Chesnutt with the opportunity to depict the intricacies of Sandy’s religious engagement with Black Methodism. It’s useful to cite a substantial portion of Sandy’s church trial here:

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Keller 40.

* Brodhead 60-62.

Brodhead 122. Chesnutt also mentions Davis at length on March 25, 1880 in a “novel idea in preaching.” Here he admires Davis’ commentary about preaching to different audiences.

Brodhead 131.
The cakewalk had results which to Sandy were very serious. The following week he was summoned before the disciplinary committee of his church and charged with unchristian conduct, in the following particulars, to wit: dancing, and participating in a sinful diversion called a cakewalk, which was calculated to bring the church into disrepute and make it the mockery of sinners...He was positively identified by Sister 'Manda Patterson...This testimony was confirmed by one of thedeacons, whose son, a waiter at the hotel, had also seen Sandy at the cakewalk...he was found guilty and suspended from church fellowship until he should have repented and made full confession. 12

The narrator does not reveal whether or not Sandy attended a Colored Methodist church. Yet, Tom Delamere “laughed until he cried at the comical idea...of half-a-dozen Negro preachers sitting in solemn judgment upon that cakewalk...and sending poor Sandy to spiritual Coventry.” 13 This would indicate that the church is “Colored Methodist.” Most importantly, Chesnutt’s narration of the events of Sandy's trial parallels traditional procedures for discipline in the Methodist Church.

In its 1894 publication of doctrines and disciplines, the Methodist Episcopal Church describes the procedures for trying a member accused of immorality. 14 Chapter 7, section 5, of its policy on the administration of discipline responds to the question, “What shall be done when a member of the church is accused of immorality?” Answer one states that “the preacher in charge shall appoint a committee of three discreet members of the church, who shall investigate the report or accusation. If upon investigation they deem a trial necessary, they shall formulate a bill of charges and specifications.” Answer two continues by stating that “On the presentation of such bills of charges and specifications, the preacher in charge shall appoint a committee of not less than five, nor more than thirteen, members of the charge to which the member belongs...[and] if the accused be found guilty by a

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12 Chesnutt Marrow 120.
13 Chesnutt Marrow 121.
majority of the committee, the preacher in charge shall declare him suspended, or expelled, according to the verdict of the committee." The administrative guidelines, also, discuss the use of witnesses in a trial against the accused. Furthermore, the chief "diversion" of dancing, which was the *principle* charge leveled against Sandy and was expressly forbidden by Methodist doctrine.

In Rule 11 of the General Rules for Methodist parishioners, containing scriptures and expository notes, states that members "[must avoid] the taking of such diversions as cannot be used in the name of the Lord." The expository notations put the case more clearly:

"Diversions" include those popular amusements such as dancing, theaters, circuses, etc., which divert or turn the heart away from God to be fascinated by worldly things... [Dancing] Its practice destroys the Christian influence. What good can a member of the church, who is a participator in social dances and a frequenter of balls, do? Is he disposed to exhort, or pray, or sing. Who will be disposed to hear him? Can the spirit of God accompany his message? Will the wicked feel its power?... I take it is now, in the middle of the nineteenth century, well understood by unconverted men not to consist with what ought reasonably to be looked for in the genuine Christian character.

Sandy's trial not only gives evidence for the realism of Chesnutt's project, but it, also, serves as a catalyst for a more authentic rendering of Black masculine Christian engagement than that of the unbelievably pious Uncle Tom. Even though Sandy was innocent of the charges of unchristian conduct, it causes his dismissal from the church. More importantly, it appears to suggest, alongside of Chesnutt's depiction of his subsequent intemperance, that moral frailty is inevitable without the provisions of the Black Church.

Prior to his banishment from church, his moral character was left relatively in tact, thereby preserving his sentimentalist construction. Old Delamere

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35 Tigert Doctrines and Discipline 125-126.
37 Chesnutt Marrow 24.
describes him "as honest as any man in Wellington."' When Carteret attempts to correct Old Delamere’s glowing praise for Sandy by noting that Sandy may be as honest as "any Negro" in Wellington, Old Delamere unashamedly declares that "I make no exceptions major, I would trust Sandy with my life,—he saved it once at the risk of his own." He concludes his argument with Carteret by remarking that "I merely wish to say that Sandy is an exception to any rule which you may formulate in derogation of the Negro." Throughout the narrative, Old Delamere remains steadfast in his beliefs concerning the impeccable nature of Sandy’s moral character. Yet, after Sandy’s banishment from the church, the narrator relates that "Sandy insensibly glided into habits of which the church would not have approved." Sandy’s "habits" took the form of "too often accepting the proffered remedy [of drink]." Chesnutt’s depiction of Sandy’s intemperance illustrates a bona fide vice that eventually contributed to Sandy’s subsequent problems with the law. Contrary to Stowe’s sentimental depiction of Uncle Tom, Chesnutt’s realistic portrayal of Black masculine Christian engagement becomes a more veritable representation of the Christian faith. Chesnutt’s Sandy, wholly dissimilar from Stowe’s Uncle Tom, was not portrayed as an example of Black masculine flawlessness. On the night that Tom robbed and assaulted Aunt Polly, Sandy was “to attend [a] prayer meeting on this particular evening of the week.” But instead, Sandy: ...set out for the house of a friend with whom it occurred to him that he might spend the evening pleasantly. Unfortunately, his friend proved to be not at home, so Sandy turned his footsteps toward the lower part of the town, where the streets were well lighted, and on pleasant evenings quite animated. On the way he met Josh Green, whom he had known for many years, though their paths did not often cross. In his loneliness Sandy accepted an invitation to go with Josh and have a drink, — a single drink.  

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*Chesnutt, Marrow 24.
*Chesnutt, Marrow 24.
*Chesnutt, Marrow 24.
*Chesnutt, Marrow 24.
*Chesnutt, Marrow 121.
*Chesnutt, Marrow 132.
*Chesnutt, Marrow 166.
This scene is particularly important because this was the night "Sandy [saw] his own ha'nt." This ha'nt was none other than Tom Delamere who conspired to be seen near a "well lighted" area in order to implicate Sandy in the commission of a crime. Yet the significance of this setting, in view of Chesnutt's depiction of Black masculine Christian engagement, suggests that Sandy's removal from the church led to his intemperance. Sandy's drinking provided Tom with the opportunity to incriminate him. Tom Delamere was well aware of Sandy's susceptibility to this particular vice due to his estrangement from the church. After complaining to Tom about his banishment from the church, Tom would say "Cheer up, Sandy, cheer up! Go into my room and get yourself a good drink of liquor. The devil's church has a bigger congregation than theirs." For Sandy, the Black church was a "social club" as well as a "religious temple." Fellowship with other churchgoers was key to the moral stability of Chesnutt's characterization of Sandy. E. Franklin Frazier's (1963) sociological study of the Black church reveals why the church served in such a pivotal role:

Where could the Negro find a refuge from this hostile White world?... They retained their faith in God and found a refuge in their churches. The Negro church with its own forms of religious worship was a world which the White man did not invade but only regarded with an attitude of condescending amusement. The Negro church could enjoy this freedom so long as it offered no threat to the White man's dominance in both economic and social relations.

According to Frazier and other sociologists who have done similar studies on the Black church in America, the religious institution was the only establishment in the African American community that was left virtually untainted by overarching White dominance. In fact, when Sandy "set out for the house of a friend" who

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24 Chesnutt Marrow 121-122.
25 Chesnutt Marrow 121.
“unfortunately [was] not at home,” Sandy probably sought “to spend the evening pleasantly” with another churchgoer. During his jailhouse conversation with Mr. Delamere, who was attempting to ascertain the facts surrounding the crime, Sandy revealed to Mr. Delamere that he “went roun’ter see Solomon Williams, an’ he wa’n’t home, an’ den I walk’ down street an’ met Josh Green, an’ he ax me inter Sam Taylor’s place, an’ I sot roun’ dere wid Josh till ‘bout ‘leven o’clock, w’en I sta’ted back home.”

It should be pointed out that Sandy did not mention to Mr. Delamere, the moral center of Chesnutt’s work, that he had a drink with Josh. Still, more importantly, perhaps the name Solomon alludes to the wise King Solomon. Chesnutt’s narrative appears to suggest that it would have been wiser for Sandy to be with Solomon rather than Josh Green. The Marrow’s intimation that Sandy should have refused Josh’s entreaty to drink, even though the wisdom of Solomon’s abode was not available, points to an advocacy of Christian engagement on the part of Chesnutt. His journals espouse his devotion to the moral certainty of Christian engagement for African Americans and his disaffection towards intemperance.

On July 12, 1875, Chesnutt writes that “religion never was designed to make our pleasures less. I believe it, if there is any pleasure, any true pleasure [it is] in religion for I have tasted the apple of sin and though it was sweet to the tongue, there was a worm of gnawing at the which gave it a bitter taste.” Chesnutt also writes that his prayer to God was that “he bless me with his grace [and] let me serve him. I want to feel like a man and a Christian, to walk the earth with a firm step…” In addition, Chesnutt’s own attempts to preserve himself from the “bitter taste” of sin is glaringly similar to the wisdom Chesnutt’s narrative advises Sandy to follow. On July 15, 1875, Chesnutt wrote that he “went to a prayer meeting last night and did not get home until 12 o’clock.” Chesnutt placed a high value upon the insularity of Christian fellowship. Yet and still, the influence of Chesnutt’s own Black masculine Christian engagement with Methodism upon Sandy’s characterization might be seen more clearly in an excerpt from Chesnutt’s May 29, 1880, journal entry:

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28 Chesnutt Marrow 203.
29 Brodhead 69-70.
30 Brodhead 70.
31 Brodhead 71.

AFRICAN AMERICAN DOCTORAL STUDENT DEVELOPMENT 37
"The coarser forms of vice are so repulsive to my very nature that I am never likely to become a drunkard, or a rake. Such vices are easily shunned. One can treat them as he would an enemy, who should enter his house with the avowed intention of doing injury; that is, take by him by the collar and turn him out of doors."

When Chesnutt's narrator tells that Sandy "insensibly glided into habits of which the church would not have approved," one can easily surmise that Chesnutt himself viewed Sandy's moral failure as insensible because of the relative ease of avoiding such a temptation. However, the Marrow recognizes that Sandy's moral demise was not entirely upon his own accord. Tom Delamere's malicious impersonations and repeated petitions to drink helped facilitate Sandy's demise.

After the events surrounding Tom's crime were disentangled by Mr. Delamere's discovery of Tom's involvement in the crime, "Sandy was restored to the bosom of the church and, enfolded by its sheltering arms, was no longer tempted to stray from the path of rectitude, but became even a more rigid Methodist than before his recent troubles." While some commentators on The Marrow of Tradition rightly point to Chesnutt's desire to morally elevate his readers through his intricate plot devices and his characterizations, these interpretations fail to consider Chesnutt's Christian depiction of the Methodist Sandy Campbell as an endorsement of Christian idealism. Moreover, Bernard Bell's contention that "Sandy is subtly satirized as a self-important body servant to old Mr. Delamere and a back-sliding Methodist who considers himself better than a Baptist of any degree of sanctity" discounts Chesnutt's depiction of Sandy's moral integrity in The Marrow of Tradition. Aside from Sandy's gentlemanly refusal to expose incriminating information about Tom Delamere in the chapter titled "Two Southern Gentleman," Chesnutt depicts a scene where Sandy admonishes Tom for...
his ungentlemanly behavior. Sandy’s admonition is entrenched in Chesnutt’s Christian ideology.

After referring to Sandy as a “good darky,” Sandy reproves Tom for such a flippant remark:

“All right, Mistuh Tom, you shill have de money; but I wants ter tell you, suh, dat in all de yeahs I has wo’ked fer yo’ gran’-daddy, he has never called me, a ‘darky’ ter my face, suh. C’se I knows dere’s w’ite folks an’ Black folks,—but dere’s manners, suh, dere’s manners, an’ gent’emen oughter be de ones ter use ’em, suh, ef dey ain’t ter be fergot enti’ely!”

Although, Sandy had since been unfairly dismissed from the church “thoo no fault er [his] own, God knows,” he maintained Christian principles of a “southern gentleman.” While Sandy possesses moral integrity and fortitude, he does so in a realistic fashion. At the end of the novel, “Sandy was restored to the bosom of the church and, enfolded by its sheltering arms, was no longer tempted to stray from the path of rectitude, but became even a more rigid Methodist than before his recent troubles.” This intimates that Sandy’s realistic return to the protection and values of Black Methodism is a model that Chesnutt seemingly endorses. A return to the values of Christianity, for Chesnutt, is the essence of a “southern gentleman.”

While serving as principal of the Normal School in Fayetteville, North Carolina (1880-1883), Chesnutt delivered a speech titled, “Etiquette (Good Manners),” to the Normal Literary Society. The literary society held its meetings on the premises of that school. The speech largely revolved around the manners that one should possess if a Negro aspired to become a part of acceptable society. Chestutt spoke:

“I have a very high ideal of those qualities, which, apart from his literary attainments and skill in teaching, should make up the character of an instructor of youth; and my ideal of a teacher can be tersely but clearly expressed in two words—a
Christian Gentleman. By the word Christian, I mean not merely a church-member or outward professor of religion; but one who is imbued with the true spirit of Christ; one who goes out, as did He, the Great Teacher, to instruct the world in the ways of truth... A teacher should be a Gentleman. And here I use not the word in its conventional sense. I do not mean that he should be of high birth or great wealth; that he should clothe his person in fine raiment, or his fine speech in fine words: I use the word in its broadest signification—one who has a proper respect for himself, and a proper regard for the rights and opinions of others, and at the same time knows how to act in order that other people may know that he respects himself and them. I have told you that a teacher should be a Christian gentleman.39

Chesnutt's speech, which indicates that a true gentleman is a "Christian gentleman," appears to foreshadow his realistic characterization of Sandy Campbell. Chesnutt relies upon the Christian engagement of Sandy Campbell, to bring about the "moral revolution" that would be necessary in the Black community to deal with the onslaught of racial oppression in the 19th Century. Similar to Uncle Tom, yet more thoroughly realistic, Sandy was a model for the highest measure of Black humanity in a narrative that dealt with the realities of racism in the South.
A BLIND MAN WITH A VISION

Christopher Leevy Johnson
Department of History
College of Liberal Arts

Around 3:30 p.m. on Thursday, December 12, 1968, a family gathered in the chapel of Leevy's Funeral Home located at 1831 Taylor Street in Columbia, South Carolina. Claude McCollum, the manager of the funeral home and the head director of the impending services, led the family in prayer and loaded the family into two limousines. From the corner of Taylor and Gregg streets, the cortege crossed over Taylor Street, made a left on Hampton Street and then another left onto Harden Street. As the hearse and the two limousines approached the Chapel of Allen University, onlookers crowded the sidewalks in hopes of getting a glimpse of the family. Inside, hundreds of mourners already had gathered to get a good seat for the funeral services for one of Columbia's most famous businessmen and politicians. After the casket was set in the chapel and the family was seated, the funeral services began. Following the scripture, prayer, and a few songs, the Reverend M. D. McCollum, brother of the funeral director, began the eulogy: "Beloved, today I have no text. My subject is Isaac Samuel Leevy."

Isaac Samuel Leevy, Jr. was born on May 3, 1876, in the Antioch Section of Kershaw County, South Carolina. He was one of 10 children born to Isaac Samuel, born into slavery and Laura Hunter Leevy, who was born free. Even though he was born into poverty, he was determined at an early age to overcome the circumstances of his environment. He was educated in the public schools of Kershaw County and finished Mather Academy in Camden, South Carolina. Because Mather Academy was a private institution for the privileged, Mr. Leevy had to put himself through Mather. His parents did not have enough money to pay the dollar-per-month tuition, so Mr. Leevy found odd jobs cutting wood and other chores in the community to fund his education:

1 Reverend A. M. McCollum, Unpublished Eulogy of Isaac Samuel Leevy. Author's personal collection.
"As I grew older and visualized my desperate, poverty-stricken condition, I could see no remedy unless I could get away from home to school. I persuaded my father to let me go to the Mather Academy (Browning Home) in Camden, South Carolina, about 10 or 12 miles from my home. After much worry, because there was no way in the world to get a dollar a month to pay tuition and to pay for the needed books, I in some way was able to get a dollar; and my father walked to Camden and paid the dollar for a month's tuition."

Mr. Leevy recalled that excelling at Mather was very difficult because of his impoverished condition. The other boys in his classes came from prominent families, and he was from a small poor community. He, however, studied hard and was determined to excel.

Because of his good grades, he was invited to participate as a speaker in the commencement exercises; however, he did not have a good suit to wear. He recalled in his memoirs that the principal of the school, Mrs. A. A. Gordon, helped him mend the only suit he had so he would be dressed appropriately: "She stated that I was a poor boy, and that my father had nothing with which to help and I couldn't measure up with the other boys in the speaking group; therefore, she instructed me how to press my suit with a wet towel and a hot iron. I followed her instructions and got by that commencement day, receiving many congratulations on the declamation I delivered." This knowledge of repairing and mending clothes would serve him later and make him considerably wealthy.

After graduating from Mather, Mr. Leevy was confident enough to take the teacher's examination at the courthouse of Kershaw County. While he awaited his test scores, he opened his very first business, a pressing shop in the city of Camden. After receiving notice that he passed the examination, he was elected the public school teacher for Lancaster County, earning a wage of 15 dollars per month. In spite of the fact that he bargained for 18 dollars a month, the trustee board of the school was not in any financial condition to pay him that much, espe-
cially in light of the fact that they were paying him three times as much as they paid his predecessor. Mr. Leevy recalled that people in the town of Lancaster called him professor, a title he relished. He did not teach in Lancaster for long because he wanted to learn, not only how to clean and press clothes, but to make them as well: “I left the state for Hampton Institute, Virginia for the purpose of learning how to cut and make clothes and complete my education.” So he enrolled in Hampton Institute, Hampton, Virginia, and graduated at the age of 30.

Hampton Institute, at the time, was a trade school developed to help Blacks find jobs in skilled laboring positions. But Mr. Leevy, also, attended night school so that he could graduate with an academic degree as well as the industrial degree. Mr. Leevy decided to take up tailoring and became a master tailor. He felt honored by attending Hampton, and in several letters back home, he recounted to his parents what a tribute it was: “It is fine that we have Christ for an example, but it means so much more to young men when they can see his life and spirit in the lives of those who are working side by side with them and laboring under the same difficulties.” One summer, during college, he found a job working at a hotel in Bar Harbor, Maine. He was such a curiosity that White parents took their children to look at him so they would know what a Black man looked like. He, also, worked the summers in the White Mountains in New Hampshire, located at the foot of the mountain known as the “Great Stone Face.” He recalled that on his trips from Hampton to New Hampshire, he would always stop twenty minutes for lunch at Plymouth Rock, where the pilgrims landed. After graduating from Hampton, he was offered permanent position to work for the owners of the hotel he worked for in New Hampshire, a position by the Y. M. C. A. National Committee to work in South Africa as a field representative, and a position in Charlottesville, Virginia, as an instructor at the Normal and Industrial School. Nevertheless, he decided to take a job in the Mayesville Institute in Sumter County, South Carolina.

While attending commencement services at Allen University, he was introduced to the Reverend Richard Carroll, a man he described as “a great evangelist, leader and editor.” Reverend Carroll wrote Mr. Leevy several times in hopes that

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1 Ibid.
2 The Papers of I. S. Leevy. South Caroliniana Library, The University of South Carolina, Columbia, South Carolina.
he would come to Columbia and open up a tailor shop. Heeding Reverend Carroll’s call, Mr. Leevy moved to Columbia in 1907. In Columbia, Mr. Leevy immediately acted on his entrepreneurial spirit and opened up a tailoring shop on Gates Street, which was later renamed Park Street in downtown Columbia, South Carolina. Mr. Leevy spent a lot of time with Reverend Carroll who was a permanent fixture in the religious and political circles of the colored community of Columbia. Ruby Leevy Johnson, Mr. Leevy’s eldest daughter, remembered: “We would go to Reverend Carroll’s house on Sunday evenings for dinner. He and daddy would be in the living room talking and we would go in his backyard and eat the figs off the tree.”

Mr. Leevy traveled with Reverend Carroll on his various speaking engagements and race meetings. From these experiences, Mr. Leevy met the most prominent colored and even White members of the community. These persons, also, patronized Mr. Leevy’s tailoring shop; the encounters were mutually beneficial. Together, he and Reverend Carroll organized the Negro State Fair Association of South Carolina.

While Mr. Leevy was in Hampton, he and a young lady named Mary Kirkland wrote letters to each other. Every boy in Kershaw County knew that the Kirklands had the prettiest daughters in the county. Not only were their daughter’s pretty, but also they came from a rich and prominent family. When he moved to Columbia, he would catch the train to Kershaw County in hopes of courting the attention of Mary. She recently had graduated from South Carolina Agricultural and Mechanical Institute. On June 23, 1909, Mr. Leevy married the former Mary E. Kirkland of the Westville section of Kershaw County in A.M.E. Zion Church of Westville, South Carolina. To this union, four children were born: Ruby Geneva on February 8, 1917, Isaac Kirkland on May 7, 1918, Carroll Moten on October 13, 1920, and Marian Naomi in 1922.

When Mr. Leevy arrived in Columbia in 1907, there was only one dilapidated school for the colored children of the city. The Howard School was located across from the Richland County Jail on Hampton Street. Mr. Leevy was encouraged by his own innate belief in the primacy of education to try and organize

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6 Author interview with Ruby Leevy Johnson, December 1, 2000. The house was located right across the street from the current C. A. Johnson High School on Barhamville Road in the Edgewood Community of Columbia, South Carolina.

7 Some of these letters are in Mr. Leevy’s personal file in the South Caroliniana Library, University of South Carolina, Columbia, South Carolina.

8 It is a well known fact that the Kirkland’s even owned slaves during the antebellum period.
another school for the colored children of Columbia. With the help of Mr. Joseph Pelot, he petitioned the city board of education for the construction of a new school within the city. After many set-backs and pitfalls, Mr. Leevy recalled one day reading the daily newspaper and was elated by the news that a new school for colored children had been approved by the board: “one bright morning the daily paper, with large headlines, announced that a site in the Old McCrary Pasture had been purchased by the city board of education for a second very much needed school in Columbia for Negroes.” That very same day Mr. Leevy and Mr. Pelot went to the superintendent’s office to thank him and the board for seeing and acting upon the need to construct a new school building for colored students. When the building was completed, that same superintendent called Mr. Leevy to see what name should be placed on the school. Mr. Leevy replied: “remembering my great friend and brother alumnus Booker T. Washington, I stated, “I could suggest no better name for the new school.” Mr. Leevy was there on the afternoon when the cornerstone was laid proclaiming the Booker T. Washington School of Columbia, South Carolina.

Mr. Leevy’s mission to get sufficient classrooms for colored children in Columbia did not rest with the Booker T. Washington School. Because of the increase in the Black population in the city, a third school was desperately needed. Whites citizens in the inner city began to move to the suburbs of the 1920s in Wales Gardens and Shandon. One community that they deserted was the Waverly Community. The Waverly school, therefore, was left vacant when all of the White families living around the school left. Mr. Leevy petitioned the school board to allow the colored citizens of the city to use the six-room school for the educational advancements of the Negro citizens in the city. The night before the school board met to discuss the Waverly school adjustment, many of Mr. Leevy’s supporters called him to say that they would not appear with him at the meeting. He notes in his memoirs that the reneging participants feared White backlash and being fired from their jobs, if they went with him. Because Mr. Leevy was self-employed and had a mostly Black clientele, he had no fear. When he arrived at the school board meeting, the White secretary of the board came out to the lobby

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4 "The Autobiographical Essay of I. S. Leevy." Found in the Modjeska Sankins Papers, South Caroliniana Library, University of South Carolina, Columbia, South Carolina.
5 ibid.
to try to talk Mr. Leevy out of bringing the petition before the board. He claimed
that he feared Whites in the city would rather see the school burned down than
colored children in it. Mr. Leevy, with tears in his eyes, answered: “Our under­
standing is that you were elected to serve both races and our disappointment now
is that you are denying our rights to petition under the Bill of Rights and the
Constitution of the United States. However, we wish to advise and impress upon
you and your board that our people’s interest is the education of their children in
such that we have no more fear of a stick of dynamite than we have of a stick of
candy.”  \textsuperscript{11}  The board meeting was held in February (no year is mentioned) and by
September of that month, the school was opened for the colored children of
Columbia.

Mr. Leevy was known throughout the community as a fighter for the educa­
tional rights of the colored citizens of Columbia. In July of 1936, a Miss Charlotte
Jackson informed Mr. Leevy that a large group of children in the Kendall Town
suburb (where C. A. Johnson High School is currently located) of Columbia had
no school to attend. With the help of another lady in the community, Mrs. Harris
(no first name is given), a petition was signed by 263 families claiming that their
children had no access to public school education. After meeting again with the
secretary of the school board and then the chairman of the school board, the
board promised, if the colored community would provide the land and a thousand
dollars towards the project, the school board would provide a fourth school for
colored students. After finding the site, a six classroom school was built. During
a committee meeting about naming the school, a Black citizen recommended that
the school should be called the Jackson-Leevy Graded School. But Miss Jackson
withdrew her name and the school was called the Leevy Graded School; however,
Miss Jackson became the first principal. When the school was moved to its cur­
rent location it was renamed Carver Elementary School after George Washington
Carver.

Mr. Leevy outlined in his autobiography that his next undertaking was the
establishment of a financial institution for Black citizens of Columbia. With the
assistance of Mr. I. J. Joseph, an insurance agent, the two formed the Victory
Savings Bank, which was chartered in 1921. At Mr. Leevy's insistence, Mr. Joseph became the full-time president and he the vice-president. However, Mr. Joseph was called away to fulfill obligations to the Lincoln Reserve Insurance Company in Chicago and Mr. Leevy became the second President of Victory Savings Bank.

Coupled with his community activism, Mr. Leevy maintained his tailoring shop on Park Street. The tailoring business was very successful until about 1917. Mr. Leevy claimed that so many service men were called away from Columbia and because ready-made clothes were becoming common place, he closed his tailoring business and opened a department store in 1917. The Leevy Department Store re-located to 1131 Washington Street, and became the largest Black-owned business in the state. Inside the department store was housed a barber shop, beauty salon, tailoring shop, and a dressmaking department. In 1925, Mr. Leevy had 17 employees. However, in 1930 Mr. Leevy had to close the department store because of a lack of patronage: “The great panic that followed World War I led to the exodus of tens of thousands of our people from the South to the big modern centers, causing me to liquidate my department store that had existed for many years. At one time it carried stock and merchandise valued at more than $100,000. Several months after closing out my department store, I bought a bankrupt furniture store. I bought a bankrupt furniture store and operated it about two years.” The furniture store, likewise, did not do well, and in two years he closed the furniture store as well. One of the reasons why the department store and the furniture store did not do as well is because Mr. Leevy was too lenient with his credit policy. He really wanted to help people and he allowed them to get anything they wanted on credit. Then he would send his children and other employees to their houses on the weekends to collect the weeks rental fees: “People owe him now for stuff he allowed people to get on credit: gas, clothes, and property.”

While he was in the furniture business, Mr. Leevy ventured into two more businesses. One was a commercial hog farm located in the Farrow Road area of Columbia, and the other was an Esso Gas Station. Mr. Leevy realized that: “nowhere in Columbia and probably the state were Negroes engaged in the filling

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12 The Palmetto Leader, December 25, 1925.
14 Interview by author of Ruby Leevy Johnson, December 12, 2000.
station business. With the aim of exploring into this type of enterprise, I moved my house from a corner lot and built in its place Columbia's first filling station owned and operated by a Negro. Not only was the colored-owned filling station a first of its kind, it became the nexus for civic activity and a haven for Black travelers. Nowhere else in town could Black commuters gain access to clean restrooms, cold drinks and good conversation. Mr. Leevy advertised in the Palmetto Leader that he had an around the clock wrecker service and the “Leevy's Better Battery Service.” The Leevy Esso Gas Station was a full-service gas station with a top-notch mechanic. The mechanic for the filling station was Mr. Ollie James Johnson. He was one of the best auto mechanics in Richland and Fairfield counties. He taught auto mechanics at Booker T. Washington and another trade school in Jenkinsville, South Carolina. In 1935, Mr. Johnson married Mr. Leevy's eldest daughter, Ruby Geneva Leevy. Ollie and Ruby Leevy Johnson would later become the parents of five children: Jamescina, Charles, Carroll, Isaac, and Andrena.

The Esso Gas Station was by no means the last of Mr. Leevy's business ventures. In 1932, two local preachers in Columbia approached Mr. Leevy with a business proposition. They believed that Columbia needed another Black-owned funeral home. At the time there were four Black-owned funeral homes in the city: T. H. Pinckney Funeral Home, Champion-Pearson Funeral Home, Manigault-Williams Funeral Home, and Johnson-Bradley-Morris Funeral Home. So the three of them went into partnership and opened the Leevy-Holloway-Bowling Funeral Home in the Ridgewood Section of Richland County. That partnership did not last long for various reasons, and Mr. Leevy went independent, opening up the Leevy's Funeral Home inside the Esso Gas Station in 1933. For almost 20 years, the funeral home was located inside the filling station. He advertised, beginning in January of 1933, that he had the lowest prices in town and their service was “As Near as Your Nearest Phone.” One could come to the corner of Taylor and Gregg streets for a gallon of gas, a soda pop, and pay respects to a deceased individual. Mr. Johnson, the mechanic at the filling station, went into business for himself and moved his garage one block to the corner of Gregg and Blanding. The old garage was renovated into a chapel and the store room was converted into an embalming

"Ibid."
room: “They had the gas station and they made a chapel out of the garage and a little room on the side was the show room on the front of Taylor Street. The gas station office became the arrangement room and they filled in the oil pit and made the show room.”

Mr. Leevy used his new-found position as an undertaker, also, to affect change within the community: “Immediately upon organizing the Leevy Funeral Home, I found that the colored dead of the state hospital were being buried by one other than an undertaker of the race, so I started a fight for a Negro chaplain at the State Hospital, and a Negro mortician.” In 1937, Mr. Leevy won the contract to provide the mortuary services for deceased Black patients in the hospital. This contract was a big deal to Mr. Leevy. He thought it showed his compassion for the needs of the citizens of Columbia, even in death. He wrote in all of his advertisements that he was the Mortician for the State Hospital and Asylum.

In the May 15, 1937, edition of the Palmetto Leader, a special notice was run by the pastor and members of Zion Baptist Church, which was on Washington Street in downtown Columbia. The headline read: “To the Colored Undertakers of Columbia.” The article stated: “The Zion Baptist Church of Columbia, South Carolina wishes that you notify each family that may have a death that if the funeral is to be conducted on Sunday at said church that a fee of twenty-five dollars will be charged to be turned over to said church.”

A group of ministers in the city felt inconvenienced by having to conduct funerals on Sundays. Sometimes they had to do more than one on a Sunday because Saturday and Sunday were the only days that Black people, during this period, could get off work. Interestingly, another area preacher wrote an editorial in the next edition of the paper. He declared that ministers were called to serve, and if they did not want to conduct funerals on Sunday, they needed to choose another profession: “We as ministers don’t have anything else to do but preach funerals on Sunday. We as working people cannot be going backward and forward asking off to attend funerals during the week when most of our working people and friends of the dead are off on Sunday.”

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16 Author Interview of Ruby Leevy Johnson, December 12, 2000.
17 Ibid.
In spite of Reverend Kennedy's thoughts, a group of preachers and undertakers, Mr. Leevy being one of them, petitioned the Columbia City Council to outlaw Sunday funerals. Reverend N. H. Humphrey, the pastor of Sidney Park C.M.E. petitioned the city council to ban Sunday funerals on behalf of the preachers and undertakers of the city. The undertakers of the city realized that they had made a colossal blunder when many of their families complained. They quickly retracted their support of Reverend Humphrey's petition and as a collective group printed a statement in the Palmetto Leader: "We wish the public to know that the Reverend Humphrey was not authorized to represent us at the City Council. We will conduct Sunday funerals when called to do so." 120 Mr. Leevy had served on the steering committee to write the resolution to ban Sunday funerals, but he quickly signed the letter with the other funeral directors when he, too, realized that the resolution was an error in judgment.

In May of 1940, Mr. Leevy was appointed by Joe W. Tolbert, the State Chairman of the Republican Executive Committee for South Carolina, as the Chairman of the Richland County Republican Party. Prior to this time, there was not a unified Republican Party in South Carolina. There were various factions of republicans throughout the state. Mr. Leevy was the driving force to get Blacks to join the Republican Party: "Granddaddy was the moving force to get enough people present at the state convention to help represent from Richland County. The representatives from Richland County were predominantly Black and they were hand picked by granddaddy." 21 Mr. Leevy was a great admirer of Abraham Lincoln, and he believed that the Republican Party was the party for Black people: "The Republican Party was the party for Blacks up until Goldwater. It has always been the party for Blacks, Mr. Leevy said that the Democrats didn’t do anything for Blacks." 22 Through the Republican Party, Mr. Leevy sought to bring the current predicaments of his race into the party.

As part of his commitment to the Republican Party, Mr. Leevy organized the Lincoln Emancipation Club in Columbia, South Carolina in 1940. This organiza-
tion was more than a tribute to Abraham Lincoln, whom many Blacks revered for emancipating the slaves, but it was a political organ as well. Because of the radical Republicans' role in reconstruction, most if not all Whites in South Carolina voted with the Democratic Party on both local and national levels. He, however, strongly believed in a two-party system so that Negroes could use their voting power to influence either party. Blacks had to be careful about making their political beliefs public. Therefore, the club was a camouflage so that Blacks would not be perceived as radical political participants. He and other members of the organization organized a Lincoln Day Celebration on February 12, 1955, at the Township Auditorium. He urged Blacks to come out because: "The divisive forces in our state and local governments today and the shallow convictions of many men in high places, with relation to constitutional government and first-class citizenship for all South Carolinians, force us to look with interested hope to the philosophy of the Great Lincoln." Mr. Leevy believed that if he could rally people around Lincoln's ideals and he could encourage them to vote.

During this period there were only certain days on which people could register to vote. So he would meticulously arrange rally day meetings around voter registration days so that the colored citizens of Columbia would be inspired to register. Mr. Leevy believed whole-heartedly that voting was a major means of protecting and promoting their rights: "The people of this state need renewed hope and faith, and increased strength and inspiration for the fight that lies immediately ahead since prominent men, even in our own state, would defy the fundamental principles of constitutional liberty." The funeral home was used not only as a business, but, also, as a medium to spread his political philosophy. Countless organizational meetings were held in the funeral home's chapel, and all of his promotional fans carried his famous slogan: "A Voteless People is a Hopeless People." Around 1941, Mr. Leevy developed glaucoma. His son, Carroll, who was a practicing physician in New Jersey, encouraged him to have surgery, but Mr. Leevy refused. During the next eight years his sight became continually worse, and by 1948 he was, completely, blind.

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\(^{24}\) Ibid.
Mr. Leevy became very active in the Republican Party and ran for city council, the State Legislature and even Congress as a Republican. After serving several years as the Chairman of the Richland County Republican Party, he was elected State Vice President of the South Carolina Republican Party. In 1956 he was elected as a state delegate to the Republican National Convention being held in San Francisco, California. “The delegation that granddaddy was a part of was integrated. They rode from South Carolina to San Francisco on a chartered bus. When they reached many of the stops along the way, they had to live in segregated facilities. Arriving in San Francisco, they were assigned to the Mannix Hotel. At that time the Republican Party was attracting members and they had a credential’s fight at the convention between granddaddy’s group and another group headed by Strom Thurmond. At the credentials committee, Mr. Leevy’s group lost. Some of the people who traveled with granddaddy defected, like Earl Middleton and I. DeQuincy Newman. They went with the other group.”

Mr. Leevy remained in San Francisco long enough to take a picture with Richard Nixon, but he and his group caught another bus and headed back to Columbia.

When Mr. Leevy wrote his memoirs, at Modjeska Simkins encouragement, he was still a member of the Republican Party. He really believed that the two-party system was beneficial for the country and that the Republican Party was making real gains for the Black community:

“I have just been told that the kind and quality of Republican Party that I have been contending for has just been born, therefore, our labors have not been in vain. Our organization of the Lincoln Emancipation Clubs of South Carolina, Inc., was not in vain. In that we have at last a Republican Party of, by, and for the people, planted in the wards and precincts, the counties and districts of the state which reaches far yonder the White House, which resides the greatest of all, the President of the United States, Dwight D. Eisenhower.”

However, when Barry Goldwater got the Republican nomination in 1964, Mr. Leevy publicly switched his allegiance to Lyndon Johnson: “Goldwater, hated

Author Interview with I. S. Leevy Johnson, December 13, 2000.
Blacks and he did not want Blacks to prosper and he publicized it. He didn’t care nothing about Black folk. Mr. Leevy’s slogan was “No water for Goldwater in South Carolina.” He publicly changed to the Democratic Party and he encouraged other Blacks in Columbia to switch to the Democratic Party and he was quite successful.26

Mr. Leevy became very active in Columbia during the Civil Rights Movement. As a founding member of the Columbia Chapter of the National Association for the Advancement of Colored People, he was instrumental in helping coordinate during protests in Columbia. He would allow different groups to use the chapel in the funeral home as a meeting place. Mr. Leevy would later serve on the Board of Directors for the Southern Christian Leadership Conference organized in 1957 by the Reverend Dr. Martin Luther King, Jr. Also, Mr. Leevy was one of the board members who signed the “Heed Their Rising Voices” full page ad in the New York Times, which requested public financial support for Reverend King’s legal bills.27 Mr. Leevy was also instrumental in bringing Martin Luther King, Jr. to speak at the Township Auditorium during the height of the Civil Rights Movement: “He [Martin Luther King, Jr.] and Reverend Ralph David Abernathy came here to the funeral home and met with granddaddy. I remember distinctly that people were worried about going to the public meeting because Whites intimidated their employees. He and granddaddy got up and made a speech that night to a full Township Auditorium.”28

On June 17, 1965, Mr. Leevy’s wife, business partner, friend and companion slipped away. Her funeral services were held in the Wesley United Methodist Church in Columbia. Mr. Leevy would live for another three years and began grooming his grandson and namesake, Isaac Samuel Leevy Johnson, to run the family business. After I. S. graduated from C. A. Johnson High School, Mr. Leevy sent his grandson to mortuary school at the University of Minnesota. During the early sixties, only northern embalming schools would admit Blacks. After completing mortuary school, I. S. returned to Columbia to work in the family business. While working full-time at the funeral home, I. S. went to school at Benedict to

26 Author Interview with Benjamin J. Piper, December 12, 2000.
27 This page is re-printed in Taylor Branch’s Parting The Waters: America in the King Years 1954-1963. (New York: Simon and Schuster, 1988).
28 Author Interview with I. S. Leevy Johnson, December 13, 2000.
earn a degree in business administration. In 1965, Mr. Leevy's grandson enrolled in the University of South Carolina's School of Law, and became the first Black student to complete the entire program and graduate from the University of South Carolina School of Law in May of 1968.

When the staff arrived at 8 a.m. on Monday morning, December 9, 1968, the staff noticed that Mr. Leevy had not made it down to his office. They told Mr. Leevy's son, Kirk, that Mr. Leevy was not downstairs. When Kirk went to knock on Mr. Leevy's bedroom door, nobody answered. He quickly went and got Mr. Leevy's grandson, Carroll, and the two of them knocked down the door. There they found Mr. Leevy's lifeless body resting peacefully in his bed. They tearfully notified Mr. Leevy's daughter Ruby, who, also, lived in the funeral home with her daddy. After the family surrounded him in tearful anguish, the coroner, Cecil Wiles, arrived and pronounced Mr. Leevy dead. The staff carried Mr. Leevy's body about twenty-feet into the preparation room, where his grandson and namesake, I. S. Leevy Johnson, meticulously, prepared his remains for burial; a final service to his grandfather. To I. S., this was a sacred duty rendered to the man whose legacy he would have to live.

Several articles and editorials were written about Mr. Leevy's life after his death. After ninety-one years on this earth, Mr. Leevy had accomplished more, business wise and politically, than any other African American man in Columbia, South Carolina: "As a mortician, he knew the frail mortality of man; as a man he knew that the living must serve the living — and he did, in full measure." He had received honorary degrees from South Carolina State College, Morris College, and Allen University. In 1962, Benedict College honored him with its Distinguished Service Award, and, in that same year, he received a similar award from the South Carolina Mortician's Association. He had served on the Inter-racial Board of the Associated Charities of Richland County, Charter Member of the South Carolina Human Relations Commission, organizer of the Richland County Tuberculosis Hospital for Negroes, life member of the National Negro Business League, and was Chairman of the Palmetto State Voters Association. His philanthropic spirit was manifested in the thousands of persons he allowed to purchase goods on credit,
and he donated thirty acres of land to the Columbia Bible College for the creation of the Bethel Bible Camp, a summer retreat for children.

Isaac Samuel Leevy, Jr. was a strong believer in the Bible and his church. While living in Columbia, he attended the Wesley United Methodist Church. At Wesley he served in many capacities: Sunday School Teacher, Superintendent of the Sunday School, Trustee and Steward. He once told an audience:

"What a man needs most is hope. He's got to have something to make him know that his dream can come true. And it doesn't have to be a large thing, just a little bit of hope can keep a man alive. There is a story in the Old Testament about a time of drought. When the people and the cattle had no water to drink and the fields were parched for lack of rain, the people called upon the prophet to pray for rain, and when he prayed, Jehovah gave him a sign, just a small cloud in the far away sky about the size of a man's hand, but this was the promise of life — giving water, and it kept the people's hopes alive. I'm going to keep on keeping on until the battle is won."

Mr. Leevy gave hope to thousands of African Americans not only in Columbia, but, also, in the entire state. His life lives on in the legacy of his children, grandchildren and great-grandchildren. Even though he was never successful in being elected to political office, his grandson, I. S. Leevy Johnson, was elected to the South Carolina House of Representatives in 1970, becoming one of the first three Black legislators elected since Reconstruction. Mr. Leevy's funeral home still stands at the corner of Taylor and Gregg streets and continues to be a pillar of the community. In 1995, Mr. Leevy's grandson, I.S., bought the funeral home out of the family trust and is currently operating the business with the help of his long-time friend, Ben Piper and his son, Christopher.

In 1998, Isaac Samuel Leevy, was posthumously inducted into the South Carolina Business Hall of Fame. When his grandson and namesake, I. S. Leevy Johnson, accepted the award on his behalf, he remarked how the recognition was the fitting tribute to the entrepreneurial accomplishments of his grandfather. His

The Papers of I. S. Leevy. The South Caroliniana Library. University of South Carolina, Columbia, South Carolina.
grandson, the current owner of the funeral home and one of the most prominent lawyers and political leaders in the State of South Carolina, headed Reverend McCollum's concluding comments when he admonished the congregation to: "Let no one here say that this is the last tribute of respect that he'll pay him, but let every moment of every day be spent in honoring all that Mr. Leevy stood for. Isaac Samuel Leevy, humanitarian, businessman, citizen, statesman, churchman, patriarch, may he rest in peace."31 Those members of his family who are left behind live each day in honor of his legacy and continue to give utterance to his vision.

31 Ibid.
PART 2: THE MOORE SCHOOL OF BUSINESS
T H E I M P A C T O F P O S I T I O N I N G S T R A T E G Y 
O N T H E E F F E C T S O F N E G A T I V E P U B L I C I T Y : 
A N I N T E R - C A T E G O R Y P E R S P E C T I V E

Tracy Harrell Dunn
Department of Marketing
The Moore School of Business

Introducing a pioneer to the marketplace is both a costly and perilous undertaking (Golder & Tellis, 1993). The estimated costs to launch a new product successfully is between $20 to $50 million (Lukas, 1998). This is an expensive investment given that at least 50 percent of pioneers are doomed to fail (Martino, 1998). In 1993, only 10 percent of new products (percentage includes pioneers and extensions) were successful and their expected life span was 5 years (Clancy & Shulman, 1994). One of the reasons cited for the failure of new products is a poorly chosen positioning strategy (Clancy & Shulman, 1994). Therefore, one reasonable way for marketers to mitigate the risks involved in pioneering a new market is through careful choice of positioning strategy.

Sujan and Bettman (1989) identified two positioning strategies available to marketers. One strategy is to associate the product with an existing product category and thereby assist the consumer in learning about the new product by relating it to a familiar product category. They refer to this strategy as a differentiation strategy. Alternatively, the marketer can choose a subtyping strategy, which emphasizes the distinguishing characteristics of the product. Regardless of which strategy is chosen, the marketer's choice is an important one because it ultimately affects how consumers perceive the product (Sujan & Bettman, 1989).

For example, Procter & Gamble (henceforth, P&G) recently introduced Frebreze, a spray that eliminates odors from fabrics. P&G could have used advertising that compared the product to an existing product category (e.g., upholstery cleaners). Because most consumers have used upholstery cleaners or at least

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1 This paper uses the term pioneer, which refers to the first brand in a distinctly new product category to appear in the marketplace (Schmalensee, 1982, p. 350).
2 This paper adopts the definition of product category used by Golder and Tellis (1993). It refers to "a group of close substitutes such that consumers consider the products substitutable and distinct from those in another product category" (p. 159).
seen advertising for them, this association would have made the product seem more familiar and less unusual. By using a differentiation strategy, P&G would have enabled the consumer to use his/her accumulated general knowledge about upholstery cleaning products and apply it to this new product.

Instead, the company used advertising that described what the product does without suggesting a product category. One of the early promotional efforts claims that it removes odors from furniture and drapes, car interiors, carpeting and clothing and canvas shoes. Because at the time of Febreze’s introduction, there were no existing products with such a unique purpose, consumers probably did not have a well-developed schema in memory that would help them process this marketing communication. As a result, consumers were left to use the advertising information to create a new schema for the product.

By emphasizing distinguishing attributes of the product, the P&G marketers utilized a subtyping strategy. Researchers have extolled the benefits of using this niche strategy (e.g., Linneman & Stanton, 1991; Sujan & Bettman, 1989). However, there also are benefits to associating one’s product with an existing product category. One such benefit is what researchers call “transfer of affect,” in which the affect associated with an existing, familiar object is transferred to a new, unfamiliar object. This transfer occurs when the new object is closely identified with the familiar object. This phenomenon has received support in the literature (e.g., Fiske, 1982; Fiske & Pavelchak, 1986).

To understand its implications for the Frebreze case, let us consider how this phenomenon would work if P&G had positioned Frebreze as similar to upholstery cleaners. Because in most cultures, dirt is considered socially unacceptable and to be avoided, one can assume that most consumers have positive feelings toward the upholstery cleaner category because these products serve an important purpose. Based upon this assumption, it is likely that the positive effect that many consumers associate with the category is likely to transfer to Frebreze if Frebreze had been touted as a new type of upholstery cleaner and the consumer perceived the new product as part of the upholstery cleaner category. In this instance, such an association would have worked to the advantage of the pioneer (in this case,

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Schemata are cognitive structures that represent one’s knowledge about a domain (Sujan & Bettman, 1989).

Febreze) because the consumer had a positive attitude toward the existing product category, which in this case is the upholstery cleaner category.

However, what happens if, after the pioneer's strategy is chosen and the association is set in minds of consumers, unfavorable information is learned about the existing category, and the consumer's attitude becomes negative toward the existing category? Does this newly developed negative effect then transfer to the pioneer that is psychologically linked to the incriminated category in the consumer's mind? For example, in the case of this latter Frebreze scenario, what if the results of a study were published in which upholstery cleaners were found to have a dangerous chemical that causes skin cancer in the users. As a result of this negative information, consumers are likely to develop a negative attitude towards upholstery cleaners. Therefore, if Frebreze had been associated with upholstery cleaners, this negative feeling could then potentially transfer to Frebreze.

These are important questions because negative publicity can be costly to both the firm and its products. For example, consider what happened to Food Lion after ABC's PrimeTime Live aired a segment regarding Food Lion's meat-handling practices. Its net earnings for the 4th quarter of 1992 fell 55.1% (Tosh, 1993). Similarly, sales at Jack in the Box restaurants fell 30 to 35% in the weeks following the discovery that its food was responsible for deaths and illnesses related to a dangerous bacteria called Escherichia coli (Graebner, 1993). Schwan's Enterprises lost $200 million when their ice cream was linked to a salmonella outbreak (Berman, 1999).

The aforementioned are all examples from the marketplace of the impact of negative publicity when there was evidence that directly implicated a firm's product(s). This impact of negative publicity in instances of direct implication has been explored extensively in the literature (e.g., Burton & Young, 1996; Griffin, Babin & Attaway, 1991; Jolly & Mowen, 1985; Jorgensen, 1994, 1996; Mowen, 1980; Mowen, Jolly & Nickell, 1981). However what has not been examined as closely is the consumer response to a category associated but not directly implicated by the negative publicity. This is a reasonable occurrence given marketplace examples of consumer response when one product is linked to an indicated product in the minds of the consumer.
Consider the case of the frozen strawberries. Sales of fresh (not frozen) US grown strawberries plummeted when consumers concerned about the Hepatitis A outbreak linked to frozen Mexican strawberries (Maggs, 1997). Even though the frozen strawberries were the products of concern in the reports, consumers had strong links between frozen and fresh strawberries and, therefore, did not want to take a chance. Another example is what happened to Schwan’s Enterprises when a salmonella outbreak was traced back to its ice cream. The company not only incurred the expense associated with the recall, but, also, lost sales of other Schwan’s non-ice cream products that were not directly implicated by the recall (Berman, 1999). Both of these examples serve as anecdotal evidence that an association between products in the minds of consumers can lead to negative reactions to both the indicted product(s) as well as the harmless but affiliated product(s).

In this chapter, I consider a tangentially similar issue. How does negative publicity about an existing, familiar product category affect consumer response to a new, related product category? Specifically, I explore how the positioning strategy of the pioneer can drive this inter-category transfer of affect. In doing this, I seek to improve the understanding of how the choice of positioning strategy by the pioneer can potentially influence how its category is perceived. Up to this point in the literature, the study of positioning strategies has been limited to the brand level. In this paper, I seek to broaden this understanding of the impact of a product’s positioning strategy to the category level.

I begin this examination by first reviewing the relevant literature on categorization, positioning strategies, and negative publicity. I illustrate that a product’s positioning strategy influences how it is categorized as well as how affect regarding a related product category is transferred to a new product. To accomplish this, I use Fiske and Palvachek’s (1986) model of category-based transfer of affect. Finally, I discuss the implications for pioneer products.

**Categorization**

Because consumers are inundated with marketing stimuli in their environment, they seek ways to simplify the processing of the information. One such way
is categorization. Categorization is the process whereby individuals seek to identify a new stimulus. It occurs when a new stimulus is compared with existing knowledge structures (Cohen & Basu, 1987). These knowledge structures (or schemata) are storage places for attributes, expectations, and behaviors about a particular stimulus (Fiske & Pavelchak, 1986). They allow individuals to classify new objects and relate them to familiar objects, which serves as an aid in drawing inferences and making judgments about the new stimuli (Cohen & Basu, 1987).

Researchers have conceptualized schemata as components of an associative network in memory, consisting of nodes and links (e.g., Keller, 1993). The nodes represent information about a given stimulus, and the links connect the nodes (Keller, 1993). Fiske and Pavelchak (1986) provide a useful depiction of a schema, in which a category label is connected to multiple nodes.

The category label represents a category like upholstery cleaners. Below the label are the pieces of information (Ai), each representing an attribute, a behavior, or an expectation that an individual has for the category. For example, in the case of upholstery cleaners, an example of an attribute might be a fresh smell; a behavior might be removes dirt; and an expectation might be easy to use. The links that connect the various nodes to the category label are stronger than the links that connect the nodes to each other (Fiske & Pavelchak, 1986). This means that accessibility of the category leads to accessibility of each attribute. However, accessibility of one attribute does not necessarily lead to activation of another. For example, tough on dirt does not necessarily activate fresh smell. However, the accessibility of the category — upholstery cleaners — leads to activation of both.

While the aforementioned may be considered a simplified category schema, many researchers have broadened the depiction of schemata to include links connecting a given schema to other related schemata, forming an associative network. Therefore, in addition to having a category schema, consumers can potentially have schemata regarding each brand in a given category (Engel, Blackwell, & Miniard, 1995). These various brand nodes are then linked to the category in memory, which allows them to expand the network associated with each brand (Cohen & Basu, 1987). These networks are believed to be mostly categorical in

Another characteristic of schemata is that it is built over a period of time. As the individual learns about a stimulus through direct experience or provided information, the schema develops and more nodes are added. Therefore, when the individual comes in contact with a new stimulus, by categorizing it into an existing schema, the individual reduces the need to process its individual attributes. Instead he or she can use existing knowledge stored in the accessed schema to infer attributes about the new stimulus (Cohen & Basu, 1987). However, before the individual can apply the schema contents to this situation, the individual must first determine that the new stimulus fits the existing category schemata.

In determining the fit between a new stimulus to an existing category, an individual relies on information from the environment regarding the new stimulus. This stimulus information is then compared to existing schemata for similarity (e.g., Loken & Ward, 1990; Sujan, 1985). This type of holistic processing is believed to be automatic and common in most consumer situations (e.g., Alba & Hutchinson, 1987; Cohen & Basu, 1987).

Therefore, in the consumer context, marketers can influence this categorization through advertising, which creates and communicates the product's position among the marketplace of competition (Adams & Van Auken, 1995). Using advertising, the marketer can either associate a new product with existing brands or differentiate it from the competition (e.g., Kalra & Goodstein, 1998; Mitra & Lynch, 1995). The positioning strategy selected determines how the consumer relates the new product to an existing schema. In the next section, I suggest how the positioning strategy influences categorization of a new product.

**POSITIONING STRATEGIES AND CATEGORIZATION**

Sujan and Bettman (1989) identify two positioning strategies available to
marketers — the subtyping strategy and the differentiation strategy. When the marketer does not provide a category label cue or instead provides attribute information that is inconsistent with existing product categories, the consumer potentially is unable to fit a new product into an existing, known category schema. In doing this, the marketer has created a niche or submarket for the product (Sujan & Bettman, 1989). This strategy is referred to as the “subtyping strategy” (Schoormans & Robben, 1997; Sujan & Bettman, 1989). This strategy creates perceptual distance between the advertised product and existing product categories. Therefore, as a result, the consumer creates a new category.

Another option available to marketers is the differentiation strategy. Using this strategy, the marketer associates the new product with an existing product category, while highlighting superiority on its distinguishing attributes (Sujan & Bettman, 1989). Because the marketer of a new product has the burden of educating the consumer about the product and its benefits, the differentiation strategy can facilitate the learning process for the consumer and reduce the perceived risk of trial. By using the differentiation strategy, the marketer makes the product seem more familiar because the consumer accesses knowledge about the existing product category from memory.

**POSITIONING STRATEGIES AND TRANSFER OF CATEGORY-BASED AFFECT**

Besides creating familiarity, the association with an existing product category provides a new product with other benefits as well. First, the consumer potentially places the product within his/her consideration set when contemplating the purchase of a brand within the existing category. This occurs because of the close perceptual proximity created by the differentiation strategy (Wilkie & Farris, 1975). Second, the consumer is more likely to make inferences about the product based on the knowledge about the existing product category (e.g., Pechmann & Ratneshwar, 1991; Sujan & Bettman, 1989). Third, the product benefits from any positive affect that the consumer associates with the existing product category (e.g., Fiske & Pavelchak, 1986).
This last benefit, which is a focus of this paper, occurs because specific beliefs or overall attitudes that the consumer has about an existing product category potentially becomes associated with a new product (Keller, 1993). This perspective is suggestive of the category based affective model that has received much support in the literature (e.g., Fiske, 1982; Fiske & Pavelchak, 1986; Sujan, 1985; Sujan & Bettman, 1989). According to this model, individuals have well-defined schemata for product categories. Each of these schemata has an “affective tag” associated with it. Additionally, each node (representing an attribute, a behavior, or an expectation) also, has an affective tag that represents its evaluative value. Once a stimulus has been classified as a member of a given category, the affect associated with the given category is then transferred to the newly classified stimulus and therefore influences the evaluation of the new stimulus (Cohen, 1982; Cohen & Basu, 1987; Sujan, 1985). Thus, in the case of consumer products, if the consumer perceives the new product as similar to an existing product category, the affective tag associated with the category is likely to transfer to the new product (Cohen, 1982; Fiske, 1982; Fiske & Pavelchak, 1986; Sujan, 1985; Sujan, Bettman, & Sujan, 1986).

For example, Consumer A dislikes eggs. Therefore, his schema for eggs probably has a negative affective tag. The marketer of an egg substitute uses advertising that emphasizes the substitute’s similarity to real eggs in an effort to encourage trial. Consumer A, seeing the ads, perceives the egg substitute as more similar to real eggs than different. As a result, he responds negatively to the egg substitute because his unfavorable feelings about real eggs influence his impression of the substitute product.

The above example is conceptually similar to a phenomenon suggested by researchers in the brand extension literature (e.g., Keller, 1993; Romeo, 1991). Romeo (1991) found that affect associated with the family brand is more likely to transfer to the extension when the extension is perceived similar to the original brand. This is conceptually similar to the notion that an association between two different product categories created by a positioning strategy can lead to a transfer of affect from one to the other.
NEGATIVE PUBLICITY

Negative publicity is insidious for any product because one instance of negative publicity can undo years of brand equity building. Also, negative publicity is not always foreseeable and, therefore, preventable. With quick turnaround, media available now for consumption of information (i.e., television, radio, Internet), news, especially bad news, is diffused at rapid rates (Weinberger & Romeo, 1989). Additionally, consumers tend to give negative information more weight than positive information for several reasons (Richey, Koenigs, Richey, & Fortin, 1975).

First, the effect of negative information may be the result of the cognitive processes initiated by content of the message (Scott & Tybout, 1981). Second, consumers make attributions about the cause of the negative information and, therefore, feel more certain about their negative feelings (Mizerski, 1982). Third, negative publicity is attention grabbing. Fourth, the medium for the message is usually a credible source, e.g., nightly news broadcast (Kanouse & Hanson, 1972; Sherrell & Reidenbach, 1986), and, finally, researchers (Fiske, 1980) believe that consumers find negative information more diagnostic (i.e., more indicative of underlying characteristics than positive information).

For these reasons, most marketers who are interested in building brand equity for their brand would not knowingly associate a new product with an existing product category about which consumers feel negatively. However, there are circumstances in which products, inadvertently, find themselves associated with a disliked category. For example, consider a food “the new coffee” that stresses its similarity to traditional coffee. Over time and repeated exposure to this processor that introduces this new type of coffee made out of roasted soy nuts, consumers may develop a strong association between the soy nut coffee and coffee bean coffee. Therefore, if at some later point, a food processor of real coffee recalls its products because the artificial coloring used on the coffee beans is linked to stomach cramping after consumption, consumers are likely to feel less favorable towards this type of coffee. This change in subsequent evaluation of the coffee-bean coffee is likely to affect the soy nut coffee because they were strongly associ-

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6 This author uses the following definition for negative publicity given by the American Marketing Association: "The noncompensated dissemination of potentially damaging information by presenting disparaging news about a product, service, business unit, or individual in print or broadcast media or by word of mouth" (Sherrell & Reidenbach, 1986, p. 38).

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ated with each other. Researchers have established that when the differentiation strategy is used, there is a higher recall of the product's consistent features with the existing category and more inferences about features not explicitly stated (Sujan & Bettman, 1989). Therefore, it is reasonable for consumers to infer that both the new product and the implicated existing product category share a negative characteristic, which, in the previous case, was tainted artificial coloring.

As illustrated in the previous example, the impact of negative publicity and potential transfer of affect has implications for the pioneer (in the above case, soy-nut coffee) and the pioneer's category. According to the schema literature, a consumer is likely to construct a schema for the pioneer category based on the product information from the pioneer's marketing communication. Therefore, the pioneer's use of the differentiation strategy is likely to cause the consumer to access the schema of an existing product category so that the pioneer's category schema is linked to the existing product category in some way. Once these associations are formed in the minds of consumers, they are considered very difficult to erase (Carpenter, Glazer, & Nakamoto, 1994; Carpenter & Nakamoto, 1989). Conversely, when the pioneer uses a subtyping strategy, which creates a perception of difference, the consumer is likely to create a new category for the pioneer (Sujan & Bettman, 1989). Therefore, over time, the consumer is likely to think of the pioneer category as different from existing categories.

Researchers have found that the nature of a consumer's early experience with a new domain influences how subsequent information is processed as well as how it is incorporated into existing information (Alpert & Kamins, 1994; Anderson, Kline, & Beasley, 1979). Therefore, the impact of negative publicity about an existing category on the pioneer's category heavily depends on the strategy used by the pioneer. Hence, when negative information is learned about a brand within a product category, consumers are likely to respond negatively (Weinberger & Romeo, 1989). This negative response can potentially affect all brands in the implicated category as well as related brands in other categories. Consequently, when negative information is learned about an existing category,

$$P_{ia}: \text{The evaluation of the pioneer when a pioneer uses a dif-}$$
differentiation strategy will decrease to a greater extent than the evaluation of the pioneer when the pioneer uses a subtyping strategy.

P15: The evaluation of the pioneer category when a pioneer uses a differentiation strategy will decrease to a greater extent than the evaluation of the pioneer category when the pioneer uses a subtyping strategy.

RESEARCH ISSUES AND CONTRIBUTIONS

The purpose of this chapter was to explore the effect of negative publicity regarding an existing product category on the pioneer category given the strategy of the pioneer (i.e., differentiation or subtyping). Fiske and Palvachek (1986), who laid the groundwork for category based transfer of affect, suggested the importance of understanding how consumers respond to a new product when information is learned about a related product's liability (or in this case, a related category's liability). I am unaware of any research that has examined the influence of positioning strategies on inter-category transfer of affect. Some work, however, has been done on the inter-category effects of information, where researchers have restricted themselves to consider the relationship between a parent brand and its brand extensions (e.g., Romeo, 1991). Yet, to the knowledge of this researcher, no one has considered the inter-category effects of information where the two categories are not linked by a parent brand name.

While marketers do not have a crystal ball to see into the future, the conceptual ideas presented here can help them understand the additional risks and potential rewards of associating a pioneer with an existing category. This chapter, also, suggests a theoretical extension. The literature has established that consumers develop schemata for product categories. This paper attempts to broaden our thinking about schema development for product categories by examining how the positioning strategy of the pioneer influences this process.

REFERENCES


Maggs, J. (1997, April 8). Contamination scare is shriveling sales of fresh as well as frozen strawberries. *Journal of Commerce and Commercial, 412*, 1A.


Databases today can range in size into the terabytes—more than 1,000,000,000,000 bytes of data. Despite the development of technology to support huge databases, the rapid spread of computerization in all industries presents users with the problem of interpreting vast amounts of data. Within these masses of data lies hidden information that could be of strategic importance. Three tools, which have emerged in recent years to address this phenomenon, are data mining, data warehousing, and On-Line Analytical Processing (OLAP).

DATA MINING

The objective of data mining is to identify valid novel, potentially useful, and understandable correlations and patterns in existing data [2]. Data mining is an extension of traditional data analysis and statistical approaches in that it incorporates analytical techniques drawn from a range of disciplines including numerical analysis, pattern matching, and areas of artificial intelligence such as machine learning, neural networks and genetic algorithms. While many data mining tasks follow a traditional, hypothesis-driven data analysis approach, it is commonplace to employ an opportunistic, data-driven approach that encourages the pattern detection algorithms to find useful trends, patterns, and relationships.

DATA MINING AND DATA WAREHOUSING

Data warehouses are databases that, in theory, store all the data that an organization collects or purchases from outside sources. Data warehouses are generally relational databases containing dozens or hundreds of tables that are described by hundreds or thousands of fields. Data are brought into the data warehouse, cleaned, verified and normalized.
The data mining database could be a logical or a physical subset of a data warehouse. However, a data warehouse is not a requirement for data mining. Setting up a large data warehouse that consolidates data from multiple sources, resolves data integrity problems, loads the data into a database, and can be an enormous task, sometimes taking years and costing millions of dollars. Therefore, the data to be mined could be extracted from one or more operational or transactional databases rather than from a data warehouse.

**DATA MINING AND OLAP**

Data mining and OLAP are different tools that can be used to complement each other. OLAP is part of the spectrum of decision support tools. OLAP databases are organized along the different *dimensions* of a business, such as time, data, product type, and geography. This multidimensional structure often is called a *cube* (even when there are more than three dimensions).

Multidimensional systems are powerful resources for reporting and investigating data in a deductive manner. While OLAP pre-summarizes data along specific dimensions, data mining thrives on detail. Again, data mining and OLAP can be used to complement each other. For instance, prior to acting on the pattern uncovered by data mining, an analyst may need to determine the implications of using the discovered pattern in governing a decision.

**DATA MINING: THE BUSINESS IMPERATIVE**

Data mining is useful in any business context where there is a need to extract meaningful patterns from large quantities of information. This process, also known as "knowledge discovery," can be valuable in two different ways; it can increase profit by lowering cost, or it can increase profit by raising revenue. The following paragraph briefly illustrates several ways in which these two objectives can be obtained.

**Data Mining as a Research Tool.** One way that data mining can lower costs is at the very beginning of the product lifecycle, during research and development. There is, generally, a lot of data on which predictions can be based and data min-
Data Mining can be used to facilitate that process. An example would be the pharmaceutical industry that uses sophisticated prediction techniques to determine which chemicals are likely or unlikely to produce useful drugs. By focusing the research on the appropriate chemicals, or alternatively, by not doing the research on the unlikely chemicals, the industry potentially can save millions of dollars.

Data Mining for Process Improvement. Another way that data mining can be profitably employed to save money is in manufacturing. The consequence of a problem in the manufacturing processing is often a ruined batch of product and/or a very costly shutdown and restart of the process. Many modern manufacturing processes are controlled using statistical process control. Computer programs watch over the output and order slight adjustments to keep the reading within the proper bounds. Data mining techniques can be used to generate the process control rules that often involve complex interaction between the variables involved.

Data Mining for Marketing. Many successful applications of data mining are in the marketing arena, particularly in the area known as database marketing. In this context, data mining can be used both in the cost term and the revenue term of the profit equation. On the cost side, data mining can be used to cut marketing costs by eliminating calls and letters to people who are very unlikely to respond to an offer. On the revenue side, data mining can be used to spot the most valued prospects, such as those most likely to purchase high-margin items.

Data Mining for Customer Relationship Management. The term Customer Relationship Management (CRM) has come to embody much of what used to be called one-to-one marketing. Good customer relationship management requires an understanding of who the customers are and what they like as well as what they do not like. It also means anticipating their needs and addressing them in a proactive manner before they become dissatisfied and go to the competition. Through the application of data mining techniques, a large corporation can turn the volumes of records in its customer databases into a meaningful coherent picture of its customers.
DATA MINING: THE TECHNICAL IMPERATIVE

The field of data mining has diverse origins. On the academic side there is artificial intelligence and statistics. Artificial intelligence has contributed important algorithms for pattern recognition in data, while statistics offers the mathematical rigor and the foundations for predictive modeling and experimental design. For several decades, people have been extracting the data in databases to help make more informed decisions; commonly known as decision support, data mining is a natural extension of this effort. The following paragraphs review data mining from a technical perspective:

Data Mining and Artificial Intelligence. Artificial intelligence, also known as machine learning, has its origins in the field of computer science. Machine learning is essentially writing computer programs that are capable of learning by example. One type of learning manifests itself by a new-founded ability to perform a particular task; neural networks have been successful at this type of learning. Another type of learning is learning by rules that have been developed by examples; decision trees have been successful in this regard.

Data Mining and Statistics. Statistics has been another important thread that has supported data mining. For centuries, individuals have used statistical techniques to understand the natural world. The techniques have included predictive algorithms (such as the various regression techniques), sampling methodologies, and experimental design. Now these techniques are being applied to the business world. Again statistics offers the mathematical rigor needed for the data mining processing methodologies.

Data Mining and Decision Support. Decision support is actually a broad term that's generally used for the information technology infrastructure that organizations use to make informed decisions. Decision-support databases are designed to support complex queries, such as “which customers spent more than $100 at a restaurant, more than 50 miles from home in two out of the last three months?” A data warehouse is a special case of a decision support database in that it is a large decision support database that is normally fed by many operational and transaction systems. Many data warehouses focus on summaries of historical data, whereas data
mining requires access to data at a detailed level because that is where the most revealing patterns are discovered. To address this issue, data warehouses are increasingly being developed with data mining in mind.

Having discussed the advantages of using data mining and how it can help to facilitate many processes and procedures, it's important to maintain a balanced perspective in terms of one's expectations of data mining; specifically, what data mining can actually do and what it cannot do. The next paragraphs will address these issues.

**WHAT DATA MINING CAN DO**

While the term data mining often is used rather loosely, it is generally a term that's used for a specific set of activities, all of which involve extracting meaningful new information from data. The activities are: classification, estimation, prediction, clustering, affinity grouping, and description. The first three activities - classification, estimation and prediction are examples of directed data mining [1]. In directed data mining, the goal is to use the available data to build a model that describes one particular variable of interest in terms of the rest of the available data. The last three activities - clustering, affinity grouping and description are examples of undirected data mining [1]. In undirected data mining, no variable is singled out as the target variable; the goal is to establish a relationship among all the variables.

**WHAT DATA MINING CANNOT DO**

Data mining is a tool. It does not eliminate the need to know the business, to understand the data, or to understand the analytical methods involved. It must be remembered that the predictive relationships found via data mining are not necessarily causes of an action or a behavior. Further, data mining assists analysts with finding patterns and relationships in the data. It does not indicate the value of the patterns to the organization. The patterns uncovered by data mining must be verified and validated in an appropriate context in order to achieve the maximum benefit from the knowledge discovered.
THE FUTURE OF DATA MINING

It is clear that data mining is still in its infancy. With the proliferation of the Internet and the growth of electronic commerce, new opportunities exist for using data-mining techniques and methodologies. Web users search for, inspect and occasionally purchase products and services on the Web. While organizations compete bitterly for each potential customer, the key to winning this competitive race is knowledge about the needs of potential customers and the ability to establish personalized services that satisfy those needs.

Moreover, before improving and personalizing a Web site, there needs to be a method of evaluating the site's current usage. The only information left behind by many users visiting a Web site is the trace through the pages they have accessed. From this data source, the site owner must figure out what the users wanted in the site, what they liked, what disturbed or distracted them. This process often is referred to as click-stream analysis and data mining can be used for discovering knowledge and patterns regarding a Web site's usage [6]. The business benefits of obtaining this type of customer intelligence are potentially enormous; however, along with the benefits come challenges that go beyond the technical realm such as those of privacy and security concerns. Having said that, data mining is a growing, rich and diverse field that deserves the attention of practitioners and researchers alike.

REFERENCE NOTES

6. William E Spangler Choosing data-mining methods for multiple classification: Representational and performance measurement implications for decision support; Journal of Management Information Systems, Armonk; Summer 1999; Vol. 16, Iss. 1; pg. 37, 26 pgs
8. SAS Enterprise Miner Tutorial
   http://www.sas.com/software/tutorialsv8/em
9. SPSS Data Mining
   http://www.spss.com/datamine
The introduction of transaction-cost theory by O. E. Williamson (1979) was an exercise inspired by and constrained by Production Cycle Economics. Williamson likely used the constraint of the production cycle because of an interest in the contracting issues underlying the production process. Specifically, the constraints simplify his analysis by lending a framework on which to base his thoughts and analysis.

Williamson (1979) spends much effort discussing Transaction-Cost Theory and contracting. The one area of his analysis that is not addressed in detail is the role interpersonal relationships play in the contracting process and how these relationships may affect the cost of the transaction in question. Williamson does touch on this subject in his 1979 paper, but this discussion occurs within the framework of the production cycle.

This chapter explores the general effects of interpersonal relationships on contracting and on transaction costs. It is hoped that by unconstraining the analysis of the limitations of the production cycle that new and meaningful relationships will be discovered; thereby, increasing the understanding and applicability of transaction-cost theory.

**Contracts**

According to O. E. Williamson, transaction costs are central to the study of the economics of the firm. “Indeed, if transaction costs are negligible, the organization of economic activity is irrelevant, since any advantages one mode of organization appears to hold over another will simply be eliminated by costless
contracting...” (Williamson, 1979, p. 233). Here is the first, important element to consider in transaction-cost theory – the level of analysis. In transaction-cost theory, the level of analysis is the transaction and the transaction is embodied in the contract. This said, what is the definition of a contract? Normally, this question is not given much attention in business academia. Business academia assumes that all contracts are similar, discrete, and completely codefiable. This conclusion is an error because not all contracts are alike. Contracts for services and the underlying law that supports such transactions is fundamentally different from contracts for goods. Contracts can be unilateral or bilateral. Contracts can vary in type and duration. They can be one-off deals or recurring ones. Contracts can be made between individuals, groups, organizations, or countries, so the level and the parties involved are, also, a consideration. Coase (1937) states, “[t]he contract is one whereby the factor, for a certain remuneration (which may be fixed or fluctuating), agrees to obey the directions of an entrepreneur within certain limits.” This definition hardly is enlightening. In order to understand transaction-cost theory, there must be an understanding of what constitutes and defines a contract.

Within the academic law community, there is general agreement on what constitutes a contract. Corbin (1952, p. 442) defines a contract as “…[a] writing…the parties intend it to be and it means what they intended it to mean.” Macneil defines a contract as “…a projection of exchange...accomplished by promise, the ‘manifestation of intention to act or refrain from acting in a specified way...’” (1974, p. 713).

The default construction of a contract, in both law and economics, is the discrete-transaction paradigm – “sharp in by clear agreement; sharp out by clear performance” (Williamson, 1979, p. 235). Not all contracts are so simple or so easily defined and delimited. Besides its simplicity, the discrete-transaction paradigm assumes away the importance of the actual purpose of the contract (Williamson, 1979). This may be because typical discrete-transactions, e.g., buying a pack a cigarettes at the corner store, are of little interest to business or law academia. In such discrete-transactions, the purpose of the contract is well
understood and raises few questions involving the transaction, performance or the underlying, unspoken or implied contract.

"Relational" contracts, in contrast to discrete-transactions, have a purpose and differ from discrete-transactions in that they are difficult to define and delimit; their boundaries are fuzzy (Macneil, 1978, p. 901). Williamson does not define what constitutes a relational transaction. Macneil does state that relational contracts have been developed to address modern needs for sustaining on-going relationships with suppliers and business partners. Relational contracts are distinguished from discrete-transactions in that they have "duration and complexity" (Macneil, 1978, p. 902)

Other transactions may be covered by "nonstandard" contracts. Nonstandard contracts can be viewed as nondiscrete, non-relational contracts, i.e., an all other category. Nonstandard contracts include a grab-bag of contractual issues including disputed contracts, transactions that take place irrespective of the underlying written agreement, and nonperforming contracts.

MACNEIL'S SCHEMA OF CONTRACTS

In Williamson's (1979) writings, there is a lack of specified connection between transactions and contract types. A correspondence between transactions and contracts seems logical, since contracts reflect the transaction exchange. Defining a correspondence between transactions and contracts will allow examination of how governance mechanisms affect and are effected by the relationships among market, transaction, and contract.

Macneil has proposed several "contract schemas" (Macneil, 1974, pp. 738-740). The schema of interest, in this paper, proposes a continuum ranging from classical to neoclassical to relational contracts (Macneil, 1978, p. 862).

Classical contracts are designed for discrete, sharply defined transactions (Macneil, 1978, p. 863). They are the closest approximation to the discrete-transaction paradigm. The offerer and offeree of a contract are irrelevant in classical contracts. The scope of the transaction is tightly bounded and they, typically, involve transactions of short duration. Classical contracts closely approximate
idea of transactions occurring in highly competitive markets (Macneil, 1978, p. 864).

Neoclassical contracts are designed to cover long-term transactions executed under conditions of uncertainty, where the cost of complete specification of all contingencies is either prohibitively expensive or produces rigid agreement lacking adaptation (Macneil, 1978, p. 864). Neoclassical contracts typically are noncomprehensive in scope and inherently are designed to be flexible over time (Macneil, 1978, p. 865). “Third party assistance in resolving disputes and evaluating performance often has advantages over litigation in...[providing]...flexibility and [comprehensiveness]...” (Williamson, 1979, p. 237).

Figure 1

<table>
<thead>
<tr>
<th>Types of Contracts</th>
<th>Classical</th>
<th>Neoclassical</th>
<th>Relational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure Market Equilibrium</td>
<td>Fragmented Market</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Types of Economic Markets**

Much of corporate law and collective bargaining are designed to sustain ongoing relationships (Macneil, 1978, p. 885). Relational contracting is different from classical and neoclassical contracts in this regard. These contracts cover completely unbounded, nondiscrete transactions. In contrast to neoclassical contracts, the referent point of agreement is not the original agreement, but the entirety of the relation. Relational contracts define transactions that occur in highly fragmented markets. These markets may be so specialized that the offerer and offeree only have each other as exchange partners, making the use of the term “market” misleading (Williamson, 1979, pp. 238-239).

**Transactions**

The criterion for organizing transactions into contractual agreements is assumed to be cost minimization. Cost containment can occur either through reduced production expense or by decreasing transaction costs. Minimization of
transaction costs reduces to the "...economizing on bounded rationality while simultaneously safeguarding the transaction in question against the hazards of opportunism" (Williamson, 1979, p. 246). Moreover, Williamson asserts these twin objectives are in tension "...since a reduction in one [e.g., bounded rationality] results in an increase in the other [e.g., opportunism]..." (Williamson, 1979, p. 246).

Relating bounded rationality and opportunism to contracting is necessary. Contracts inherently limit or set boundary conditions on the cognitive processes directly related to the contract, contract processing, and the supported transaction (Macneil, 1974, p. 727). For instance, once price has been fixed in contract, this element of the transaction can be removed from immediate consciousness. Complex contracts place greater bounds on cognition than simple contracts. Opportunism arises from suppliers attempting to reap returns above contracted levels. This is more likely to occur for "recurrent, idiosyncratic transactions" (Williamson, 1979, pp. 238-239, 245-246).

**WILLIAMSON'S SCHEMA OF TRANSACTIONS**

Williamson categorizes transactions by three "critical" dimensions. These dimensions are (1) uncertainty, (2) frequency of recurrence, and (3) "the degree to which durable transaction-specific investments are incurred..." (Williamson, 1979, p. 239). These critical dimensions have been collapsed into the two-by-three matrix given below (Williamson, 1979, p. 247). From this matrix it can be seen that there are six types of governance structures.
Table 1
Transaction Characteristics

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Nonspecific</th>
<th>Mixed</th>
<th>Idiosyncratic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasional</td>
<td>Buying Standard Durable Goods and Equipment, e.g., Autos</td>
<td>Buying Customized Durable Goods or Equipment, e.g., Super tankers</td>
<td>Buying Physical Plant, e.g., Nuclear Power Plant</td>
</tr>
<tr>
<td>Recurrent</td>
<td>Buying Standard Non-Durable Goods or Materials, e.g., Cigarettes</td>
<td>Buying Customized Non-Durable Goods or Material, e.g., Airplanes</td>
<td>Long-term Investments in Complex Projects e.g., Human Capital, Software</td>
</tr>
</tbody>
</table>

The terms “occasional” and “recurrent” speak for themselves in defining the frequency of a transaction. “Nonspecific”, “mixed,” and “idiosyncratic” transactions define a continuum ranging from low to high uncertainty and from transactions involving durable-specific items to intangibles (Williamson, 1979, pp. 246-248).

GOVERNANCE

Governance structures are part of the optimization problem. In transaction-cost theory, governance structures have the twin objectives of removing opportunism and lowering contract costs. Opportunism is a central concept in the study of transaction costs (Williamson, 1979, p. 234). The costs associated with contracting vary and include, but are not limited to: creation, monitoring, enforcement, dispute resolution, litigation, renewal, and renegotiation. For some transactions, some governance structures may deliver simultaneous reductions in bounded rationality and opportunism (Williamson, 1979, p. 246). Transactions vary from the market-driven, market-governed type where “faceless buyers and sellers... meet...for an instant to exchange standardized goods at equilibrium prices...” (Williamson, 1979, p. 239) to specialized governance structures...
required for idiosyncratic transactions. The nature and complexity of the contracts varies with the transaction.

Governance is affected by the type of transaction that occurs. Regarding transaction types, Williamson (1979) provides three propositions: (1) highly standardized transactions will likely not require specialized governance structures; (2) "only recurrent transactions will support highly specialized governance structure[s]...;" and (3) occasional nonstandardized transactions require "special" governance structures (Williamson, 1979, p. 248).

**PRODUCTION CYCLE**

Transaction-cost theory has been applied to the analysis of the firm in various forms. Initial studies limited the application of transaction-cost theory (Williamson, 1979). I submit these limits where really scope or boundary conditions were imposed by researchers in an effort to simplify analysis. One dimension used as a scope condition was the production cycle. This scope condition was further bounded by applying transaction-cost theory to defined states of a product's formation—from raw materials to finished good (Williamson, 1979, p. 234).

Using this type of analysis applied to the production cycle, Williamson (1979) emphasizes the incentives to remove transaction costs from the market and internalize them in the firm. This is classic transaction-cost theory. The drive to internalize is used by Williamson to explain vertical integration. Another line of inquiry by Williamson, using another point in the production cycle, concerns intermediate-product market transactions.

The impact of interpersonal connections may be affected by the type of analysis to which transaction-cost theory is applied. Attempting to analyze transaction costs according to where the product is in its production cycle is likely not very feasible. First, I do not know of a schema of production cycle that is readily available to use in such an analysis. Such a schema would likely not be consistent across firms due to variations in firm-specific production. Second, transaction-cost is a contract-based theory; I know of no complete analysis of contracting requirements that would apply through the production cycle. Third, obtaining the
data for contracting factor inputs required for production may be difficult. Another approach for investigating interpersonal connections and transaction-cost economics must be found.

INTERPERSONAL CONNECTIONS

Given the understandings, put forth in this chapter, of transactions, contracts, and governance, an analysis of interpersonal connections can begin. The scope of this analysis is relaxed and includes all transactions and contracts a commercial enterprise may use. Using Macneil’s schema and applying it to Williamson’s transaction schema yields six conditions to consider. The systematic examination of the social context in which these six “scenarios” are embedded will reveal sources of governance costs. (Jacobson, Leway & Ring, 1993)

Table 2

<table>
<thead>
<tr>
<th>Frequency:</th>
<th>Transaction—Contract Scenarios</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nonspecific</td>
</tr>
<tr>
<td>Occasional</td>
<td>Classical</td>
</tr>
<tr>
<td></td>
<td>Contracts</td>
</tr>
<tr>
<td></td>
<td>Opp = &lt;/0</td>
</tr>
<tr>
<td></td>
<td>Eff = 0/&lt;</td>
</tr>
<tr>
<td>Recurrent</td>
<td>Classical</td>
</tr>
<tr>
<td></td>
<td>Contracts</td>
</tr>
<tr>
<td></td>
<td>Opp = 0</td>
</tr>
<tr>
<td></td>
<td>Eff = &lt;&lt;&lt;</td>
</tr>
<tr>
<td></td>
<td>TYPE 1b</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The market is the main governing mechanism for nonspecific transactions (Williamson, 1979, p. 248). Classical contracts are used in these transactions. Occasional or recurrent frequencies can be treated nearly alike in this regard. Markets are especially efficient with recurrent transactions. This efficiency will decrease, significantly, the applicability and economic efficiency of interpersonal connections. Opportunism in this context is low to nil. The use of interpersonal connections will increase transaction costs. These are Type 1b scenarios shown in Table 2, above.
In Table 2, “Eff” denotes efficiency and “Opp” represents opportunism. For Type 1b scenarios, efficiency will decline, significantly, with the use of interpersonal connections. Opportunism is nearly nonexistent due to market forces.

Occasional transactions, embodied in classical contracts, will not benefit from market governance to the same degree as recurrent transactions due to lower frequency. Here, “...rating services or the experience of other buyers... can be consulted...” (Williamson, 1979). Rating services and experienced buyers reduce costs associated with opportunism. Interpersonal connections will show small benefits for occasional transactions by slightly decreasing the level of opportunism. The efficiency of using interpersonal connections is likely not high, as the number of transactions covered by the rating services and informants will likely be low.

Occasional transactions of the mixed and idiosyncratic type benefit little, if at all, from market pressures and information (Williamson, 1979, pp. 249-250). Transactions in this context rely upon neoclassical contract law, with its reliance on third parties in resolving disputes and measuring performance (Williamson, 1979, p. 249). For occasional transactions of the mixed and idiosyncratic type, interpersonal connections appear to be valuable for continuity. Since these transactions are only occasional, the cost of interpersonal connections will be spread over a small number of exchanges. Governance costs may be high, but depending on the form of interpersonal connections employed, they could be lower than other governance structures. These are Type 2 scenarios as indicated in Table 2. It is hypothesized that opportunism will decline and efficiency will increase in this scenario.

Recurring transactions of the mixed and idiosyncratic type will use relational contracts (Williamson, 1979). In these transactions, reliance on market forces is “hazardous” (Williamson, 1979), while the recurrent nature of these transactions permits efficient use of the governance structure. In this scenario, interpersonal connections will not only maintain continuity and control opportunism, but they will do so efficiently. “Additional transaction-specific savings can accrue at the interface between offerer and offeree as contracts are successively adapted to
unfolding events and as periodic contract-renewal agreements are reached” (Williamson, 1979, p. 240).

In these Type 3 scenarios (See Table 2), the recurrent nature and uniqueness of the transactions will greatly enhance the leverage of using interpersonal connections. The recurrent nature of the transactions allows the maximum exploitation of interpersonal connections, driving opportunism costs lower, while greatly increasing efficiency. In addition, the uniqueness of the transaction may place the offerer and offeree in a state of mutual dependence. The resulting dependency may lend itself to governance by interpersonal connections more readily than any other form of transaction.

The types of interpersonal connection appropriate for each of the situations discussed here fundamentally differ. Rating services provide different levels of care and interpersonal connection than the specialized interpersonal connections needed to govern recurring transactions of the mixed and idiosyncratic type. These differences will not just be manifested in the structure of the interpersonal connection, but, also, in the cost of governance type selected.

**CONFOUNDS**

Transactions, contracts, and interpersonal connections are all human endeavors. By their very nature, these activities exploit personal relationships. Humans are creatures of habit. We tend to purchase the same goods from the same distributors. The recurrence of purchase behavior builds familiarity, not just on a personal level, but on a contractual level as well. Human consumers become educated in contractual terms and negotiations through purchasing experiences. Armed with this knowledge and given recurrent purchase patterns, purchase habits and personal relationships are used to manipulate opportunism and efficiency. Personal relationships may, therefore, affect the transaction, the contract, and the governance mechanism.

If transactions, contracts, and the governance mechanism all use personal relationships to manipulate opportunism and efficiency, then the actual effect of interpersonal connections, a form of personal relationship, as a governance
mechanism has to be confounded with the application of human interactions in the transaction and contract. If this is true, then the act of determining and separating the effect of personal relationships associated with each aspect, an exchange will be most difficult, if not impossible. It will be most difficult to identify, isolate, and separate each component of a personal relationship and attribute it to transaction, contract or governance structure.

This situation may prove especially challenging to the researcher. For instance, will subjects perceive the difference between transacting, contracting, and governing? Will subjects be able to separate, in their minds, the different interpersonal interconnections used in transacting, contracting, and governing? How will the researcher specify and distinguish between the three types of interpersonal interaction? The three-way interaction of interpersonal connectedness, i.e., $\text{TRANSACTION}_{ic} \times \text{CONTRACT}_{ic} \times \text{GOVERNANCE}_{ic}$, will likely be assigned to the error term. In what manner should the two-way interactions be handled? What remedies are available when the three types of interpersonal interactions are so confounded that the large part of these measures is placed in the error term?

**LIMITATIONS OF THE THEORY**

Irrespective of the perceived benefits of transaction-cost economics as applied to the study of the firm, the theory does have its problems. Williamson states “[transaction-cost theory has] too many degrees of freedom…” and “…the concept wants for definition…” (Williamson, 1979, p. 233). Degrees of freedom and lack of definition are related in the sense that tighter specification of the theory and its elements would constrain analysis. The problem is not to constrain any model of transaction-cost theory to the point where no meaningful analysis can be performed. What is required is a more exact definition of the elements of the key elements of the theory, i.e., what is a contract and what is a transaction. It is possible to define a contract with sufficient specificity; the real problem is defining the transaction. Besides, a lack of specification, obtaining data at the transaction level is difficult. As a result, many studies using transaction-cost economics are at the firm, industry or country level. (Gatignon & Anderson, 1988; Hennart,
This is where the real problem exists. The inability of researchers to obtain transaction-level data, in and of itself, limits and blurs the specificity of the defined transaction. Observing transactions at a higher level, says the firm, masks much information. The masking and loss of data blur the relationships between transaction costs, contract, and interpersonal effects, making it difficult, if not impossible, to make any clear predictions. This is the problem facing transaction-cost theory. Until it is overcome, the power and applicability of this theory will be limited.

REFERENCES


PART 3: COLLEGE OF EDUCATION
Reflective of the distinct character of American society and history, American colleges and universities were founded as an activity of public interest. Unlike many international institutions, American institutions were not founded as agencies of central government. In the United States, state and local governments, as well as religious denominations, chartered our early institutions of higher learning to serve the needs of the people, the economy, or to educate men for the ministry. This foundation of public interest has, throughout history, dictated a certain amount of public responsibility. Institutional advancement in higher education continues to seek the support of those individuals, corporations or philanthropic foundations, which are looking to fulfill their "public responsibility." Today, funding for higher education primarily is generated in five areas: tuition, government support, gifts and bequests, endowments, or other institutionally generated funds. While each new political administration is faced with the challenge of trying to balance the federal budget, discretionary programs, such as the Higher Education Act, face harder cuts than entitlement programs, such as Social Security (Bauer, 1996). As government support becomes more limited and competitive, and tuition increases face negative reaction, colleges and universities continue to look more strategically at other areas of funding. This chapter examines the role of foundation funding in higher education and provides a practical guide for seeking foundation support as part of the higher-education funding pie.
THE ROLE OF FOUNDATIONS

In the 1940s, philanthropic giving in the United States totaled about $17.6 billion (Commission, 1970). While in the early 1990s, Americans gave $130 billion to charitable causes. The majority of these contributions went to religious institutions, and a substantial proportion of these charitable contributions were made through philanthropic foundations (Geier, 1997).

In the early 1980s there were more than 22,000 grant making foundations (Murphy, 1986); today the number of grant making foundations totals more than 35,600. The primary beneficiaries of foundation dollars are colleges and universities. In fact, between 1995 and 1998, there was a steady rise in the amount of private gifts to higher education, marking an increase of 15 percent during the three-year period. By 1998, there was a total of $18.4 billion in private gifts to higher education, doubling the $9.2 billion in grants awarded in 1991 (Academe, 1999; Nauffts, 1994). Foundation support for higher education is approximately 20 percent of the total private-support dollars in higher education, following the support of individual sources and corporations, which together make up about 70 percent (Brittingham & Pezzulloa, 1990). Clearly, philanthropic foundations play an important role in higher education funding.

Types of Foundations

If higher educational development officers, faculty, and student researchers are going to capitalize on the resources that philanthropic foundations offer, it is essential for these grant seekers to have an understanding of the financial role of foundations in higher education. To begin, there are four basic types of foundations: independent or family foundations, general purpose or operating foundations, corporate foundations, and community foundations. (Table 1 provides general characteristics of the four types of foundations.)
Table 1

<table>
<thead>
<tr>
<th>Foundation Type</th>
<th>Description</th>
<th>Source of Funds</th>
<th>Decision-Making Activity</th>
<th>Grantmaking Parameters</th>
<th>Reporting</th>
<th>Examples of Foundations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent or Family</td>
<td>An independent grantmaking organization established to aid social, educational, religious, or other charitable activities</td>
<td>Endowment generally derived from a single source such as an individual, a family, or a group of individuals. Contributions to endowment limited as to tax deductibility.</td>
<td>Decisions may be made by donor or members of the donor’s family; by an independent board of directors or trustees; or by a board or trust officer acting on the donor’s behalf.</td>
<td>Broad discretionary giving allowed but may have specific guidelines and give only in a few specific fields. About three out of four limit their giving to local area.</td>
<td>Annual information returns (990-PF) filed with IRS must be made available to public. A small percentage issue separately printed annual reports.</td>
<td>Andrew W. Mellon Foundation, Ford Foundation, Lilly Endowment, Inc., Pew Memorial Trust, Robert Wood Johnson Foundation, Rockefeller Foundation, W.K. Kellogg Foundation, etc.</td>
</tr>
<tr>
<td>Operating or General Purpose</td>
<td>An organization that uses its resources to conduct research or provide a direct service.</td>
<td>Endowment usually provided from a single source, but eligible for maximum deductible contributions from public.</td>
<td>Decisions generally made by independent board of directors.</td>
<td>Makes few, if any grants. Grants generally related directly to the foundation’s program.</td>
<td>Same as above.</td>
<td>Amherst H. Wilder Foundation, Carnegie Endowment for International Peace, Charles F. Kettering Foundation, Norton Simon Foundation, Robert A. Welch Foundation, Russell Sage Foundation, Twentieth Century Fund, Inc.</td>
</tr>
<tr>
<td>Corporate</td>
<td>Legally an independent grantmaking organization with close ties to the corporation providing funds.</td>
<td>Endowment and annual contributions from a profit-making corporation. May maintain small endowment and pay out most of contributions received annually in grants, or may maintain endowment to cover contributions in years when corporate profits are down.</td>
<td>Decisions made by board of directors often composed of corporate officials, but which may include individuals with no corporate affiliation. Decisions may also be made by local company officials.</td>
<td>Giving tends to be in fields related to corporate activities or in communities where corporation operates. Usually give more grants but in smaller dollar amounts than independents with comparable giving.</td>
<td>Same as above.</td>
<td>Amoco Foundation, BankAmerica Foundation, Ford Motor Company Fund, General Electric Foundation, General Motors Foundation, Prudential Foundation, etc.</td>
</tr>
<tr>
<td>Community</td>
<td>A publicly sponsored organization that makes grants for social, educational, religious, or other charitable purposes in a specific community or region</td>
<td>Contributions received from many donors. Usually eligible for maximum tax deductible contributions from public</td>
<td>Decisions made by board of directors representing the diversity of the community.</td>
<td>Grants generally limited to charitable organizations in local community.</td>
<td>Annual information returns (990) filed with the IRS must be made available to public. Many publish full guidelines or annual reports.</td>
<td>Chicago Community Trust, Cleveland Foundation, Hartford Foundation, New York Community Trust, Permanent Charity Fund of Boston, San Francisco Foundation, Winston-Salem Foundation, etc.</td>
</tr>
</tbody>
</table>

Independent or Family Foundations

The independent or family types of foundations are defined as private foundations that primarily rely on endowment income. These foundations are usually set up by wealthy individuals to memorialize someone, or to support the interests of the founders, members, boards or friends of the foundation. Independent foundations may fund scholarships, special projects, operating budgets or research and may or may not have permanent offices or staff. Decisions tend to be made by family members, legal counsel representing the family or a board of directors. There are more than 30,000 independent foundations. In 1992, the Connelly Foundation, an independent foundation, gave 16 grants to higher education totaling $5,861,282 (Bauer, 1996).

Operating or General-purpose Foundations

Operating or general-purpose foundations are defined as private foundations that rely on endowment income. These foundations are what most people think of when they hear the word “foundation.” Operating foundations generally support innovative proposals, programs that bring national attention to an important program area, and programs that are easily replicable. Operating foundations, usually, are run by a professional staff and can be large organizations, such as the Ford Foundation or Rockefeller Foundation, that support a broad range of causes; or these foundations can be more specialized and give money to particular causes, such as the Carnegie Foundation contributing to education. There are only a few hundred operating foundations in existence. In 1992, the Ford Foundation gave 418 higher education institutions a total of $83,027,419 (Bauer, 1996).

Corporate Foundations

Corporate foundations are private foundations that rely on contributions and/or endowment from profit making companies. Corporations donate a minimum of 5 percent of their adjusted gross income to charitable causes. Corporate giving is different from general foundation giving in the sense that in general foun-
dations, gift giving is a major activity; while in corporate foundations, giving is a minor activity. Also, corporations have to be more concerned than other foundations about supporting controversial issues. Large corporations often set up foundations to separate corporate officers from the decisions of gift giving. Corporate grants range in supporting projects from technology and engineering, to general research and project development. Today, corporate grant dollars made toward education are going more toward pre-college education programs. Higher education programs can benefit by seeking grant dollars through consortia projects with pre-college programs.

Community Foundations

Community foundations are defined as public charities and rely on contributions from many kinds of donors. These foundations are set up in specific cities or regions and can be made up of smaller foundations that pool their funds together. Community foundation grants may focus on social, educational, religious or other charitable programs, or support scholarships, needs assessment for local problems or replication of effective programs. Community foundations are the fastest growing element of philanthropy in America today (Hodgkinson & Weitzman, 1984). The Cleveland Foundation was the first community foundation established and serves as a model for other community foundations.

The largest amount of grant dollars awarded comes from independent or family foundations, which award a little more than 76 percent of grant dollars. Corporate foundations contribute about 16 percent of grant dollars, followed by community foundations, contributing almost six percent, and operating foundations, less than two percent. (Figure 1 shows, in rounded figures, the amount of grant dollars awarded by each type of foundation.)

Researching Foundations

With more than 35,600 foundations in existence, it is important to know how to determine which foundation would be most likely to support a given project.
There are many resources including publications, libraries, and Internet resources available for researching foundations and determining where grant dollars are awarded. One of the better sources for researching foundations is the Foundation Center, a nonprofit organization that has reference libraries in Atlanta, Cleveland, New York, San Francisco, and Washington, D.C. The Foundation Center, also, has Cooperating Collections, funding information resource centers, located in each state, Washington, D.C., and in Puerto Rico. The Foundation Center’s computerized database has nearly two million records providing information on more than 660,000 grants and nearly 57,000 operating and/or terminated foundations. The Foundation Center’s Internet address is: http://www.fdncenter.org. The foundation research materials listed below can be found in either the Cooperating Collections or in many local libraries and serve as a general first-step resource guide to help in the grant seeking process. These materials include:

1. **The Foundation Grants Index**—lists the grants that have been given in the past year by foundation, subject, state, and other groupings (MacLean, 2000).
2. The Foundation Directory—lists more than 3,100 foundations that either have assets of more than $1 million or award more than $100,000 annually. General characteristics of foundations are described such as type of foundation, type of grants, annual giving level, officers and directors, location, particular fields of interest, contact people, etc.

3. The Taft Foundation Reporter—presents comprehensive profiles and analyses of private foundations, and the Taft Directory of Corporate and Foundation Givers (Brisbois & Kalte, 1999), which provides information on nearly 8000 private foundations and corporate giving programs.

4. The National Data Book—includes all the currently active grant making foundations in the United States. It includes community foundations and lists foundations by state in descending order of their annual grant totals. It also gives information on location, principal officer, market value of assets, grants paid, and gifts received (Romaniuk, 2000).

5. The Foundation News—describes new foundations, new funding programs and changes in existing foundations. It is published six times a year.

6. COMSEARCH Printouts—computer-sorted listings of foundation grants in more than 60 major giving categories. It is produced by the Foundation Center (e.g., Murray, 2000).

7. Foundation Annual Reports—gives specific guidelines for making an application to the foundation. Includes the foundation’s history, current assets, geographical limitations to its giving, the range of grants, the current focus of activity, and whom to contact. (Kotler & Fox, 1985)
Fundraising

The nation's wealthiest and most prestigious colleges and universities are the recipients of the majority of foundation grants. In 1994-95, Harvard topped the list of 50 colleges and universities receiving foundation support, receiving $58.8 million in grants from 297 foundations, according to the Foundation Center's annual report. Completing the top-five list for receiving the most foundation funding were Emory University, Columbia University, Brown University, and Stanford University (Mercer, 1997). Wealth and prestige have longstanding ties with the philanthropic foundations. In many instances, foundation board members are the same board members of the premiere institutions, and a traditional relationship between the foundation and the institution already exists. These institutions, also, have a track record and prestige upon which foundations can rely. "Like people, foundations have a desire to be associated with winners," according to Michael O'Neill, director of the Institute for Non-profit Organization at the University of San Francisco (Mercer, 1997). Coupled with prestige, conservative politics also has had a stronghold in foundation funding. From 1992-94, 12 conservative foundations gave $88.9 million to leading universities that had programs that would support the agenda of conservative policy research. These recipients included the prestige institutions such as Harvard, Yale, Cornell, and Stanford (Fiore, 1997).

Even though prestige institutions receive larger proportions of grant awards in some areas, there is hope for fundraising through foundations at the smaller institutions. A great source of foundation funding for the smaller institution comes from the regional or community foundations. These foundations are younger, but they are the fastest growing area of philanthropy in the United States. In 1996, the 500 or so existing community foundations had assets totaling $17.1 billion (Geier, 1997). Colleges with projects that address specific needs and are located in certain geographic areas should definitely seek funding from community and regional foundations. The foundation requirements for the institution or the project may be narrow and specific, but worth the investigation and effort. For instance, the Donald W. Reynolds Foundation recently gave $25.5 million to
the University of Arkansas for Medical Sciences. The Reynolds Foundation awards grants only in Arkansas, Nevada, and Oklahoma, where its founder operated businesses.

In seeking foundations as financial support in higher education, it is important to determine project needs, identify the proper prospect foundation, coordinate campus contacts, and submit the best proposal targeted at answering that particular foundation's questions. Clearly, foundation fund-raisers should become familiar with campus programs, goals, and priorities. They should have a grasp of current research on their campuses, as well as student scholarship and fellowship needs. The goal in being current on campus information is to determine and match the project interests with the interests of the foundations in order to identify the best prospect. Foundation fund-raisers, also, should work to coordinate the contacts between the faculty and fund-raisers. Most colleges have a foundation officer, or offices of development or institutional advancement that work to handle coordinating communication. Without this coordination, an institution could seek funding from a foundation to support one project for $5,000 when it would be more beneficial to seek funding for another project at $25,000. Many times foundations only will give to one project within a given institution during a program year.

Coordinating communication, also, helps in cultivating foundation officers. The bottom line is that people give money to people they know and trust. Foundation fund-raisers can be instrumental in linking foundation officers with faculty, students, or other university administrators who may positively influence the giving decisions.

At the dawn of the 21st Century, development officers also are engaging in more cooperative fundraising among institutions. A prime example of cooperative fundraising exists within Five Colleges, Incorporated. Five Colleges consists of Amherst, Hampshire, Mount Holyoke, Smith, and the University of Massachusetts at Amherst. Together the institutions share a central development officer and seek more funding through institutional collaboration. The primary source of their collaborative funding has come from government and private foundations, which
during the past 10 years has totaled 25 to 35 percent of their annual grants budget (Peterson, 1999).

Another major and essential component of successful foundation fundraising is proposal development. Almost all foundations require some type of written proposal as a part of the grant seeking process. During the initial research process, it is important for grant seekers to determine a foundation’s individual application process and target match the proposal to the foundation guidelines (Kotler & Fox, 1985). If no specific format is indicated for the proposal, the following components should be included:

1. **Proposal summary** covering the scope of the project and its cost
2. **Introduction** providing background on the college or university and the framework and context in which the project will operate
3. **Problem statement** documenting the problem, defining its components, and linking it to the institution’s ability to address it
4. **Project objectives** that are specific and measurable
5. **Project methodology** identifying activities and personnel
6. **Project evaluation** regarding measurement of results against objectives
7. **Budget** including personnel and non-personnel costs
8. **Supporting materials**, especially tax-exempt letters, audited financial statements, and lists of governing boards or trustees (Murphy, 1986)

It is important to follow professional protocol in building relationships with foundation staff. Foundation fund-raisers should be sure to send a cover letter with the proposal and send personal notes to anyone who assisted in developing the proposal. Recognize and expect that proposals will be rejected. Only about 7 percent of proposals submitted are funded (Murphy, 1986). A large foundation such as the Ford Foundation accepts only about one of every 100 proposals that are submitted.

Finally, foundation fund-raisers should recognize and expect that proposals will be accepted and funded. When a proposal is accepted, be sure to review the
conditions of the grant and make sure those conditions are acceptable with the institution, the project, and the foundation. The foundation fund-raiser in coordination with the lead researcher, department chairperson, dean, and/or university president should write a letter of thanks to the foundation. The cycle then moves from cultivating the relationship to building and maintaining a relationship with the foundation through site visits, progress reports, and other invitations that may affect the next solicitation.

In summary, foundation funding is increasing and becoming a larger slice of the capital pie in higher education. Teams of faculty, students, and other professional staff can work together to benefit their colleges or universities in getting funding from philanthropic foundations. It is important to research prospective funding sources and to find the best match between funding sources and projects to be funded. Throughout the funding process, recognize the importance of personal contact and building relationships, as well as having a strong project. Indeed, people give money to worthwhile projects and to people they know and trust.

REFERENCES

Academe (1990, September/October). Gifts to higher education rise. 17.


FROM REFORMATION TO TRANSFORMATION: THE DEMAND FOR ACCOUNTABILITY AND HIGHER PERFORMANCE IN LOW PERFORMING SCHOOLS

Phyllis Weaks Sanders
Department of Education Leadership and Policies
College of Education

Our country has entered the 21st Century with an educational system that is falling short of providing excellence in educating the mass of children who attend public schools. Students are achieving less, and the weak academic achievement level is causing our youth to leave school unprepared for the workplace, unqualified to enter college, and unlikely to develop into productive, responsible citizens. Yet, this country has spent years making arduous attempts to reform education.

This chapter traces some of the efforts to reform education and explores a perspective on making a transition from reformation to transformation. The first section will provide a historical perspective on school reform; the second section will discuss the accountability wave; the third section explores the process of transformation; the fourth section provides a summary.

SCHOOL REFORM

There is an educational phenomenon occurring in the efforts to improve public schools in America. In the mid 1980s, more rules and regulations about all aspects of education were generated by the states than in the previous 20 years (Timar & Kirp, 1987). According to Timar and Kirp, the school reform movement has resulted in a whole new body of knowledge governing the behavior of teachers, students, and administrators. Curran (1999) indicates school reform initiatives span decades, but they have evolved in their change of focus during the 1990s.
For students, there are rules about participation in sports and other extracurricular activities; about how much and what kinds of homework must be done; and about how many times they may miss school before failing their courses. Students also are subjected to rules about what kinds of courses they must take; how much time to devote to each subject each day; and what topics each class must cover.

For teachers, there are rules regarding placement of career ladders and eligibility for merit pay. In addition, there are even rules that permit state officials to place schools deemed unsatisfactory into receivership, and to fire school administrators and presumably, trustees (Timar & Kirp, 1987).

As more and more people conclude that existing schools are not doing a very good job, the rules appear to be narrowing down to one rule for all: Be accountable, no excuses for low performing schools. Throughout the past decade, the “no excuse” for failure message is spreading all across the country. “Faced increasingly with a ‘change it or lose it’ message about public education, states are adopting a get-tough approach using test results as a basis to make demands on educators and students” (McRobbie, 1998, p. 1). According to McRobbie (1998), there are at least 32 states and 34 large urban schools that have accountability systems based partially on test scores. The question is: “Is the get-tough approach achieving the desired results?”

**HISTORICAL PERSPECTIVE**

The get-tough approach is not new in education; serious efforts in school reform are noted in educational literature throughout the last half of the 20th Century. According to Goodlad (1975), anyone who has been associated with education for a quarter of a century or more has seen two distinct waves of concern: advocates of toughening up education and advocates for making education more humanizing. Goodlad notes that authors such as Arthur Bestor, Robert Maynare Hutchins, and Albert Lynds, who published in 1953, contributed to the rapid demise of the Progressive Education Society, which came to be noted for its humanistic approach.
Roughly, two years after the humanistic phase, a tough but simple solution to what ailed primary schooling was introduced by Rudolf Flesch, who according to Goodlad (1975), called for reading teachers to abandon word recognition techniques, which were described as sloppy, in favor of a structured, phonetic approach. Following was the launching of Sputnik I, which caused another major wave of concern, signifying that schools were not rigorous enough. The prevailing message was to get tougher with academics, especially in the areas of mathematics and science. Educators, in the eyes of Goodlad, had gone through what probably was the most radical period of “probing, poking, and reforming in the history of common schools” (p.108).

Still, there were other noted school reforms described in Goodlad's work (1975). By the end of the sixties, The Coleman Report (Coleman, Hobson, McPartland, Mood, Weinfeld, & York, 1966) was viewed as a radical document by implying that schools make no difference in the education of youth. The implication was that academic achievement was less related to the quality of a student’s school, and more related to the social composition of the school. For instance, the student’s family background outweighed the quality of a school that a student attended based on the data analysis of this research project.

The 1970s were not an exception in Goodlad's (1975) compilation of school reform movements. Most noted was the idea of Ivan Illich to deschool society. Illich questioned the apparent discrepancies between the schooling’s promise and its actual outcomes.

The spotlight on school reform in the 1980s brought to light the search for excellence. However, the light apparently set off the alarm system for the nation when the United States Department of Education’s National Commission on Excellence in Education published the report, A Nation At Risk, in 1983. The conclusion of this report, brief but dramatic, is said to be the origin of current reform efforts (North Central Regional Educational Laboratory [Available on Line]). The conclusion of the report reads:

“If an unfriendly power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have
allowed this to happen to ourselves. We have even squandered the gains in achievement made in the wake of the Sputnik challenge. Moreover, we have dismantled essential support systems, which helped make those gains possible. We have, in effect, been committing an act of unthinking, unilateral educational disarmament.” (p. 5)

This report alone created school reform across America for an unprecedented period (Lyons, 1999). Since these reforms originated from state legislatures, Lyons (1999) refers to these efforts as top-down reform.

What were the results of these top down reform efforts? Minimal improvement was in the schools. They made an impact, but they all apparently failed at bringing the educational system in the United States to a recovery state (Hanson, 1991); thus, the education or miseducation of children remains a concern nationwide. A search of more recent literature revealed continuing concerns. Why did these 20th Century reforms fail? Some researchers would suggest that reforms provide faulty maps of change used in the educational territory and that some solutions are not even known, while other solutions are not easy because of the complexity of the problem (Fullan & Miles, 1992). These researchers make the argument that every person involved in school reform has a personal map of how change should take place, and all of their constructs are expressed in propositions or statements that do not address the how-to’s.

Another train of thought suggests that it is not the educational territory in disrepair but those who enter for the service. The children who enter for service come with inherent problems such as poverty, unreadiness to learn, illnesses, and other problems related to their family backgrounds or the social composition of their schools (Hodgkinson, 1991; Coleman et al., 1966).

However, a new wave of thought is bringing a new message that disregards and, to some degree, contradicts these views, because the theme of this wave is no excuse; accountability is what is needed. Currently, almost all states are turning to what appears to be the ultimate authority and latest movement in the 1990s and the 21st Century, a focus on accountability.
ACCOUNTABILITY

States and school districts are holding schools, teachers, principals, and even students more accountable for their performance (Olson, 1998). In addition, taxpayers, business leaders, and policymakers are demanding proof of results as well as better performance in all schools. Currently, most states already have adopted some type of an accountability system. However, the question of how accountability is measured remains an issue. Table 1 shows the percent of states with academic standards and states that hold schools accountable for results.

According to some researchers, it is the practice of accountability that presents a controversy: “...But because the question of how we exhibit educational accountability hinges on beliefs about what constitutes knowledge and how it can be demonstrated, an issue that is noncontroversial in theory becomes extraordinarily divisive in practice” (Theobald & Mills, 1995, p. 1). The divisiveness in practice can best be noted in the different views between Theobald & Mills (1995) and Curran (1999).

Curran (1999) argues that the idea of accountability in education is not new. In fact she states that it has been around for decades, but the focus on results is what is new about the latest wave of education accountability initiatives. Curran maintains a strong position that in a comprehensive, standards-based education, an accountability system needs to develop standards for student knowledge, and measure performance relative to standards.

Theobald and Mills (1995) present an adamant view that opposes the drive for measuring student performance relative to standards using just tests. “If standardized tests were banned across the country tomorrow, the majority of the changes that would ensue (and there would be few) would be positive” (p. 5).

Groups such as the New American Schools Development Corporation (NASDC), business executives, and far-right conservatives equate accountability with tests (Theobald & Mills, 1995; Mitchell, 1996). These groups, according to Theobald and Mills (1995), make a strong attempt to convey a message that all of society’s ills can be cured if only schools are made accountable.
States With Academic Standards - 98%

States without Academic Standards - 2%


There is growing agreement among researchers (Goodlad, 1984; Theobald & Mills, 1995;) that casting the future of a person or a school upon a standardized test is not a useful way to discuss how children or schools are doing. Since standardized tests measure the acquisition and reproduction of factual information, Theobald and Mills (1995) find a shallow argument in any attempts to define education based on test results.
Despite these types of objections and debates on the practice of accountability, states continue to focus on results. Schools where test scores constantly show negative results are facing intervention and assistance and at worst, takeovers by the states. Policymakers, business leaders, and the public-at-large are expecting and demanding more from public school systems all over this country, and they are not accepting poverty as an excuse for failure. Therefore, regardless of the economic conditions of a community, the socioeconomic conditions of a family, or the color or culture of a child, the demand to transform low performing schools to high performing schools is echoing loudly and clearly in the 21st Century.

TRANSFORMATION

During the past two decades, schools have crept into an infectious state of performing low. The failure of most public schools to teach poor children is a national tragedy and a national disgrace (The Heritage Foundation, 2000). Schools that continuously perform low, typically, have large minority populations and support a level of isolation and mediocrity that is difficult to break (Nash & Calderon, 1994).

Researchers, policymakers, parents and educators have made various speculations about where the blame lies. The most important issue is not who is to blame, but rather who will take the responsibility for transforming low performance into high performance for all students regardless of their poverty status. Therefore, a transformation must take place in order to move from an infectious state of failure in the public schools to a state of recovery that leads to a quality life for all children.

How does transformation take place in schools that are at the bottom in test scores, at the top in high poverty populations, surrounded by impoverished neighborhoods, and embedded in other distinct conditions that were not erased by school reform tactics? As with most “how” questions, there are no easy answers or sets of solutions for the task of improving student performance. However, there is another option, such as the process of transformation that warrants attention.
Transformation, whether in organizations, institutions or school programs, typically aims at improving the quality of service and the life of those involved. This perspective is connected with the views of William Glasser, author of *The Quality School*.

“If we accept that the purpose of any organization, public or private, is to build a quality product or perform a quality service, then we must also accept that the workers in the organization must do quality work and that the job of the manager is to see that this occurs.” (Glasser, 1990 p. 1)

This notion of quality service and quality performance typifies the work that school administrators are doing with teachers in high performing schools. Therefore, if principals are effectively changing the quality of service that teachers provide and the school as a whole, could teachers not use the same principles of the principal to do the same for students and other individuals in high performing schools, thus, resulting in transformation of everyone?

Transformation in education is mostly associated with leadership. Although there is no standard, agreed upon definition of transformational leadership, there are similarities in how transformational leaders are described. Among those descriptions are words such “charismatic,” “empowering,” “relational,” “enthusiastic,” “optimistic,” and “motivating” (Liontos, 1992; Williams, 1997). While the seed of transformational leadership was planted by James McGregor Burns (Liontos, 1992), it was fertilized and grown more extensively by Bernard Bass, whose work was based on political leaders or business executives not school leaders (Liontos, 1992; Williams, 1997). Yet, it is credited with setting the stage for accomplishing day-to-day routines and making remarkable improvement in student achievement and, consequently, transforming schools (Sergiovanni, 1990).

Like school reform, transforming schools calls for a change. However, it appears that the call for transformation does not occur from a top-down management approach. Rather, it resonates from what Williams (1997) calls a consumer base, which is culturally defined by fast change and frustration with the traditional linear management styles. The need for management that invites participation in
decisions that shape the nature and function of work results in more lateral interaction, creating a participatory style of management.

What Williams (1997) posits in her views on a traditional linear approach and a participatory approach, created a curiosity of how the words reform and transform were defined. (Figure 2 provides definitions for both words.) One observation from examining the meaning of the two terms, reform and transform, was that the words used to define the term “reform” conjure up an image of a top-down or unilateral approach, i.e., persuade, eliminate abuse or malpractice, improve by removal, and correction of evils. These words carry negative connotations. For the term “transform,” the image appears to be more of a contrast: change the character or nature of, construct, conversion. These words appear to be more related to a participatory or lateral approach or one less forceful in nature and more inviting for change.

A second observation in examining the words used to define reform and transform is that one definition alludes to change the nature, function or condition. This definition does not appear to be threatening. However, with words such as “to eliminate abuse or malpractice,” or “to improve by alteration or removal of defect,” one could create an aura of threat to the environment that is not conducive to positive change.

Regardless of how one might view the meaning of reform and transform, the concept of transformation has gained popularity in schools because the issue is not about a top-down approach to leading; rather it is a more inclusive and collaborative approach that seeks to empower rather than overpower individuals. Leithwood (1992) offers what he believes are three goals of transformational leadership in school leaders. They include:

1. **Helping staff develop and maintain a collaborative, professional culture.** In a professional culture, teachers and staff engage in dialogue, plan together, observe one another and make critical assessments.
Figure 2. Definitions: Comparison of Terms with Regard to Image

**Reform**
- To improve by altering, correcting errors, or removing defects
- To eliminate abuse or malpractice
- To cause a person to give up irresponsible or immoral practices

**Transform**
- To alter the appearance or form of
- To change the nature, function, condition of
- To subject to the action of a transformer

Source: *Webster's II New College Dictionary*, 1995

**Reform**
- To persuade to adopt a better way of life
- Correction of evils, abuse of errors
- Action to improve social or economic conditions without radical or revolutionary change
- To improve by alteration; removal of defect

**Transform**
- A marked change, as in appearance, usually for the better
- To change the nature function, condition of
- Conversion
- Construct
- Alteration


**Reform**
- To put an end to (an evil) by enforcing or introducing a better way
- Correction of Evils, Abuse of errors
- To produce by cracking

**Transform**
- To change in composition or structure
- To change in character or condition
- Convert

2. **Fostering teacher development.** This development can be accomplished by goals that are realistic and explicitly known by all, i.e., commitment to the mission of the school. Motivation is enhanced as a result of internalized goals for professional development.

3. **Helping teachers solve problems more effectively.** Involve teachers in problem solving of school issues rather than the principal being the primary problem solver. Leaders also encourage teachers to try new activities and go the extra step.

With regard to these goals, the central idea appears to be involvement and empowerment. The effects of this type of leadership according to Leithwood (1992) are consistently positive. Two key findings of his work are reasons for moving from reformation to transformation for positive change. The first reason is that the significant amount of influence on teacher collaboration was attributed to transformational leadership practices. The second reason is the significant relationship that existed between the transformational leadership and the teacher's reports of changes in both attitudes toward school improvement and altered instructional behavior. In the words of Leonard Pellicer (1999):

> "Successful leaders recognize and appreciate the importance of the little things to the overall health and vitality of an organization. They realize that by going beyond broad expectations and demonstrating commitment through small but significant acts of caring, they can build an environment that will bring out the best in everyone." (p. 43)

Leadership that aspires to empower teachers, create a warm, caring working environment, promote quality in service, and transform character and attitude can motivate teachers to affect students in the same way.

Therefore, these types of changes would be more appropriately matched to the definition of transform—to change in character or condition. Thus, attitudes of students toward school improvement and altered behavior will be congruent with their teachers; therefore, they are more likely be long lasting.
In fact, program leaders who conduct training in transformational leadership define transformation as a profound and lasting change—a change that arises from the passion and values of individuals, i.e., Transformational Leadership Program (Move the Mountain Leadership Center, n.d.). This approach to change is much different from a stimulus response approach that tends to come from many of the school reforms that have generated fears and upheavals in teachers who already are faced with a multitude of issues, day-to-crisis, and challenges that come from working with all students, whether rich or poor. Then to be confronted with reform terminology such eliminate, malpractice, removal, or other words that destruct rather than construct does not create a healthy environment for positive change to take place.

Common sense would suggest that reactions and changes that derive from school reform alerts will be temporal only, while lasting change is more likely to occur when individuals’ passion and values for their work bring about change in their attitudes, beliefs, and behaviors. The idea of bringing change that arises from the passion, values, and a vision of individuals is what appears to be occurring in schools that are moving from low performance to higher performance. Shared vision, as described by Senge (1990) is not some type of idea but rather “a force in people’s heart”. The force, described by Senge (1990), is a positive force that leads to transformation from low performing to high performing schools.

For instance, a review of the literature on high poverty, high performing schools suggests that leaders with a vision, practices that influence teacher performance, and freedom from district office administrative constraints are found in schools that have transformed or are in the process of transforming from low performing to high performing schools (Connell, 1999; Heritage Foundation, 2000; Cawleti, 1999).

Perhaps the idea of transformation was in the mind of the government when changes were instituted in the Chapter I Program more than three decades ago. In 1965, the government program formerly known as Chapter One, presently called Title I, was enacted to assist with the achievement of students who resided
in low-income school communities (U. S. Department of Education, 1996). The U. S. Department of Education discovered in the evaluation of Chapter One implementation that major problems were occurring in the education system. One of the flaws of the program was that students who attended high poverty schools were subjected to watered down and nonchallenging curricula when compared to other schools.

In 1994 (U. S. Department of Education, 1998), Chapter One was reauthorized as Title I to improve opportunities for disadvantaged students to have a better quality of education. The new changes and challenges included the following:

1. **Ensuring that children served by the program are expected to achieve the same high standards that the states apply to all their students.** Title I students' progress in meeting challenging standards will be determined by the states' assessments that are aligned with standards.

2. **Supporting a challenging curriculum and accelerated instruction to provide students with opportunities to meet challenging state standards.** There is an expectation that poor and minority children have the same challenging curriculum as other students. Title I resources are expected to be used to provide Title I students with the extra time and services that they need to meet new expectations for achievement. Title I encourages frequent tutoring, in, before, and/or after school. The addition of summer programs, providing for more learning time to the school day, is encouraged as well.

3. **Expanding school-wide programs to more high poverty schools with an emphasis on improving the curriculum and instruction of an entire school.** Flexibility is a key. Options are available to give schools the flexibility to use Title I and other funds in ways that address the needs of all students.

4. **Helping support high quality teaching training for teacher preparation and providing a challenging curriculum and**
instructional program. In addition, to help build the capacity of schools to continuously improve, school support teams, state corps of distinguished educators, and a comprehensive technical assistance network will be in place.

5. Promoting partnerships between schools and parents. In addressing children's needs, professionals will work through parent-school contacts and provide support for family involvement/engagement and family literacy.

6. Holding schools and districts more accountable for showing progress in raising the academic performance of students who receive the service. Schools that have been chronically identified as failing will have sanctions imposed on them.

7. Targeting money on the neediest schools within districts, including all levels, elementary, middle, and high schools.

While these changes have not created solutions to the mammoth problems that exist, the attention signifies efforts to improve the quality of service and life for the recipients of this government program. Another way of viewing the upgrade of changes in this program is to recognize the attempt to encourage collaboration and progress toward goals as opposed to maintaining a continuous, one-way, bottoms out approach that is sure to create a poorer quality of life. Working collaboratively is an essential step in transforming and improving student performance. Evidence of the effects of programs and schools can be noted in their leaders.

Sergiovanni's (1990) suggestion that student achievement can be "remarkably improved" by leaders who use transformational practices has merit. Leithwood's (1992) findings on the effects of transformational leadership have implications for helping schools make remarkable improvement in student performance, if transformational leadership practices can filter from the leader to the teachers and down to the students.

In order for schools to have lasting changes, it is critical for school leaders, district leaders, policymakers and other stakeholders in our children's education
to consider the idea of a transformation, a process that comes with new thinking, new attitudes, and new practices by those who teach, lead, and manage our educational systems. Transformation is not a sudden reaction or a quick fix for the demands being placed on schools. Rather, it is an idea about change, change in attitude, character, culture, and even terminology.

Long lasting change is a process itself, and to make a lasting positive difference in students and in the schools that they attend, a transformational approach could be a new and different way for confronting the responsibility of everyone to increase student performance beyond just the measures of a test.

The limited literature on the process of transformation in educational settings highlights the need to understand the attitudes, thoughts, and practices of those individuals in schools who have gone through a transformational process, a state of low performance to high performance. Closely looking at successful practices is a great beginning for affecting change and improving student performance.

SUMMARY

The idea of moving from reformation to transformation is not a play on words but rather an alternative way to view change, particularly as it is occurring in schools that are moving from low performance to higher performance. To a greater extent, the issue of how to change low performing schools has no one solution, but the idea of changing attitudes, and creating a quality service and quality life for children is paramount in improving their performance.

The research that indicates on how low performing schools are being transformed into high performing environments gives credit to leadership. Such leadership is collaborative, visionary, and safe enough to take risks, and even fail, in efforts to create positive changes in student performance and in the school as a whole.

The historical perspective in the literature shows a pattern of trendy reforms that surfaced and to some degree disappeared. Some of the reforms were a shock to the nation, escalating fear and casting blame.

A longer life seems to have come with the birth of accountability. Demands are mounting for radical change to alter the way students in low performing
schools are being served. However, for schools to meet the demands of accountability, transformation must occur. Linda Darling-Hammond (1994), a noted researcher and leading reformer, acknowledges that transformation in schools is taking place, “an overdue transformation” (p.1) in high school education where the relationship between teachers and students is more meaningful and personalized. Also, in connection with transformations in schools, Darling-Hammond cites the work of James Comer whose work connects with families and builds communities within schools, bridging the gap between the school and the home. Each of these examples of transformation calls for a change in the nature, function, and condition of schools and are generally subject to the action of a transformer, the school leader.

Transformational leadership appears to be influential among researchers and educators, as the characteristics of this type of leadership appear to show positive results in teacher performance. Equally important, transformational leadership is bringing teachers together in solving critical issues related to the challenges of achievement. This style of leadership signifies a shift from a top-down approach to a more participatory approach.

This participatory approach is leading to significant changes in the attitude, character, and culture of the school as well as of the key players. Under such conditions, first lies the possibility of teachers transforming their minds to believe that all children can learn and creating the heart to make it happen. Second, those conditions could have a trickle down effect in the classroom to transform the minds of students so that they, too, believe they can learn. It is all about an attitude of transformation. The prevailing belief in this writing is that attitudes must change if performance is to improve, and a leader who empowers can create a transformation process, thus getting the desired results in school performance without a get-tough approach.

Effective Schools researcher, Ron Edmonds, once said: “We can, whenever and where we choose, successfully teach all children whose schooling is of interest to us. We, already, know more than we need to do that. Whether or not we do it
must, finally, depend on how we feel about the fact that we haven't so far.” (Personal Communication, 1978)

REFERENCES


PART 4: COLLEGE OF ENGINEERING AND INFORMATION TECHNOLOGY
The manufacturing practices that formed the basis for the development of a successful fine chemical and pharmaceutical industry have been challenged recently. Environmentalists have focused on the large amounts of waste generated by these companies, while consumers have protested the growing costs of the final products.

Both of these issues arise as a result of the inherent properties of fine chemicals and pharmaceuticals. Fine chemicals are defined as low-volume, high-priced organic compounds (Stinson, 1995). Pharmaceuticals are fine chemicals with medicinal properties. Both categories consist of compounds that are structurally complex, have a high molecular weight and volatility, and are heat sensitive (Bond, 1974). The processes for manufacturing fine chemicals and pharmaceuticals tend to be chemistry intensive since the products are very specific to certain applications and must meet high purity requirements (Mills and Chaudhari, 1997).

The high sensitivity of fine chemicals and pharmaceuticals often imposes the need to conduct the reactions in solution under mild conditions (Sheldon, 1997). Several solvents frequently are used, which eventually represent waste that must be disposed of following the reaction. This problem is further exacerbated by the fact that the pioneers of the fine chemical and pharmaceutical industries were mostly synthetic organic chemists who are trained to employ homogeneous stoichiometric syntheses, which use excessive amounts of solvents and generate high volumes of waste. Such practices have been adopted in this industry and continue to be used today despite the waste disposal problems associated with them (Caruana, 1991).
A paradigm shift is now occurring in the nature of the chemical industry that is having marked effects on the fine chemical and pharmaceutical segments of the industry. It was estimated in 1993 that the U.S. chemical industry produced more than 350 million tons of toxic waste, which was safely disposed of at a cost of $20 billion, making it the largest single source of pollutants. Therefore, environmental concerns, which have materialized as legislative measures, have prompted a shift to more environmentally friendly manufacturing practices. Economics are the driving force for the waste reduction efforts since the cost of disposing of chemical waste has increased significantly in recent years, and in many cases, it threatens profits. The fine chemical and pharmaceutical sectors are ideal candidates for such changes because of their excessive waste production per mass of final product. The public also has garnered the support of government officials and put pressure on pharmaceutical companies to lower prices by lowering manufacturing costs (Cusumano, 1995).

HETEROGENEOUS CATALYTIC SYNTHESIS

Manufacturing costs can be lowered by improving the selectivity of a process, thereby to produce more of the desired product (Cusumano, 1995). The standard definition of selectivity is the ratio of the amount of desired product formed to the amount of reactants consumed (Sheldon, 1997). Improving the selectivity of a process can reduce manufacturing costs, improve product quality, and reduce waste production. Catalysis is an ideal solution since a catalyst can accelerate or decelerate the rate of formation of a particular product (Fogler, 1992). Ideally, a catalyst could convert reactants to the desired product with 100% selectivity. In reality, catalytic processes can proceed with minimal waste production (Dartt and Davis, 1994). Catalysts also can facilitate chemical transformations that are not possible otherwise, combine several such transformations in a single step, and even replace toxic reagents and reactants that are necessary in non-catalyzed stoichiometric processes (Blaser and Studer, 1999).

The decision to attempt to lower manufacturing costs using catalysts requires a subsequent choice between homogeneous and heterogeneous catalytic
processes. A homogeneous catalytic process employs a catalysis that is in solution with the reactants, while a heterogeneous catalytic process involves more than one phase. The catalyst is usually a solid and the reactants and products are liquids (Fogler, 1992).

Homogeneous catalytic processes offer the advantages of operation under relatively mild conditions and no mass transfer limitations that affect the rate of reaction (Mills and Chaudhari, 1997). Furthermore, they are generally better understood at the molecular level, which leads to greater innovation in the selection and design of synthetic schemes. However, homogeneous catalytic processes have the disadvantages of relatively low activity (i.e., turnover frequency) and short catalyst lifetime. Further, catalyst recovery and reuse often is impossible, although catalyst separation from the final product frequently is required (Beller, 1997). All of these factors contribute to manufacturing costs, especially since the catalysts are often very expensive (Mills and Chaudhari, 1997).

The most obvious advantage of the use of heterogeneous catalysis is the ease of catalyst recovery since solid catalysts can be easily removed from a reaction slurry by simple filtration. In some cases, heterogeneous catalysts also can eliminate the need for certain liquid phase reagents by replacing them with solid alternatives. The disadvantages of heterogeneous catalysis are the mass transfer limitations that are frequently introduced and the limited knowledge regarding the molecular behavior at the catalyst surface. Moreover, due to the limited know-how and previous experience in this area, the development of novel materials is necessary in some cases. Finally, contamination can be a problem occasionally due to leaching of the active catalytic species during the course of a reaction and the high purity requirements (Blaser and Studer, 1999).

Despite these disadvantages, heterogeneous catalysis is believed to be one of the best ways to convert high waste generating homogeneous processes to ones with inherent waste minimization characteristics. Therefore, heterogeneous catalysis in fine chemicals and pharmaceuticals has become a research topic of increased interest. In this work, we have investigated such a process conversion using the synthesis of substituted flavanones as a model. This acid and base cat-
alyzed synthesis involves the Claisen-Schmidt condensation of 2'-hydroxyacetophenone and substituted benzaldehydes to produce substituted 2'-hydroxychalcones, and the subsequent isomerization of the chalcones to form the corresponding substituted flavanones. These two reactions occur in series as shown in Figure 1.

![Chemical structures and reactions](image)

Figure 1. Synthesis of flavanones in two steps (Claisen-Schmidt condensation and isomerization reactions)

Chalcones and flavanones are members of a class of compounds known as flavonoids. These compounds feature a C₆-C₃-C₆ general structure (Wagner and Farkas, 1975). Flavonoids are known to be very stable in visible and ultraviolet light and act as light filters for plants. Consequently, they have been used for years as photoprotectors (McClure, 1975). More recently, flavonoids have been found to provide improved cardiovascular health, immunology, and relief from allergies and asthma (Crouch, 2000). Their antioxidant, antitumor, and anti-inflammatory properties have been attributed to their ability to protect cells from free radical attacks. Free radicals are charged oxygen molecules that weaken the cell structure and disrupt its function by reacting with lipids in the cell membrane. Each free radical attack results in the formation of another free radical that can go on...
to attack neighboring cells. Flavonoids scavenge free radicals and thus prevent cell damage (Berkoff, 1998).

Developmental work in the homogeneous synthesis of chalcones and flavanones was performed in the early 1900s to 1940s. Heterogeneous studies mostly have been reported in the last decade. A review of the literature indicates that the homogeneous studies have included kinetic and mechanistic studies. Therefore, rate expressions (algebraic equations that relate the rate of the reaction to the concentrations of the species participating in it), activation energies (minimum energy reacting molecules must have before they react), and proposed mechanisms (the sequence of individual steps by which the overall reaction occurs) have been reported for these homogeneous processes. However, the heterogeneous studies have not been as comprehensive, and complete kinetic and mechanistic data are not available. Hence, examining the kinetic parameters and proposing a mechanism for the heterogeneous synthesis of flavanones are two of the major goals of this work.

A study by Climent et al. (1995) first demonstrated the feasibility of the heterogeneous synthesis of flavanones. These authors examined the Claisen-Schmidt condensation reaction of acetophenones and benzaldehydes during a series of solid base catalysts (i.e., a sepiolite, hydrotalcites, and magnesium oxide). They, also, studied the effect of substitution on the aromatic ring of benzaldehyde on the rate of the reaction during hydrotalcites catalysts. More specifically, they reported that the rate of this reaction is affected by the presence of \( \text{OCH}_3 \), \( \text{Cl} \), and \( \text{NO}_2 \) groups at the 4-position on the benzaldehyde ring. It was observed that electron-accepting groups (such as \( \text{NO}_2 \)) increase the reaction rate, while electron-donating groups (such as \( \text{Cl} \)) decrease the reaction rate. The observed rates are believed to be proportional to the Hammett constants of these functional groups. The Hammett equation characterizes the reactivity of meta- and para-substituted aromatic compounds by giving each functional group a characteristic constant (Dean, 1979).

Similar substitution effects, also, were observed by Tichit et al. (1995) during condensation reactions of substituted benzaldehydes and acetone. They
reported that the logarithm of the experimentally observed pseudo-first-order rate coefficient increases linearly with the Hammett constant of the substituted benzaldehydes in their study. The rate constants increase with the nucleophilic strength (how readily an atom donates its electrons in a reaction) of the substituent. However, both papers fail to report complete kinetic data and to provide any mechanistic (i.e., molecular level) explanation for these substitution effects.

**EXPERIMENT**

The synthesis of the substituted flavanones examined in this study was achieved by the Claisen-Schmidt condensation reaction between 2-hydroxyacetophenone and the corresponding substituted benzaldehydes. The substituted chalcones formed in this step then undergo isomerization to form the substituted flavanones. Both of these reactions occur in a batch reactor at constant temperature in the presence of a solid basic catalyst. A schematic of the batch reactor system used in our studies is shown in Figure 2. It consists of a Pyrex vessel, an overhead stirrer, a heating mantle with a temperature controller, and a sampling device.

![Figure 2. Schematic of the experimental batch reactor system used](image)
The magnesium oxide catalyst was prepared from commercial magnesium oxide powder. The powder was dried, pressed into a large tablet, broken into smaller fragments using a mortar and pestle, and fractioned to the desired catalyst particle size using a combination of sieves. Prior to use, the desired amount of catalyst was activated by heating to 120°C for approximately 2 hours. This procedure removes weakly adsorbed water from the catalyst surface.

Experiments were conducted at constant temperature (160°C), atmospheric pressure, and under total reflux using a reaction slurry volume of 150 mL. Catalyst particle sizes ranged from 177 to 250 μm (i.e., 60/80 mesh) and 0.1 wt% catalyst loading was chosen for consistency with previous work in our group (Drexler, 1999). Previous analysis has shown that external mass transfer limitations are insignificant for these particle sizes, and catalyst loadings are less than 0.5 wt% (Drexler, 1999).

Prior to the start of each experiment, the reactor was purged with nitrogen gas in order to remove any oxygen present and to prevent the formation of a benzoic acid type by product due to the oxidation of the substituted benzaldehydes. Next, the reactor was charged with the appropriate amounts of 2-hydroxyacetophenone, substituted benzaldehyde, and dimethylsulfoxide (DMSO), which was used as the solvent. The use of a solvent is necessary in these experimental studies in order to control the initial reactant concentration ratios while maintaining a constant 150 mL reactor volume. A sample was collected at room temperature after the reactants and solvent were mixed thoroughly to establish a baseline. Then, the temperature control unit was activated to raise the reactor temperature to 160°C. Once the reactor and its contents reached 160°C, another baseline sample was collected and the catalyst was added. The reaction was then allowed to proceed for the desired length of time (approximately 20 minutes), and samples were collected periodically to determine changes in the concentrations of the reactants and products over time.

Off-line sample analysis was performed with an SRI 8610C gas chromatograph (GC) equipped with a Supelco SPB-5 fused silica capillary column and a flame ionization detector (FID).
RESULTS

Preliminary kinetic studies of the synthesis of 4’-methoxyflavanone from 2’-hydroxyacetophenone and 4-methoxybenzaldehyde have been completed and a rate expression extracted for this case. This process utilized data collected in the early stages of experiments in which the initial concentration of one reactant was held constant while the other was varied. In particular, the initial concentration of 2’-hydroxyacetophenone was held constant in our case at 1.5 mol/L while the initial concentration of 4-methoxybenzaldehyde was varied between 0.1 and 3.0 mol/L. Measurements were conducted for 20 minutes with samples collected every 2 minutes. Figure 3 shows how the concentration of the 4’-methoxyflavanone produced raises faster at higher initial concentrations of 4-methoxybenzaldehyde. Further manipulation of data indicates a first-order dependence of the reaction rate on the 4-methoxybenzaldehyde concentration (i.e., the reaction rate is proportional to the initial 4-methoxybenzaldehyde concentration). A second set of similar experiments, in which the initial concentration of 4-methoxybenzaldehyde was held constant at 1.5 mol/L while the initial concentration of 2’-hydroxyacetophenone was varied between 0.1 and 3.0 mol/L were also conducted (results shown in Figure 4). Corresponding calculations, also, indicate a first-order dependence of the reaction rate on 2’-hydroxyacetophenone concentration. Lastly, the reaction rate constant, calculated from both data sets, was $3.1 \times 10^{-4}$ L/mol/sec. Therefore, the reaction rate can be expressed as:

$$-r = 3.1 \times 10^{-4} C_A C_B$$

Where $C_A$ is the concentration of 2’-hydroxyacetophenone and $C_B$ is the concentration of 4-hydroxybenzaldehyde (both are expressed in mol/L).
Figure 3. Comparison of concentrations of 4’-methoxyflavanone produced for different initial concentrations of 4-methoxybenzaldehyde (initial concentration of 2'-hydroxyacetophenone=1.5 mol/L)

Figure 4. Comparison of concentrations of 4’-methoxyflavanone produced for different initial concentrations of 2’-hydroxyacetophenone (initial concentration of 4-methoxybenzaldehyde=1.5 mol/L)
Further syntheses of substituted flavanones were conducted with 4-hydroxy- and 4-nitrobenzaldehyde. The results of these studies were compared to the results obtained with 4-methoxybenzaldehyde, as well as with the unsubstituted benzaldehyde analog. As Figures 5 and 6 show, the rate of the reaction (manifested as the rate of consumption of the two reactants) varies significantly depending on the type of benzaldehyde used. In agreement with the findings of Climent et al. (1995) and Tichit et al. (1995), a strong correlation was observed between these rates and the Hammett constant of these functional groups (Figure 7). In particular, the rate of the reaction increases with increasing Hammett constant and hence, decreasing nucleophilicity (how readily an atom donates its electrons in a reaction) for these functional groups.

**FUTURE WORK**

Our future work will focus on obtaining rate expressions for the syntheses of 4'-hydroxy- and 4'-nitroflavanone, proposing a reaction mechanism describing the sequence of molecular events taking place, and further exploring the observed substitution effects.

![Graph](image)

**Figure 5.** Rate of consumption of 2'-hydroxyacetophenone during its reaction with various substituted benzaldehydes

AFRICAN AMERICAN DOCTORAL STUDENT DEVELOPMENT
Figure 6. Rate of consumption of various substituted benzaldehydes during their reaction with 2'-hydroxyacetophenone

Figure 7. Rate of synthesis of substituted flavanones as a function of the Hammett constant of the substituting groups
REFERENCES


Berkoff, N. "Focus on Flavonoids." Delicious! April 1998. 29 May 00 <http://www.healthwell.com/delicious-online/D_backs/Apr_98/nutadv.cfm>


PART 5: COLLEGE OF SCIENCE AND MATHEMATICS
William is a normal kind of guy. Sunday afternoon he wakes up and stumbles to the bathroom to brush his teeth. It feels like he is moving through old engine oil. Must have been that last tequila still with him, he thinks. The first thing that penetrates his foggy brain is that his toothbrush is teasing him. He begins to sweep away the fog from his brain. Concentrating on the brush, he reaches out. The brush edges away from his hand on the sink. He pulls his hand back to think about this, and the brush returns to its place. It’s not the tequila’s fault; William has just entered the world of the low Reynolds number (Re).

THE REYNOLDS NUMBER

Humans and many of the animals on Earth live in a fluid environment, whether it is in air or water. Also, a considerable percentage of tissue, be it plant or animal, is made up of water, a fluid. Fluid flows. This is an experience that people are familiar with: wind blowing, rain streaming down a windowpane, salt water rushing through a flume system. The Reynolds number describes fluid flow and is a dimensionless ratio of inertial forces to viscous forces,

\[ \text{Re} = \frac{UL}{\nu} \quad \text{Eq. 1} \]

where \( U = \text{fluid velocity in m/s} \), \( L = \text{characteristic length in m} \), \( \nu = \text{kinematic viscosity of fluid in } \text{s/m}^2 \) (‘m’ refers to meters, ‘s’ refers to seconds).

Inertia is a characteristic of an object that allows it to stay in motion, if it is already moving, or if it is at rest, to stay at rest. Birds are examples of terrestrial organisms taking advantage of inertia. They flap, then lock their wings and soar. Fish are a good marine example; once, a fish finishes its power stroke, it glides.
Regarding fluid flow, when inertia, or the numerator of Eq.1 is high, the denominator or viscous term becomes less influential, thus, viscosity is ignored. Any discontinuity or disturbance in the flow continues to exist (Koehl & Strickler, 1981) because nothing is there to quench it. In the above example of birds soaring and the gliding of fish, their strokes cause turbulence in the flow. Since their inertial term is large compared to their viscous term, they escape much of the viscous effects of air that would tend to slow them down, bringing them to a standstill.

Viscosity is a property of fluid that describes its resistance to the rate of deformation, or shear (Denny, 1993). Kinematic viscosity, the denominator in the Reynolds number, deals with how much the fluid sticks to itself, and the difficulty of moving one molecule of the fluid past nearby molecules (Denny, 1993). When the viscous term in Re is much larger than the inertial term, inertia does not exert much influence on the fluid-flow regime. In this case, the fluid's molecules tend to stick together (Koehl & Strickler, 1981). Under these conditions, fluid behaves less like a liquid and more like a gel. In fluid flows where the viscosity is high, any turbulence is damped out and flow streams are laminar (Koehl & Strickler, 1981; Vogel, 1992). Flow streams are layers of fluid, one atop another. In highly viscous flow, the layers do not mix, but lie flat. Where turbulence and inertia are more influential than viscosity, the flow streams mix, collide and crumple.

The Reynolds number is useful when dealing with approximations of real fluid flow. For example, it is difficult to build a life-size model of the earth to study global wind patterns. Nevertheless, doing that would give results relatively close to reality. Since the Reynolds number (Re) describes flow, if two flow streams have the same Re, then their physical characteristics are, also, the same (Vogel, 1981). This does not mean that the values of u, L, and v are the same, but that their ratio is the same. So to model the earth and its winds, it is possible to shrink the model, as long as there is a corresponding increase in wind speed. The Reynolds number also can be used to investigate behaviors of extremely small objects or organisms in fluid media. In the marine environment, Koehl (1996; also, see Vogel, 1981 for more examples) used Re to model fluid flow through chemosensory hairs.
The range of Re values can be divided into three categories: high (Re>105), intermediate (10^5>Re>1), and low (Re<1) (Vogel, 1981; Denny, 1993). Humans’ everyday experience is of the intermediate-to-high and high Reynolds numbers where inertial forces are more influential than viscous forces. This applies to swimming, parachuting from a plane, and ice-skating. Animals are, also, familiar with life at a high Re. A tuna at a velocity of 10 m/s has a Reynolds number of 30,000,000, and a 7 cm long dragonfly with a velocity of 7 m/s has a Re of 30,000 (approximations from Vogel, 1981). The world of low Reynolds numbers, where viscous forces have more influence than inertial ones, is a less familiar situation. Invertebrate larvae (length=0.3mm) travelling through seawater experience a Re of 0.3, while the Re for sea urchin sperm traveling 0.2 m/s through the same medium is 0.03 (approximations from Vogel, 1981).

In a low Reynolds environment, flow streams are laminar (remember that any disturbances are damped out by viscous forces); significant mixing between adjacent fluid streams does not happen (Koehl & Strickler, 1981). A life example can be found in the preparation of the restorative drink, gin and coke. Gin (clear liquid) is poured into a glass, then coke (dark liquid) is added. In the “normal” high Re situation, even if the coke is poured slowly, uniform mixing is quick. This is because of turbulent mixing. If the drink were prepared under conditions of low Re, coke poured slowly or quickly into gin would stay separated.

Another interesting aspect of an environment with a low Reynolds number is called persistence-of-orientation. An apple dropped from a height ‘n’ tumbles as it falls. The same apple dropped in a low Re environment doesn’t tumble. Under the condition of a low Re, an object keeps its original orientation throughout its fall (Vogel, 1981).

Another example derives from a television show called “Kung-Fu: The Legend Continues.” In it, the main character was able to put out a candle flame from across the room by a pass of a hand. This, although dubious in reality, is normal under conditions of a low Re, and brings the discussion to a phenomenon called the wall effect (Vogel, 1981). An object’s sphere of influence is greater in a low Reynolds number environment, as the equation below shows (taken from Vogel, 1981):
\[ (y/L) > (20/\text{Re}) \quad \text{Eq. 2} \]

where \( y \) = distance to nearest wall. If an object is falling parallel near a surface, fluid flow pressure asymmetries can appear in the fluid flow streams about the object, causing it to tumble in the fluid as if it were rolling on the surface.

Because a low Reynolds environment is foreign to many persons and is the place of the odd and intriguing examples above, the rest of this discussion will leave high and intermediate Re behind, and focus on the low Re environment; similar to a travel guide that admits the beauty of Versailles, yet, points the discriminating visitor to the elegance of Fontainbleau.

Object size is important when working in a low Reynolds number environment as demonstrated by the inclusion of a length scale in Eq.1; if all else is kept constant, as length increases, so does Re. *Escherichia coli* is a bacterium that lives in watery media and experiences a low Re (Purcell, 1977). Fish the size of tuna, living in the same medium as E. coli (except when the bacterium is present in an intestinal tract) experience a high Re. Copepods, with a size range of 1-10mm (See Appendix, Figure 1), also, live in a low Re environment (Koehl & Strickler, 1981). Reynolds numbers for flagellated organisms such as dinoflagellates and spermatozoans are of the order of \( 10^2 \) or less (Sleigh, 1991). However, there are instances where the organism lives in a high Re environment, yet, the appendage does not experience the same. An example is the chemosensory bumps called aesthetascs (example length being 400 um), found on antennules of mantis shrimp (example of corresponding body length being 30 mm), that operate at a lower Reynolds number than the entire organism (Mead et al., 1999).

**LIFE AND THE LOW REYNOLDS NUMBER**

The marine system may be viewed from the bottom up, in terms of benthic pelagic coupling, for example, or from the top down. For this discussion of life and the low Re, the starting point is sediment activity. From there, the discussion will travel up the gradient to whole organism concerns. Sediment re-suspension
can be important to feeding strategies of epibenthic dwellers that eat organic particles floating through the water column. At the sediment-water interface, the Re is low. This implies that inertial forces are influential; particles on the sediment surface tend to stay there. However, there are times when the tangential force is greater than the surface normal force keeping the particle stationery at the interface (Phares et al., 2000). The tangential force strong enough to re-suspend particles from the sediment surface is beneficial to the suspension-feeding organism. However, that same force may also be strong enough to re-suspend the organism.

Larval forms of organisms that have settled onto the benthic sediment are subject to tangential forces. Depending on the flow regime of the water-sediment interface, settled larvae have more or less of a chance to stay down (remember the re-suspended particles above). Sitting at the bottom of a deep boundary layer, due to the low Reynolds number present, keeps them safe from the more energetic yet laminar streamlines. At this point, a brief digression on boundary layers is needed.

A boundary layer refers to that portion of fluid having a velocity of less than or equal to 99% of the free-stream velocity (Denny, 1993; Vogel, 1981). It includes the key concepts that: (1) the layer of fluid touching a surface does not move, and (2) the viscous layers of fluid exert a shearing force on each other. If this is a confusing idea, consider the Ekman transport spiral where each layer of water pulls on the layer beneath (Mann & Lazier, 1996). The digression is ended; the discussion can now return to the larvae settled within in a boundary layer. Boundary layers then, can give protection against turbulence; however, they, also, come with a price, the cost of diffusion.

At flows having high Reynolds numbers, convection as a method of transporting gases and other nutrients is utilized more than diffusion. The Sherwood number (Sh)

\[ Sh = \frac{uL}{D} \]  

(Eq. 3)

\((u=\text{fluid velocity}, L=\text{length}, D=\text{diffusional constant})\) is a dimensionless ratio that describes where convection is more influential than diffusion (Purcell, 1977;
Denny, 1993), and it is analogous to the Reynolds number. When the Sherwood number is much greater than unity, convection is a large factor of mass transport, and when Sh is less than 1, diffusion is of more consequence. The larvae in the above example are protected by the low Re laminar flows in the boundary layer. Nevertheless, they also may experience a low Sherwood number (Koehl, 1996). In this case, as is seen in Eq. 3, diffusion is important to life processes. Depending on the depth of the boundary layer and the constant of diffusion, it may take an inordinate length of time for oxygen or other nutrients to arrive.

Bacteria are other organisms living in a low Re, and, also a low Sh (Sh = 10^{-2}) environment (Purcell, 1977). For them, diffusion is more influential than convection for mass transport of nutrients or waste products. However, bacteria are motile so they can move around; thus, it may be presumed that they can increase the fluid velocity around them. Yet, that is not exactly the case. Taking an example of the bacterium, *E. coli*, with a size of approximately 1 micron, if it hopes to increase its food supply by 10%, it has to swim at twenty times its maximum possible speed (Purcell, 1977). Evidently, merely increasing speed of movement is not the answer to scarce nutrients in the immediate surroundings.

Remember that under a low Re, fluid behaves quite differently than what humans are accustomed to; it globs and sticks to the object moving through it. In fact, an organism traveling in a fluid where Re is low takes the surrounding packet of fluid with it when it moves. If an organism wants to exchange its layer of fluid for a new one, it must travel as in this equation,

\[ L > \frac{D}{v} \]

Eq. 4

where \( L \) is length, \( D \) is the constant of diffusion, and \( v \) is the kinematic viscosity. A behavior that works better is for the bacterium to move to areas having a higher concentration of nutrients altogether. In fact, the random walk of bacteria up a concentration gradient demonstrates that this is indeed what happens (Purcell, 1977; Mann & Lazier, 1996).

Transport of nutrients is not the only aspect of life that is affected by a low Reynolds number environment. Locomotion is another. Since viscosity is more
influential than inertial forces, any movement by an organism is a product of the immediate forces exerted at that particular snapshot in time (Purcell, 1977). The past history of forces—which forces were exerted at an earlier time, their direction and strength—is not a factor. One biological example is the copepod. The appendages which copepods use to swim are coated by hairs (See Appendix, Figure 1). However, under conditions of low Re, these brushes act like solid paddles. Imagine a copepod with miniature ping-pong paddles instead of normal appendages (Koehl & Strickler, 1981). This is the functional reality; the fluid around the organism flows similarly to glycerin flowing around a kernel of corn. When the copepod swims, if it wants to move forward, its power stroke cannot be the same as its recovery stroke. If the two strokes exerted the same force, the copepod would end up just rocking back and forth; the same packets of water would be pushed forward and then backward with no net change in distance (Koehl & Strickler, 1981). Reversibility is the name of the game under low Reynolds numbers (Purcell, 1977).

Besides paddles as appendages, another option taken by organisms to locomote at low Reynolds numbers is to use flagellae or cilia as a method of propulsion (Sleigh, 1991). Flagellae collect forward thrust from waves that propagate from the juncture of flagellum and cell body to the flagellum’s edge. As the waves pass, they exert forces on the water in such a way that there is a net forward movement for the cell (Sleigh, 1991). If the wave sent from the junction of flagellum and cell body was given some torque, the flagellum would have a three-dimensional wave, or helix, propagating through it. The bacterium *E. coli* uses this method of traveling forward in its surrounding medium (Berg, 1996), however it has a bundle of filaments instead of one flagellum. Bacteria move jerkily, having straight runs followed by periods of time during which they tumble aimlessly. This movement pattern is caused by the helical motions of the filament bundle. When the bundle rotates counter-clockwise, forward thrust is generated; yet, when the bundle rotates clockwise, it separates into its individual filaments that now beat out of sequence, causing the tumbling behavior (Berg, 1996).
Cilia do things differently than flagellae as they use an asymmetrical power and recovery stroke instead of propagating waves. They have more power in their power stroke than their return stroke, due to changes in the ciliar position (Sleigh, 1991). On the moving stroke the cilia arc outward, then collapse closer to the body and slide back to their original positions (See Appendix, Figure 2). More water is thrust against the cilium during this moving, or power, stroke. *Chlamydomonas* and *Polytomella* are two examples of flagellates that have gotten wise and use ciliary beats of their flagellae to swim (Sleigh, 1991).

While it is true that cilia use asymmetrical power and return strokes to achieve their movement, it is possible to approximate the ciliar movement as undulations of an imaginary envelope about the cell in question (Ehlers et al., 1996). This was done in order to give a potential explanation of the swimming behavior of the cyanobacterium, *Synechococcus*, which has a high swimming speed of 25um/s, yet, no flagellum or cilia.

Feeding in a low Reynolds number environment is not the same as it is under high Re conditions. Organisms that feed in a low Re environment manipulate the water packet surrounding the food particle rather than the particle itself (Koehl & Strickler, 1981). This can cause problems for the copepod with paddles for appendages because it cannot reach out and grab the particle; extending the paddle, also, pushes away the desired water package and food. Copepods get around the problem by asymmetric flapping of their paddles, causing a stream of packets to move past the mouth region. When a desired packet comes past, they redirect the flow to capture the food (Koehl & Strickler, 1981). An interesting digression on a paradigm shift finds its place here. For a time, scientists pictured copepods as sieving through the water to pick up food particles (Rubenstein & Koehl, 1977; Brusca & Brusca, 1980; Pechenik, 1996). This was because actual modeling of flow through copepod appendages, keeping things to scale, had not been done; the Reynolds number was not included in the calculations.

Tunicates are another organism that feeds at a low Reynolds number (Acuna et al., 1996). Unlike the copepods, tunicates have no paddle appendages with which to capture food. Instead, they pump water through a mucus net, then
ingest the net and the attached food particles. The particles are captured by
direct interception and diffusional deposition, not because they are too big to fit
through a pore in the net. Approaches to filter feeding under low Re conditions
also have changed. Scientists no longer see the filter-feeding process as being pri­
marily a passive sieve process. The paradigm now views filter-feeding as taking
place by gravitational deposition, inertial impactions and the above direct inter­
ception and diffusional deposition (Rubenstein & Koehl, 1977). An interesting
thing about the mucus net of tunicates is that there is no leakage of water around
the filter, whose fibers operate at a Reynolds number of 6.1x10^{-5} (Acuna et al.,
1996). The laminar flow plus the sticking of water packets together allows the
stream pumped by the animal to be entrained cleanly through the net. The stream
remains cohesive and almost no packets of food containing water escape the filter
fibers.

LOVE AND THE LOW REYNOLDS NUMBER

Life cannot exist without love, so it has been said. Excluding parthenogene­
sis and budding, perhaps it would be more scientific to theorize that life cannot
exist without sex. However, the ocean is a big place, and lonely marine organisms
can’t just put an ad in the paper. So, how do they get together? One option used
by many is to exude chemical signals for potential mates to pick up and follow.
This causes another problem for those organisms that live in a low Reynolds num­
ber environment since diffusion, the main form of mass transport, takes a long
time (Purcell, 1977). Koehl (1996) modeled fluid flow through antennule hairs
and found that rapid flicking of these antennules could overcome, in part, the
obstacle of diffusion as a barrier to reception, in a timely manner, of chemical sig­
nals. When the antennule flicks, its speed allows the exchange of the current
water packet for a new one. In the pauses between flicking, the molecules have
time to diffuse across a relatively small distance and are picked up by the chemi­
cal receptors on the hairs. Therefore, flicking can give the organism snapshots of
its chemical signal environment over time. As a result, the organism can direct its
path up the gradient and perhaps find a friend. The work of Mead et al. (1999)
on mantis shrimp confirms that flicking results in time snapshots of the odorous environment. Water flows easier through the aesthetasc of the shrimp during the outward stroke than it does during the inward stroke, allowing the exchange of chemosensory information packets.

Two problems that appear in the turbulent flowstreams of a high Reynolds number are not as problematic for the organisms living in a low Reynolds environment: directionality of the chemical signal, and patchiness of the odor plume. Since the flow they encounter is laminar, even if they are flapping, as do copepods, it does not disturb the flow patterns, and the direction of the signal is not confused (Koehl & Stickler, 1981). This laminar flow, also, helps the odor plumes stay cohesive and more continuous when the diffusional constant is low (Berg, 1996). Differences in the diffusional constant can affect the way that odor and other particles move through a fluid; diffusion takes places at a faster speed when the diffusional constant is high, than when the diffusional constant is low.

CONCLUSION

The Reynolds number is a dimensionless ratio that describes whether a flow regime is dominated by inertial or viscous forces. Most of human experience is dominated by high Reynolds numbers; environments where gliding does not exist are non-intuitive. However, this is the world of low Reynolds numbers. Aspects of life such as nutrient/gas transport, locomotion, feeding, and smelling one’s neighbors are quite different in this world and pose novel ecological problems to the organisms involved.

REFERENCES

Acuna, Jose' Luis; Deibel, Don; Morris, Claude C. 1996. Particle capture mechanism of the pelagic tunicate Oikopleura vanhoeffeni. Limnology and Oceanography. 41:1800-1814.


APPENDIX

Figure 1. Copepod limb with hairs, followed by copepod limb with paddle.

Figure 2. Flagellum above, ciliated body below. Arrow points in the direction of movement. Ciliated body 'a' is during the power stroke, ciliated body 'b' is during the recovery stroke.
PART 6: COLLEGE OF PHARMACY
Is access to adequate or quality health care a privilege or a right? The answer given by both individuals and society as a whole is that quality health care is a right. Most persons, strongly, believe that every human being should have access to adequate health care. Yet, in practice, the goal of providing equal access to quality health care has not been obtained. Achieving this goal has become important as evidenced by the growing involvement of governmental departments and agencies, as well as private entities in the discussion of the issue. Statements have been made and proposals issued to address disparities in access, particularly racial disparities.

**GOVERNMENTAL AND PRIVATE AGENCY INVOLVEMENT**

In 1985, the U.S. Department of Health and Human Services released the *Report on the Secretary's Task Force on Black and Minority Health*, which documents racial and ethnic disparities in particular health conditions at a time when national statistics were reporting an improvement in the health of Americans overall.¹ This report, along with governmental initiatives such as *Healthy People*, helped to increase national awareness of disparities in health care. *Healthy People 2000* and *Healthy People 2010* have since continued to study identified health states that exemplify apparent disparities based on race and, currently, focus on the elimination of these health disparities. *Healthy People 2000*, also released by the U.S. Department of Health and Human Services in 1990, presented a strategy for improving the health of all Americans by the end of the century via national health promotion and disease prevention objectives.² The document further sought to explore solutions that will reduce the racial differences in health
states in the United States. Healthy People 2010 builds on the initiatives set forth in Healthy People 2000 and emphasizes two overall goals: (1) increasing quality and years of healthy life and (2) elimination of health disparities. The Agency for Healthcare Research and Quality (AHRQ, formally the Agency for Health Care Policy and Research) has been instrumental in assisting with identifying and providing explanations for disparities in delivering health care to minority populations. The agency’s research has documented racial differences in health care access along with utilization and cost of health care and it continues to support research that addresses the disparities in health care.4

Private organizations like the American Medical Association, also, have recognized the importance in addressing disparities in health care. In 1991, the Council on Ethical and Judicial Affairs of the American Medical Association developed recommendations to decrease disparities in health care for women.5 The recommendations include: (1) the examination of physician practices and attitudes for the influence of social or cultural biases that could affect medical care, (2) the development and use of procedures and techniques that prevent or minimize the possibility of gender bias, (3) further pursuit of research into women’s health issues and the possible causes of gender disparities, and (4) measurement of the depth to which the cultural and social beliefs may influence physician-patient interactions. Although, these recommendations focus on gender disparities, they can and have been utilized with racial disparity as the focal point.

The Henry J. Kaiser Family Foundation also has recognized the importance of identifying and eliminating disparities in health care access. This foundation has supported research that evaluated trends in health care disparities during two decades, which appears as the October 2000 Journal Supplement to Medical Care Research and Review. The foundation has also collaborated with the UCLA Center for Health Policy Research to produce a report on research exploring access to physician services and health insurance coverage.6 The National Committee for Quality Assurance, along with various researchers, explored whether the quality of care delivered by health care plans varied across populations. The research found that for each health care plan, populations with a
higher percentage of enrollees were African Americans or Hispanics received poorer quality care than populations with a higher percentage of enrollees were Asian American. These efforts and other similar initiatives have prompted much discussion of the extent and causes of racial disparities in access to health care.

EARLY RESEARCH

Early research focused on financial and geographical barriers to access as the driving force for the disparities, leading to the development of policy to address these barriers, e.g., expansion of Medicaid coverage for children and reduction of the number of working uninsured. Andrulis asserts that the elimination of financial disparities is central to eliminating the disparities in health status. The author relates the lack of insurance, due to financial barriers, to the inability to obtain services, which, subsequently, leads to a poor health outcome. These efforts have made an impact; however, the disparities are still apparent after socioeconomic and geographic barriers have been addressed. Weinick et al. found that one-half to three-fourths of the disparities observed in data from the 1996 Medical Expenditure Panel Survey (MEPS) would have remained, even if racial and ethnic differences in income and health insurance coverage were removed. The quantification of the extent, explanation for, and elimination of disparities remaining after addressing socioeconomic issues represents the next levels of research questions.

RECENT RESEARCH

Much of the recent health care access research has focused on the extent of disparities in health care after controlling for socioeconomic barriers to access. The literature has explored, in-depth, differences in access to procedures, both diagnostic and therapeutic, that are utilized for particular health conditions. Access to care for cardiovascular disorders has been well studied. Hannan et al. examined racial differences in utilization of both diagnostic and therapeutic cardiac procedures. They found that African Americans were less likely than Caucasians to undergo angiography, bypass graft, and angioplasty. Another study,
using 1986 Medicare data, found racial disparities with the rates of coronary artery bypass grafting (CABG). Caucasians were more likely to have the CABG procedure performed than African Americans were. More recently, Canto et al. found that after adjusting for demographic and clinical characteristics, African Americans, regardless of gender, were less likely than Caucasians to receive reperfusion therapy following an acute myocardial infarction. This study also utilized Medicare data.

Other medical conditions or disorders that have been studied include cancer, renal dysfunction, female reproductive issues, and mental illness. Treatment differences with colorectal cancer based on race have been explored. One study found that African Americans hospitalized with colorectal cancer were less likely to be treated aggressively upon presentation. Also, differences in renal transplants performed have been studied. Kjellstrand found that women and non-Caucasians were less likely to receive renal transplants. Racial disparities have been studied with female reproductive issues. Kogan et al. examined racial disparities in the information pregnant women receive in the areas of tobacco use, alcohol consumption, drug use, and breast feeding. They found that African American women might be at greater risk for not receiving information that would increase their chance for a healthy pregnancy. Another study discovered racial differences in cesarean delivery in California. African Americans were more likely to undergo cesarean delivery than Caucasians. Disparities in the treatment of mental illness, also, have been examined. Cuffe et al. looked at racial and gender differences in the treatment of psychiatric disorder in adolescents. This study found that African Americans and females were facing trends of under treatment with African American females being drastically under treated for psychiatric disorders.

Few studies have examined racial disparities in access to health care across disease states. Harris et al. realizing that health states were being explored separately, investigated racial and gender differences in the treatment of conditions in a hospitalized population. They found that African Americans were less likely to receive major therapeutic procedures in 48.1% of 77 disease categories. Women
were less likely to receive therapeutic procedures in 51.6% of 62 disease categories. The significant racial and gender disparities were found with traumatic injuries, female reproductive disease, cancer, and some infectious conditions.

RESEARCH ON PHARMACEUTICAL THERAPIES

Previous research has dealt extensively with racial and gender disparities in diagnosis and overall treatment of specific health conditions, but few studies have examined disparities in access to drug therapy. Sirey, et al. discovered racial disparities in the recommendations of antidepressant therapy among depressed outpatients, but the discovery was not the focus of the research. When looking for research focusing on the determination of the level of access to pharmaceutical therapies or access to therapies considered therapeutic advances, the literature appears to be limited. Graham et al. found that among a cohort of gay or bisexual men, being White was positively associated with the use of antiretroviral therapy (OR = 1.58; 95% CI = 1.21-2.07). Moore et al. reported that Blacks were less likely than Whites to have received any antiretroviral therapy than Whites (48% vs. 63%) and Blacks were also less likely than Whites to have received prophylaxis for PCP (58% vs. 82%). Sclar et al. found that when comparing the prescribing pattern of tricyclic antidepressants (TCAs) to selective serotonin reuptake inhibitors (SSRIs) in a Medicaid population, African Americans were more likely to receive a TCA as initial therapy than Caucasians. At the time the prescriptions were received, SSRIs were considered pharmaceutical advances in the treatment of depression. All of these studies focused on only one disease state and none examined the cost consequences for disparity in access.

DISPARITIES WITH THE SOUTH CAROLINA POPULATION

Despite the apparent disparities in health status between African Americans and Caucasians in South Carolina, very little research quantifying differential access to health care has been reported. Racial disparities in health status exist in South Carolina from the beginning to end of life. African American infants are almost twice as likely to die than are Caucasians. The risk of heart disease is 1.5
times higher among African Americans than Caucasians, and African American men and women are more likely to die from cancer and complications of diabetes than Caucasian men and women, respectively. In South Carolina, the 1999 mortality rate for African American women from breast cancer was 29.2 deaths per 100,000 while the mortality rate for African American men from prostate cancer was 27.5 deaths per 100,000. While almost 70% of deaths contributed to complications of diabetes in 1997 occurred in adults 45-64 years of age, African American are 2.5 times as likely to die from complications as Caucasian men and African American women are more than four times as likely to die from complications as Caucasian women. These disparities, adversely, affect not only the health status of the state but, also, its economic development. Economic development is especially affected in counties with a high population of people of color. Health differences between African Americans and Caucasians account for most of the racial gap in labor force attachment for men. In many South Carolina counties, particularly those with higher minority populations and where recruitment of new industries is sorely needed, racial disparities in health status are a real concern.

ECONOMIC IMPACT

It is apparent that improving the health status and quality of life of individuals is not the sole argument for the importance of decreasing disparities in health care; economic impact is another argument. Economic development, greatly, depends on a healthy and productive workforce. Employees with compromised health tend to have higher absenteeism that may reduce company productivity. Bound et al. concluded that health is an important determinant of early labor force exit. As various diseases are found to reduce both an individual's wage rate and his labor supply, companies may be reluctant to locate in an area where there are concerns that a healthy workforce does not exist. In addition, companies considering capital investment in South Carolina may have concern about the costs of health insurance for their employees. Where low health risk of employees exists, commercial insurers have found they can attract business by offering them lower health insurance rates. With high incidences of cardiovascular dis-
ease, diabetes, and other chronic diseases in South Carolina, companies may face higher insurance premiums and greater labor expenses.

Economic development depends on the availability of a healthy and productive workforce. With the current impact of pharmacological therapies on medical practice, access to pharmaceutical advances is central to any effort designed to maximize physical functioning in the presence of chronic disease. It should be kept in mind that addressing racial disparities in access to health care is not only a social issue, but an economic one as well.

REFERENCES


SICKLE CELL ANEMIA: A REVIEW OF THE DISEASE STATE, TREATMENTS, AND COMPLICATIONS

Phyllis I. Perkins, Pharm.D.
College of Pharmacy

INTRODUCTION

Sickle cell anemia is a hemoglobinopathy that is characterized by the presence of the hemoglobin variant, hemoglobin S (Hb-S). The homozygous condition (Hb SS) is called sickle cell anemia, whereas the heterozygous and usually mild to asymptomatic condition, (Hb AS) is known as sickle cell trait. The earliest clinical symptoms of this disease are seen between 6- and 24-months-of-age. The highest mortality rate from sickle cell anemia occurs within the first 5 years of life, and the greatest risk period is the second 6 months of life. Sickle cell anemia is a genetic disorder prevalent among African Americans. It is, also, present worldwide in various peoples. Moreover, it is, also, one of the most common genetic blood disorders encountered by pediatricians. Sickle cell anemia is responsible for not only causing sickness in patients, but mental and cognitive deficits as well. Many children who are thought to be slow learners or lazy students have been compromised by the damage their disease causes. Sickle cell anemia also damages the spleen making these patients highly susceptible to multiple infections as children. Many children are diagnosed initially with sickle cell due to an early bout with pneumonia. The goal of this chapter is to provide the reader with a brief overview of the disease state and to discuss several complications of sickle cell disease. In closing, the importance of early detection and treatment to decrease morbidity and mortality will be stressed.
**EPIDEMIOLOGY**

Sickle hemoglobin occurs in various peoples worldwide, but most commonly in those of African descent. Sickle hemoglobin has been found in the Mediterranean, Greece, Italy, Turkey, Iran, and India and is becoming more common in western Europe including the United Kingdom, France, the Netherlands, Belgium, and Germany. Central America and South America also are affected by sickle cell disease.

There are several variations of sickle hemoglobin: hemoglobin S (Hb-S), hemoglobin C (Hb-C), hemoglobin D (Hb-D), and hemoglobin E (Hg-E). Hemoglobin S (Hb-S) is the most frequently found sickle gene among African Americans. The frequency of sickle cell trait is 8% and that of sickle cell disease (SCD) is 1 in 400. Hb-S is the most common sickle gene worldwide. Hemoglobin C (Hb-C) is found in western and northern Africa, or in descendants of those from this area, with the highest frequency in northern Ghana. Hb-C has a frequency of 3% in the United States. Hb-D is found in India, Pakistan, Afghanistan, and Iran. Hb-E has been found in Sri Lanka, Malaysia, Thailand, Cambodia, Laos, Burma, Indonesia, Vietnam, and the Philippines. Sickle cell disease (SCD) is a group of related disorders characterized by a predominance of the hemoglobin S, sickle hemoglobin, in the erythrocyte or red blood cell. Sickle cell anemia, or homozygous sickle cell disease, is defined as the presence of two recessive genes that are coded for sickle hemoglobin. Hemoglobin S is caused by the substitution of valine for glutamic acid at the 6-amino acid position in the β-polypeptide position. Hemoglobin C is caused by the substitution of lysine for glutamic acid at the 6-amino acid position in the β-polypeptide position. The alpha chains of Hb-S, Hb-C, and Hb-A are all identical. When deoxygenated, both Hb-S and Hb-A have similar physical properties in dilute solutions; however, in concentrated solutions, deoxygenated Hb-S is insoluble and forms a gel, whereas deoxygenated Hb-A remains soluble. This solubility difference represents the physiochemical basis for sickling. A comparison is shown on following page:
A
Hb-A
Position 1 2 3 4 5 6* 7
β-chain valine histidine leucine threonine proline glutamate glutamate

B
Hb-S
Position 1 2 3 4 5 6* 7
β-chain valine histidine leucine threonine proline valine glutamate

C
Hb-C
Position 1 2 3 4 5 6* 7
β-chain valine histidine leucine threonine proline lysine glutamate

The sixth-position (*) amino acid in the β-chain differentiates (A) Hb-A from (B) Hb-S and (C) Hb-C.3

PATHOPHYSIOLOGY

Three known problems constitute the basis of the various clinical manifestations: impaired circulation, destruction of the red blood cells (RBCs), and stasis of blood flow. These three problems are related directly to two major disturbances involving RBCs: damage to the membranes of the RBCs containing Hg-S and an increase in blood viscosity.3 4

Damaged RBCs may lose potassium and water leading to a dehydrated state that enhances the formation of sickled forms. In turn, they store excess calcium becoming more rigid and thus irreversibly sickled. Polymerization changes (incorrect amino acid substitution) allow deoxygenated hemoglobin molecules to exist as a semisolid gel. These cells have more difficulty deforming themselves than normal cells and as a result remain more rigid, retarding their flow, especially through microcirculation.

The presence of sickled RBCs increases blood viscosity, and encourages slugging in the capillaries and small venous vessels. Such obstructive events lead to local tissue hypoxia, accentuating the pathologic process. Other events, such as increased globulin and fibrinogen levels, also, increase blood viscosity and aggravate the hematologic process in sickle cell patients. The cycle of sickling and
unsickling that occurs in response to various oxygen tensions results in the loss of hemoglobin from the cell membrane. This cycle between sickling and unsickling, also, leads to the loss of membrane flexibility and the production of irreversibly sickled cells. The membranes of irreversibly sickled cells permanently are deformed, regardless of the oxygenation state of the hemoglobin within them. This, also, decreases their lifespan from a high of 120 days (that of a normal erythrocyte) to a low of 10 to 20 days.

**PRESENTATION**

In patients who are homozygous for Hb-S, sickle cell anemia, usually, appears between 4 and 6 months, but always by the age of two. Symptoms are delayed because of the presence of fetal hemoglobin (Hg-F). Fetal hemoglobin carries oxygen better than Hg-S and is less prone to sickling. As RBCs turn over, Hg-F is replaced by Hg-S and leads to attacks of pain that are accompanied frequently by fever. Pneumonia is often a common finding and the initial event for diagnosis. Many children have pain and swelling of the hands and feet known as, “hand-and-foot syndrome” or dactylitis.

Clinical signs and symptoms associated with sickle cell anemia include chronic anemia, fever and pallor, arthralgia, scleral icterus, abdominal pain, weakness, anorexia, fatigue, enlargement of the liver and heart, and hematuria. Infants may show enlargement of the spleen. Children homozygous for Hg-S commonly have a decreased hemoglobin and increased reticulocyte. Platelet and leukocyte counts are usually increased and peripheral blood smears display the sickled cells.

Sickle cell patients experience delays in growth and sexual maturation. Both height and weight are usually below average. There is, also, a tendency toward a reduced level of fertility and female patients tend to have more menstrual irregularities in comparison to normal women. Other typical physical characteristics include a protuberant abdomen with exaggerated lumbar lordosis. Sickle cell patients often have an asthenic appearance with long extremities and tapered fingers. The chest is, also, frequently barrel-shaped.
DIAGNOSIS

Diagnosis of sickle cell anemia is initiated usually with newborn screening by use of the longstanding phenylketonuria (PKU) screening. Umbilical cord blood is commonly used. Screening is extremely important because it allows for earlier detection and the initiation of therapeutic and preventive treatments. However, commonly used tests such as Sickledex and Sickleprep fail to differentiate between patients who are positive for sickle cell anemia and those who have sickle cell trait. Fetal hemoglobin may, also, interfere with the assay. Diagnosis of sickle cell anemia is confirmed by hemoglobin electrophoresis.

COMMON COMPLICATIONS

Many complications occur as a result of sickled RBCs and functional asplenomegaly. Below is a chart of the manifestations of sickle cell disease, crises and complications:

Acute chest syndrome is the pulmonary illness that occurs in sickle cell anemia patients. It is characterized by cough, dyspnea, chest pain, fever, pulmonary infiltration, and an equivocal response to antibiotic therapy. Pulmonary infarcts

<table>
<thead>
<tr>
<th>Crisis</th>
<th>Characteristic</th>
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<tbody>
<tr>
<td>Vaso-occlusive</td>
<td>Infarction/pain</td>
</tr>
<tr>
<td>Hemolytic</td>
<td>Massive hemolysis</td>
</tr>
<tr>
<td>Sequestration</td>
<td>Sequestration of red blood cells</td>
</tr>
<tr>
<td>Aplastic</td>
<td>Bone marrow failure</td>
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<table>
<thead>
<tr>
<th>Organ System</th>
<th>Complication</th>
</tr>
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<tbody>
<tr>
<td>Pulmonary</td>
<td>Acute chest syndrome</td>
</tr>
<tr>
<td>Neurologic</td>
<td>Various, including CVA</td>
</tr>
<tr>
<td>Dermatologic</td>
<td>Chronic ulcers</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Hypertrophy</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>Priapism, hematuria, hyponatremia</td>
</tr>
<tr>
<td>Skeletal</td>
<td>Aseptic necrosis, osteomyelitis</td>
</tr>
<tr>
<td>Ocular</td>
<td>Retinal problems</td>
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<tr>
<td>Hepatic</td>
<td>Cholelithiasis</td>
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</table>
occur, mostly, in the lower lobes of the lungs and are a frequent cause of pleural effusions. Pneumonia, usually, appears in the middle and upper lobes of the lungs and is a frequent cause of pleural effusions. Researchers cannot agree on the cause of pulmonary manifestations. It may be a combination of both vaso-occlusive disorders and bacterial infections.

Many young adults suffer from chronic leg ulcers. The inner aspect of the lower leg just above the ankle is the most common site affected. Ulcers often appear after trauma or infection. They are very slow to heal usually taking several weeks to a year.  

Cholelithiasis is another common occurrence in the sickle cell patient. It is usually seen at a younger age in these patients in comparison to the general population. It results from the chronic hemolysis that occurs because of increased bilirubin production. Cholecystitis may be confused with abdominal pain crises.  

Of course, anemia is a classic complication in sickle cell anemia. Cardiovascular abnormalities including cardiac hypertrophy and various murmurs occur. Sickle cell patients complain of various degrees of palpitations, tachycardia, and exertional dyspnea which are caused by the decreased oxygen-carrying capacity of the system.  

Priapism is a very painful complication that may develop in some male patients. It is caused by the sickling of RBCs in the sinusoids of the penis. This produces a painful sustained erection that may last several hours to days. Impotence may, also, occur after repeated episodes.  

Destructive bone and joint complications are frequently seen in sickle cell patients. Aseptic necrosis, particularly, of the femoral or humoral heads, causes permanent damage and disability. This is seen not only in patients with sickle cell anemia, but, also, in those with sickle cell trait. Sickle cell patients, also, have an increased incidence of osteomyelitis.  

Ocular manifestations, usually, present as transient monocular blindness, visual field defects from retinal hemorrhage, retinal detachment, vitreous hemorrhage, venous microaneurysms, and neovascularization. These ocular problems normally occur in adult sickle cell patients.
Renal complications include unilateral hematuria and hyposthenuria. Renal complications are, rarely, life-threatening. Potentially fatal renal complications are, usually, seen only in long-term survivors of sickle cell.3

ADVANCED COMPLICATIONS

Cerebrovascular accident (CVA), or more commonly known as a stroke, is a severe complication of sickle cell anemia that may severely impair both motor and intellectual function. Clinically overt CVAs affect approximately 5 percent of children with sickle cell anemia.12,13 According to four American studies, the prevalence of stroke varied from 7.6 to 17 percent. When subjects were grouped by age, Wood reported the prevalence of stroke to be 24 percent in patients younger than 15 years of age. Powars and associates reported that the mean age for a CVA with hemiplegia was 7 years.3

In a study conducted by Swift, et al., at the Comprehensive Sickle Cell Center, Medical College of Georgia, Augusta, the neuropsychological functioning of 19 of 21 children with sickle cell anemia was compared against 21 of their siblings who do not have sickle cell anemia. All of the children were born without birth complications and had not experienced any trauma that may have affected their neuropsychological functioning. All children in the study received a neurological exam. Delays in early development, confirmed by parent report, included mild delay in language and motor development. In 19 of 21 of the sibling pairs, the Full Scale IQ of the child with sickle cell anemia was lower than that of the control. The mean IQ difference for those 19 pairs was 18.95 with a standard deviation of 10.38. No significant differences were found between the sickle cell group and the sibling control group on the Activities Scale, the Social Scale, or Total Social Competence. However, there was a significant difference between the two groups on the School Scale.3

Cognitive functioning of children with sickle cell disease was evaluated by Armstrong, et al. Magnetic resonance imaging (MRI) was used in addition to neuropsychological evaluations to determine whether neuroradiographic evidence of infarct in children with sickle cell disease would result in impairment of cogni-
tive and academic functioning. 194 children between the ages of 6 and 12 were studied and 17 percent of them had an abnormal MRI, with 12.4 percent being categorized as a silent infarct. 22.2 percent of the children homozygous for Hb-S had an abnormal MRI and 15.6 percent had evidence of a silent infarct. Intelligence scores of children with a clinical history of CVA had lower scores on intelligence scales in comparison to those without MRI abnormalities. Children with a history of CVA also performed lower than those with silent infarcts on the same intelligence evaluations. On tests that assessed verbal knowledge and language abilities, children with a history of CVA scored significantly lower than both children with no MRI abnormalities and those with silent infarcts. Children with silent infarcts scored significantly lower than children with normal MRI in three specific areas: arithmetic, vocabulary skills, and visual motor speed and coordination. There was, also, a trend for these children to score lower on general knowledge.

In a risk factor analysis study performed by Kinney, et al., only painful event rate and history of seizure were associated with a significant risk for silent infarcts. The rate of painful events inversely was related to the risk of silent infarct in this study. For example, a child with one painful event was twice as likely to develop a silent infarct in comparison to a child with two painful events per year. An association was found to exist between seizure and silent infarct, but not necessarily a cause-and-effect relationship.

An elevated white cell count, also, was associated with increased risk of silent infarction. This is consistent with the positive correlations between leukocyte count and stroke, incidence of pain events, and mortality in both adults and children with sickle cell disease.

The results of all three of these studies strongly suggest that there is a degree of cognitive impairment associated with sickle cell anemia even in the absence of observed neurological complications. Children with a history of CVA are at the greatest risk for neurological impairments. Even children who only have MRIs suggestive of cerebral infarcts show signs of diminished functioning relative to those with normal MRIs. The clinical implications of these studies are that
children with sickle cell anemia are at risk, developmentally, as well as educationally because of intellectual impairment. If these children manifest immaturity and poor progression scholastically, they should not be labeled as poor adjusters to chronic illness. Although, treatment for these children is not clear, identifying them is the first step in achieving future prognostic and therapeutic advances.

**TREATMENT**

General management consists of proper nutrition, maintaining vaccination schedules, and use of prophylactic antibiotics. One milligram of folic acid per day helps to increase erythropoiesis and prevent megaloblastic anemia. Because most sickle cell patients have lost their spleens, it is very important to maintain vaccination schedules accordingly. Vaccinations are needed to provide long-lasting active immunity once the mother's antibody protection begins to wane. Sickle cell patients are highly susceptible to infections caused by encapsulated organisms such as Haemophilus influenzae type B, Streptococcus pneumoniae, and Escherichia coli. Prophylactic antibiotic therapy has been an issue for many health providers during the years, but it may be needed by some sickle cell patients to maintain their health. This usually consists of benzathine penicillin 600,000 units administered as an intramuscular injection once per month or Pen-VK 125-250 mg by mouth twice daily.

Streptococcus pneumoniae (S. pneumoniae) and Haemophilus influenzae are the two major organisms that cause significant infections in children. Sickle cell patients with functional asplenia are at increased risk of overwhelming infection by these bacteria. Thanks to vaccinations, Haemophilus influenzae has, virtually, been eradicated. Polyvalent pneumococcal vaccines do not provide complete protection for infants and young children, so many physicians recommend the use of penicillin prophylaxis as an additional preventive measure. Nasopharyngeal colonization with S. pneumoniae is the first step in the development of invasive disease. Some researchers believe that the use of prophylactic penicillin may decrease nasopharyngeal pneumococcal colonization rate.

Arguments against the use of prophylactic penicillin include: failure to take
the medication (noncompliance), lack of effect in preventing infection, the emergence of resistant organisms, and the delay of the acquisition of natural humoral immunity against pneumococcus. Concerns regarding the development of penicillin-resistant pneumococcal infections should not prevent the use of prophylactic penicillin, but appropriate measurements of antibiotic sensitivity are required in treating patients who have pneumococcal infections.¹⁴

The National Institutes of Health currently recommends prophylactic penicillin for all patients with sickle cell anemia (homozygous for Hg-S) until they are 5 years of age. For patients who are allergic to penicillin, erythromycin ethinyl succinate (EES) dosed at 20 mg/kg divided into two daily doses can provide adequate prophylaxis.¹⁵ A recently concluded randomized trial demonstrated that penicillin prophylaxis may be safely stopped after the fifth birthday if there is no history of a prior severe pneumococcal infection or a splenectomy.¹⁶ Nonetheless, parents must still be educated to seek medical attention for all febrile events.²¹⁶

Painful crises can be treated with opioids given on a scheduled basis, not as needed. Meperidine should be avoided since its metabolite can accumulate in the central nervous system and decrease the seizure threshold. Nonsteroidal (NSAIDs) are another good choice as is acetaminophen with or without codeine. Adequate hydration of 3–4 liters per day given intravenously or by mouth also will help to ease pain.³

Another complication of sickle cell anemia is priapism. Priapism is caused by the sickling of RBCs in the sinusoids of the penis. Treatment of priapism consists of ice packs, which may increase pain. Hot baths are thought to increase blood flow as well. Neither may help in all cases of priapism. Vasoconstrictors and vasodilators have, also, been used. Vasoconstrictors such as phenylephrine and epinephrine are proposed to exert their effect by forcing blood out of the cavernosa into the venous return. Beta agonists and hydralazine, a centrally acting vasodilator, produce, smooth muscle relaxation of the vasculature. For persistent penile erection, a subcutaneous dose of terbutaline 0.25 to 0.5 mg has been given every 4–6 hours.³,¹⁷

Acute chest syndrome can be treated with frequent use of spirometry. Proper management of pain is, also, important, but not to the extent that
hypoventilation occurs. Oxygen is, also, necessary, if the patient becomes hypoxic. 

Prophylaxis of vaso-occlusive crises is achieved by the use of hydroxyurea and pentoxifylline. Chronic transfusion therapy is used to reduce the risk of recurrent stroke as well. Hydroxyurea dosed at 15-35 mg/kg/d by mouth in divided doses. Hydroxyurea has been shown to increase hemoglobin and decrease white blood cell counts. In sickle cell anemia, hydroxyurea works as a gelation inhibitor, making the blood flow more easily through the vessels. Pentoxifylline 400 mg by mouth three times a day has been shown to decrease the number of painful episodes.

Bone marrow transplantation may be curative for some patients. Allergenic bone marrow from a matched sibling donor has resulted in cure of the disease. However, there are limitations to the procedure. There is a limited number of patients who have an HLA-matched sibling without the disease. There is, also, a 10 percent transplant-related mortality rate. Graft rejection and graft-versus-host-disease are, also, of concern with a reported incidence of up to 20 percent.

NEWBORN SCREENING AND PARENT EDUCATION

Detection of sickle cell anemia in the newborn period, prior to the onset of symptoms, has been advocated as an approach to decrease morbidity and mortality. The greatest course of action in achieving early diagnosis and treatment is educating parents about sickle cell anemia and how to detect clinical signs early to help ensure better outcomes for their children. Parents must learn how to detect impending medical emergencies, such as an increasing abdominal girth secondary to splenomegaly and increased respirations. Parents must, also, be educated about the proper use of a thermometer and informed that a temperature of 101°F constitutes a medical emergency. They must, also, be taught the importance of compliance so that their children will receive their prophylactic antibiotics as scheduled. They must, also, pay close attention to the development of possible learning disabilities that their children may have and the need to seek further assistance, if tutoring and changing study habits fail to improve the situation.
Parents must be encouraged to voice their concerns to their practitioners freely. Sickle cell anemia is not only the problem of a child suffering from it; it is the problem of the entire family.

**CONCLUSION**

General management of sickle cell anemia begins by first diagnosing the disease shortly after birth. The most important step, by far, is the confirmation of diagnosis by electrophoresis and the early beginnings of maintaining scheduled vaccinations and the use of prophylactic antibiotic therapy through age 5, at least. Medications such as hydroxyurea may decrease the number of painful episodes and may help to lessen the risk of CVA. Sickle cell anemia is a complex disease with many complications, but an area that requires more study is the identification of those individuals with neurological impairments. Once, we discover those individuals, we must learn what to do with the data so we can preserve or improve the cognitive functioning of those children. Another rich resource in the fight against sickle cell anemia is the employment of the parents in the fight against sickle cell. Without their consent to admit children into studies and their steadfastness in maintaining and improving the health of their children, much of the limited data available today would not be in existence. Sickle cell anemia is a disease that requires the efforts of the masses to fight and with continued persistence, more about this disease will be uncovered in the future.

**REFERENCES:**

15. www.emory.edu/peds/sickle/mncnap1.num
PART 7: COLLEGE OF SOCIAL WORK
Eating disorders are complex conditions that have both physical and psychological characteristics (Hsu, 1987). Psychological distress experienced by victims is manifested through disturbed eating patterns. Eating or not eating are the coping mechanisms for this chosen population. Historically, those suffering from eating disorders were thought to be young, White middle-to-upper-class heterosexual females. Research involving others such as African American women is limited because eating disorders were thought to be rare among women of color (Hsu, 1987). In regard to the rarity of eating disorders among African American women, Root (1990) takes issue with this belief. She contends that eating disorders among African American women are not rare, but are unreported due to the myth of eating disorders as a "White women's disease."

If indeed eating disorders are a reality among African American women, what do we speculate is the cause. Thompson (1996) offers the view that eating disorders among African American women are likely to be the result of survival strategies in response to racism, acculturation, emotional, physical, and sexual abuse. Other researchers speculate that acculturation is the culprit (Root, 1990; Pumariega, 1986; Silber, 1986; Robinson & Anderson, 1985; Villarosa, 1994). In addressing this literature, this paper will identify common types of eating disorders and present: 1) Theories that seek to explain human behavior of African American women within the context of their social environment; 2) The ways in which systems deter African American women from the attainment and maintenance of optimal health and well being; .3) The impact of discrimination, economic deprivation and oppression on the behavior and development of African
American women; 4) Implications for the Human Behavior and the Social Environment (HBSE) curriculum in social work education; and 5) Questions generated from research and future research needs.

**Eating Disorders**

Eating disorders afflict millions of people, thousands of whom will die. As a result eating disorders are devastating behavioral conditions brought on by many factors, including emotional and personality disorders, family pressures, and a culture in which there is an overabundance of food and an obsession with thinness. Eating disorders generally are categorized as bulimia nervosa, anorexia nervosa, and binge eating disorder. Although anorexia nervosa was first defined as a medical problem in the late 1800s, descriptions of self-starvation have been found even in medieval writings as well (Logan, 1995).

**Anorexia Nervosa**

One type of eating disorder is anorexia nervosa. Anorexia nervosa leads to a state of starvation, with patients losing at least 15% to as much as 60% of their normal body weight (American Psychiatric Association, APA, 1994). Half of these patients, known as anorexia restrictors, reduce weight by severe dieting while the other half, anorexic bulimic patients, maintain emaciation by purging. Although both types are serious, the bulimic type, which imposes additional stress on an undernourished body, is the more damaging (Logan, 1995).

**Bulimia Nervosa**

A second type of eating disorder is bulimia nervosa. This type of disorder is more common than anorexia and is characterized by cycles of binging and purging (APA, 1994). Bulimia nervosa usually begins early in adolescence when young women attempting diets, experience an increase in hunger and react by binge eating. In response to the binges, patients purge by vomiting or by taking laxatives, diet pills, or drugs to reduce fluids. Patients also may revert to severe
dieting, which cycles back to binging if the patient does not revert to anorexia (Stice, 1994).

**Binge-Eating**

The third category is binge eating without purging disorder. This disorder involves eating large amounts of food followed by feelings of shame, guilt and hopelessness (Logan, 1995). Binge eating has recently begun to receive a great deal of attention due to its high correlation to obesity (APA, 1994). Alarmingly, African American women make up more than 30 percent of the obese population. More specifically, nationally 52 percent of African American women are obese (Thompson, 1989). The inclusion of this category will hopefully prompt researchers to focus efforts on the critical problem of obesity among African Americans (Walcott-McQuigg, Sullivan, Dan, & Logan, 1995). The widely held belief that African American women have a positive self-image and are comfortable with heavier shapes has caused many to ignore the many health risks associated with obesity (Silber, 1986).

**LITERATURE REVIEW**

The following studies examined the occurrence of eating disorders among African Americans and other minority groups. These studies provide evidence that eating disorders among African American women are significant (Pumariega, 1986; Pumariega, Edwards & Mitchell, 1984; Robinson & Anderson, 1985; Silber, 1986). There is clear evidence, using four case studies, that anorexia nervosa does indeed occur among ethnic minority groups (Silber, 1986). These cases were adolescent females and, generally, the victims were children of professional, upper-middle-class or upwardly mobile families. All had family backgrounds that included a work-oriented, authoritative father. Each of the girls had been enrolled by their fathers into predominantly White, private schools, and often were isolated from their racial/ethnic peers.

The patients had similar family values and were reared with upper-middle-class values. The subjects also were similar in that they all expressed a strong
desire to fit in. In addition, these girls' symptoms appeared more extreme than those typically found in White patients (Silber, 1986). He also reports that these symptoms might be an attempt to cope with the pressure of a high-stress environment. The researcher concluded that the number of cases of anorexia nervosa among ethnic minorities probably has been underreported and predicted that this number would rise with increased awareness by professionals that minorities can be affected by eating disorders. Pumariega, et al. (1984) also reported on two case studies of African American adolescent females, who were treated for anorexia nervosa during a six-month period. The researchers point out that their patients are among the very few African American girls with anorexia nervosa reported in the literature.

Robinson and Anderson (1985) presented five case histories of anorexia nervosa in African Americans. Three of the patients were female and two were male. All met the diagnostic criteria for anorexia nervosa (i.e., grave fear of fatness, great weight loss, and various anorexic behaviors). All five cases shared the occurrence of parental death or separation. Contrary to the findings made by Silber (1986), only one patient in this study appeared to be an over achiever, and the majority of patients came from middle- to low-income families.

Although the studies by Silber (1986), Pumariega et al. (1984), and Robinson and Anderson (1985) are important preliminary investigations on the characteristics of minorities with eating disorders, they are limited due to their case-study format and small number of research subjects. The case studies, however, demonstrated that African Americans suffering from eating disorders met the standard criteria and displayed symptoms consistent with those of White eating-disorder patients.

Gray, Ford, and Kelly (1987) examined the prevalence of bulimia nervosa and attitudes toward food in male and female African American college students at a predominately African American university. In the female students, the prevalence for bulimia using the DMS-III criteria was 3%. When the more stringent standards for bulimia were used (i.e., regular binging, vomiting, or laxative abuse, and an intense fear of gaining weight), the prevalence rate for females was 1.5%.
The results indicated that 71% of the African American females reported episodes of binging, 51% reported restrictive dieting, 2% reported vomiting, 5% reported the use of laxatives, and 6% reported using diuretics. In the African American male students, the prevalence of bulimia was 2%.

Gray et al. (1987) took this African American sample from a predominately African American university and compared them to a White sample of males and females using similar methods. When compared to Whites, African American females were found to have lower prevalence of bulimia and used purging methods less frequently than the White females. No differences were found in the frequency of binging or fasting and chronic dieting. African American females, however, reported less preoccupation with food and weight control in their families and were less likely to consider themselves as having a weight problem. The African American females also were less likely to feel depressed after binging, they had less fear of weight gain, and were less likely to believe that a 2 to 5 pound weight increase would change their self-image as compared to White females.

Gray et al. (1987) suggested that the differences between the African American and White participants might be due to different perceptions of beauty within the African-American community. Meaning that an African American woman who attends a predominately African American university may be more accepting of her body type and not be affected greatly by attitudes toward thinness in the majority culture; thus, the risk of her likelihood to develop an eating disorder is minimized.

THEORIES THAT SEEK TO EXPLAIN THE HUMAN DEVELOPMENT OF AFRICAN AMERICAN WOMEN WITHIN THE CONTEXT OF THEIR SOCIAL ENVIRONMENT

In seeking a deeper understanding of what contributes to the risks for African American women to suffer from eating disorders, two theories are examined. The first theory is acculturation. Acculturation is defined as the changing of one's culture by the incorporation of elements of another culture. The second is assimilation, which is defined as minority groups giving up their culture and
assuming that of the majority. The end result of acculturation is a new culture that contains elements of both cultures. The end result of assimilation is the total conformity to the dominant culture (Robbins, Chatterjee & Canda, 1998).

**Acculturation**

There is research that examines the relationship between eating disorders and the influence of acculturation (Hsu, 1987; Pumariega, 1986). Pumariega reported that his study population may have been experiencing more eating disorders due to America's societal pressures to excel and to be attractive. The findings of this study suggest that greater adherence to American culture may increase one's risk for the development of an eating disorder.

Similar studies also suggest that African American women who are more acculturated to the dominant White society show a trend towards acquiring more problematic eating attitudes than those who are less acculturated (Hsu, 1987; Pumariega, et al., 1984; Robinson & Anderson, 1985; Rucker & Cash, 1992; Silber, 1986). It appears that the conflicting messages between their own cultural values and the majority cultural values cause some women to lose focus and engage in unhealthy eating practices.

Case studies examining African American and Hispanic patients with anorexia nervosa (Silber, 1986) suggest that Western cultural factors, such as the acceptance of thinness as an ideal, may influence the development of eating disorders. As suggested earlier, acculturated minorities may experience pressure to change and conform to the values of the dominant culture (Williamson, 1998). Some suggest that a different environment can expose African American women to eating disorders. Villarosa (1994) states, "When Black women leave the community, where being large is more accepted, and move into all White surroundings, they become more at risk for eating disorders" (p. 21). In other words, when these women move into other communities, the protective arm of the African American community and shared cultural values are weakened by mainstream values. This supports Williamson's (1998) view that an eating disorder can develop from
external forces or other issues, not related to the pursuit of thinness but from issues such as fear, isolation and insecurity.

Villarosa (1994) speaks about the impact of social, economic and vocational opportunities. She points out that the upwardly mobile African American woman may be more susceptible to White society's message that "thin is in," as she is often less tied to the African American community. Clearly, corporate America's pressure to look "perfect" may be a factor in the increase of eating disordered symptomology among African American women. Gray, et al. (1987) indicates "Black culture is accepting of higher weight levels and is less likely to equate beauty with thinness" (p. 735). They also state "Black women who purged more often tended to be of higher socioeconomic status . . ." (p. 734). Studies show that African American women who are more accepting of White American values, beliefs, behaviors, and life-styles displayed more eating-disorder symptomology than those who were less accepting of White American ways.

**Assimilation**

Assimilation is defined as the giving up of one's culture and assuming that of the dominant culture (Robbins et al., 1998). Assimilated African American women who are more accepting of White values, behaviors, and life-styles tend to show symptoms of anorexia nervosa and bulimia more often that African American women who are less accepting of White American ways (Hsu, 1987; Root, 1990; Williamson, 1998). The cultural norms of the United States have historically been dominated by the values of the White middle class. According to Hsu (1987), as African American women become more successful, they may be more likely to adopt traditional White middle-class values, which may include the related eating disorders. Therefore, assimilation may result in African American women devaluing their own race, in order to be more accepting of White standards.
The media helps perpetuate the unrealistic ideals about appearance that negatively affect the body image of all women. Women, regardless of race, are presented with images in the media that can lead to the development of an eating disorder (Braune, 1993). Yet, researchers claim that African American women, who have been bombarded with thinness in the media, have remained comfortable with larger figures and are less likely than White women to have eating disorders (Rucker & Cash, 1992). Contrary to the findings of Rucker and Cash (1992), a survey conducted by the African American magazine *Essence* (1994) found that eating disorders and poor-body image do exist in the African American community. Findings noted that 3.5% of the women surveyed vomited after eating, 16.5% used laxatives to lose weight, and 74.5% used exercise to burn calories (Villarosa, 1994). More than 2,000 African American women participated in this study.

Current media images displayed in music videos and films are destructive for all women, especially African American women. The images in popular music videos are especially disturbing. These images can promote unhealthy sexual practices as well as disordered eating patterns. Many African American women with eating disorders, like a number of victims across cultural lines, live in ignorance of the contributing factors of their eating disorders. American society tends to value women for how they look, not for who they are. Damaging images brought forth by the media can have devastating effects and must be examined (Rodin, 1992). The same forces that fight the tobacco and alcohol industry about their advertisements must also realize that those who may be at risk for addictive behaviors such as alcoholism, gambling, and drug dependency may also be at risk for developing an eating disorder. Logan (1995) states, “these disorders and behaviors can extract a high cost from both individuals and their families; and are associated with the erosion of self-worth, self-efficiency, and overall productivity” (p.805).
The societal ideal for women to be thin and attractive promotes an even greater pressure for African American women who have other issues such as racism and oppression with which to contend. When African American women are displayed in fashion magazines, videos, etc., their bodies, skin color, and hair lengths usually fail to adequately portray the many different physical features of African American women. It is often that African American women are presented in the media with more European physical features.

**Research/Literature**

Root (1990) states that limitations of current theory of who is susceptible to the development of an eating disorder may reflect racial and ethnic stereotyping, Western Eurocentricism, and the lack of experience of mainstream researchers in working with diverse populations. In addition, too few African American women serve as physicians, researchers and other health care providers. Many health care professionals are insensitive to the needs of African American women.

According to Walcott-McQuigg, et al. (1995), 50% of African American women between the ages of 45 and 55 weigh more than they should. Until the recent addition of the binge eating disorder category, valuable information such as this would have received less attention because of its exclusion from the eating disorder literature. Due to the lack of information regarding eating disorder issues among African American women, many of these individuals are undiagnosed and will never realize the seriousness of their health problems. Professionals in mental health treatment, in particular, also are likely to be unaware of the extent of these problems.

There is dialogue surrounding the fact that systems of medical care and mental health services in this country are integral to the dilemmas African America women experience in maintaining or attaining optimal health and well being. According to Freedman (1989), there is a poor understanding by the dominant White medical community concerning the beliefs and values of African American patients, and this compromises their health and illness care. Because of the dis-
parity in African American subjects in health research, many more African American women are suffering needlessly with conditions such as eating disorders, AIDS, depression, and breast cancer. Many African American women, due to shame, will not seek medical attention, and, if they do, their physicians or mental health professionals, due to stereotypical thinking, often do not acknowledge them.

THE IMPACT OF DISCRIMINATION, ECONOMIC DEPRIVATION AND OPPRESSION ON THE BEHAVIOR AND DEVELOPMENT OF AFRICAN AMERICAN WOMEN

Discrimination

Discriminatory attitudes on behalf of treatment professionals may interfere with appropriate diagnosis and treatment of eating disorders. Discriminatory attitudes about African American women and eating disorders are reflected in the efforts of researchers who fail to include African American women in major research studies. Furthermore, racism and ignorance of different cultures, lifestyles, and values cause some mental health professionals to assess, diagnose, and treat patients based on false assumptions (Root, 1990). Many African American women may avoid seeking treatment due to previous experiences with prejudicial attitudes.

In regard to discrimination, African American women face another problem. Those who receive public medical insurance or no medical insurance at all, are cared for in health centers, hospital outpatient clinics, or other facilities that have an abundance of patients. Consequently, physicians or others in these settings spend less time with patients and provide less preventive care counseling than those in nonpublic settings.

The lack of culturally competent training and education also can be a contributing factor to discriminatory attitudes held by helping professionals. The historical exclusion of African American women from participation in society's occupational and political spheres, denial of access to resources and authority,
and racial stereotypes all can have negative effects on African American women's perceptions of self, wellbeing, and identity (Thompson, 1989).

**Oppression**

Many African American women traditionally have struggled to survive and maintain the financial, psychological, and social structure of their families while, at the same time, they battle stereotypes. For many African American women, the economic realities of an oppressive society have left them powerless. The helplessness experienced by these women has resulted in them seeking refuge in food. For many, food serves as an empowerment tool; it is comforting, and it is something in their lives over which they have control (Thompson, 1992). Supporting this point, Root (1990) states “The African American woman faces double oppression, that of sexism and racism, which can, for some individuals, provide the basis for the desperateness that underlies resorting to unhealthy eating and exercise practices” (p. 529).

**Economic deprivation**

The lack of health care insurance among African American women may account for the low number of reported cases of eating disorders (Walcott-McQuigg et al., 1995). Many African American women are uninsured or rely on public, rather than private health insurance. With public medical insurance such as Medicaid, benefits are limited and frequently do not meet all women’s health care needs (Freedman, 1989).

While African American women are found in all socioeconomic levels, they are more likely to have lower incomes and live in poverty than White women. African American women continue to have less formal education than White women do. Even African American women who have similar levels of education as their White counterparts earn less money and have fewer resources (Freedman, 1989).

Freedman also reports that African American women hold a disproportionate share of low-wage jobs, and they experience higher unemployment rates (1989).
The tendency of economically disadvantaged women to delay seeking medical attention is an area that needs to be addressed.

**IMPLICATIONS FOR HUMAN BEHAVIOR IN THE SOCIAL ENVIRONMENT (HBSE) CURRICULUM IN SOCIAL WORK EDUCATION**

The idea of discriminatory attitudes about African American women and eating disorders invites one to review issues of values and ethics that emerge from the research. Values regarding women's weight differ in the African American community, and the affects of pressure on women to comply with values held by the majority culture seems to constitute a potential ethical concern by health professionals.

In regard to the HBSE Curriculum, it is imperative that information about eating disorders among African American women be included. If social work educators and practitioners are truly committed to diversity, efforts must be made to ensure that future social workers are educated about this subject. Content on eating disorders can be presented by way of case studies, journal articles, and guest speakers. Information possibly to be included in the curriculum could address perceptions of beauty and the impact of media images in relation to diverse populations. Additional readings on class issues specific to body image and eating disorders could be included as well to enhance the HBSE Curriculum. The inclusion of this subject matter in the HBSE Curriculum will contribute greatly to the education of social work students by expanding their knowledge base through dissemination of recent research and course materials.

It is the responsibility of the counselor/social worker to develop culturally sensitive attitudes and skills. This can be achieved by an awareness of one's own cultural background, values, and biases as well as learning about and accepting that of other cultures. The inclusion and creation of culturally diverse course content and its theoretical base will not only satisfy the Council on Social Work Education (CSWE) mandate, but it also will aid in the development of culturally competent practitioners. As social work programs become more diverse, the course content also must reflect diversity in all forms.
QUESTIONS GENERATED FROM RESEARCH AND FUTURE RESEARCH NEEDS

Empirical data regarding eating disorders among African American women is severely lacking. Historically, only male athletes have been the focus of eating disorders research. Future studies could explore to what extent, specifically, African American males suffer from eating disorders. The studies should examine similar issues such as racism, oppression, and others experienced by their female counterparts. The myth of the shortage of eligible African American men may drive some African American women to resort to eating disorders in order to beat out the competition (Thompson, 1992).

More African American women should be included in research studies, treatment, and prevention programs. This can be achieved by creating ethnic-specific interventions and research studies (Walcott-McQuigg et al., 1995). Social workers can dispel the myth surrounding who suffers from eating disorders by conducting research that is culturally sensitive and by examining diverse cultures without making assumptions.

According to Striegel-Moore, Wilfley, Pike, Dohm, & Fairburn (2000), African American women are just as likely as White women to binge and purge, fast, abuse laxatives/diuretics to lose and control weight. This emerging research has implications for social workers. One idea for social workers to consider is to incorporate in their work a better understanding of the complex way in which issues related to racism affect African American women. Possible treatment interventions for African American women could involve diverse options such as spiritually based support groups. Educational literature featuring African American women and African American researchers are needed so studies can attract African American participants. African American educators and researchers play an important role and should make efforts to contribute to the body of knowledge. Social work educators can contribute by conducting their own research and by supporting the research of others.

Research on therapeutic interventions should be assessed to evaluate possible modification to accommodate cultural dimensions. Modifications may take into account African American cultural norms that differ from those of main-
REFERENCES


