2010 AAPP Monograph Series: African American Professors Program

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# TABLE OF CONTENTS

Foreword .................................................................................................................. viii
Preface ....................................................................................................................... x

## AAPP DIRECTOR’S CONTRIBUTION:

Transcultural Approaches through Counselor Education Programs: Preparing Students for Counseling Effectiveness in a Global Society ........ 1

- **Tonya M. Jasinski, Ph.D.**
  - Clinical Assistant Professor
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## AAPP SCHOLAR CONTRIBUTIONS:

### PART 1: COLLEGE OF MASS COMMUNICATIONS AND INFORMATION STUDIES

The T. Boone Pickens Advertising Campaign: A Study of Framing ................. 20

- **Anthony Palmer**
  - Department of Journalism and Mass Communications
PART 2: COLLEGE OF ARTS AND SCIENCES

Test-Retest Reliability of Achievement Motivation-Related Measures in a Sample of African American Youth ................................................... 38
Charity L. Brown
Department of Psychology

Is Medical Marijuana the 21st Century Lottery? Diffusion Pathways for State Adoption of Medical Marijuana Laws ............................................... 58
Athena M. King
Department of Political Science

Adipokines and Breast Cancer Risk—A Call for Race-Specific Molecular Studies of Breast Cancer Risk of African American Women ............................................................................... 78
Regina Evarn Wragg
Department of Biological Sciences

The Syncretic Project of Antiochus of Ascalon: A Brief Consideration of Ideas from the Speeches of Varro and Lucullus from Cicero's Academica, Books I and II ..................................................100
Frank C. Martin II
Department of Philosophy
PART 3: COLLEGE OF EDUCATION

Singling Out Black Girls—Does the Single-Gender Classroom Mutilate the Academic Achievement or Identity of the “Loudies?” .......................................................... 118

Sharla Benson Brown

Department of Educational Studies

The “Achievement Gap” and the Disunity of Knowledge ......................... 132

Lisa E. Wills

Department of Educational Studies

PART 4: ARNOLD SCHOOL OF PUBLIC HEALTH

Health Disparities in African American Women:
The Effects of PCBs and Organochlorine Pesticides on Breast Cancer .......................................................... 152

Jamelle H. Ellis

Department of Environmental Health Sciences

The Audacity to Care: Yes, We Can! .......................................................... 167

A. TaQuesa McClain

Department of Health Services Policy & Management
FOREWORD

Committed to increasing the number of African-American faculty at the University of South Carolina (USC), the University undertook a bold, new approach. Instead of trying to entice African-American faculty at other universities to join its faculty, USC decided to "grow its own." In the late 1990's when Leonard Pellicer and I began exploring the possibility of establishing a program that would allow USC to grow its own African-American faculty, we wanted one that would provide opportunities for African-American students to not only gain access to faculty positions in higher education but to be successful in those roles. To that end, we envisioned a program that would recruit the best and brightest African-American students from throughout the United States and provide them with financial support as well as opportunities to experience the professoriate in a close up and personal way. We knew that respected, tenured USC professors would have to be recruited to mentor the students and help them gain an understanding of the requirements for tenure and promotion. We envisioned a program that would be supported not only by USC but by other organizations that promote diversity and access to opportunity. We perceived a program that would become a national model for other universities seeking to increase their pool of African-American faculty. In short, we envisioned a program that would make a difference not only for the students who matriculated through it but also for many, many others whose lives would be touched by those students.

Thirteen years later, we realize that the African American Professors Program (AAPP) has become a dream fulfilled. During its thirteen-year tenure, AAPP has enrolled forty-five scholars from more than thirteen states. Twenty-eight of these scholars have graduated with doctorates in disciplines such as English, geology, chemical engineering, business, education, marine science, epidemiology, music, international business, political science, biology, and pharmacy. AAPP graduates are currently employed in more than twenty-eight institutions and agencies throughout the United States. Their opportunities for success have been enhanced by the solid preparation provided through the AAPP professional-development seminars as well as by more than forty-five mentor professors at USC who continue to play a critical role in the personal and professional development of each scholar. This monograph is just one example of that preparation.
As AAPP enters its fourteenth year, I applaud Dr. Leonard Pellicer, former chair of the Department of Educational Leadership and Policies, and Dr. Jerome Odom, former Provost, for the critical role each of them played during AAPP’s infancy. Without their support, AAPP would have been nothing more than another good idea. I applaud the AAPP scholars for their commitment to their studies and their serious preparation for the professoriate. I applaud the USC mentor professors who continue to show scholars what it means to be a faculty member.

Most importantly, however, I applaud Dr. John McFadden for his outstanding, visionary leadership. Indeed, he has crafted and implemented a program whose impact is beyond measure. It is, therefore, not surprising that AAPP has gained national attention and continues to be recognized as a highly successful model for increasing African-American faculty. To ensure ongoing support of AAPP, Dr. McFadden has forged strong partnerships between AAPP and the Kellogg Foundation and the South Carolina General Assembly. Working closely with Dr. McFadden, Ms. Rhittie L. Gettone has provided a solid, consistent commitment to ensuring the success of each AAPP scholar.

While the under-representation of African-American faculty remains a challenge both nationally and at USC, AAPP continues to provide a successful model for addressing the problem. The challenge now is to convince institutions of higher education throughout America to implement programs to “grow their own” as well. The African American Professors Program provides compelling evidence that this model benefits not only the sponsoring universities but also institutions and agencies throughout the United States.

Aretha B. Pigford, Ph.D.
Retired Professor, Department of Educational Leadership and Policies
Co-Founder and Former Director, African American Professors Program
The African American Professors Program (AAPP) at the University of South Carolina is proud to publish the tenth edition of its annual monograph series. The program recognizes the significance of offering its scholars a venue to engage actively in research and to publish papers related thereto. Parallel with the publication of their refereed manuscripts is the opportunity to gain visibility among scholars throughout institutions in international settings.

Scholars who have contributed papers for this monograph are to be commended for recognizing the value of including this responsibility within their academic milieu. 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.

Founded in 1997 through the Department of Educational Leadership and Policies in the College of Education, AAPP was designed to address the under-representation 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 doctoral students for disciplines in which African Americans currently are underrepresented among faculty in higher education.

The continuation of this monograph series is seen as responding to a window of opportunity to be sensitive to an academic expectation of graduates as they pursue career placement and, at the same time, one that allows for the dissemination of products of scholarship to a broader community. The importance of this monograph series has been voiced by one of our 2002 AAPP graduates, Dr. Shundele LaTjuan Dogan, formerly an Administrative Fellow at Harvard University, a Program Officer for the Southern Education Foundation, and a Program Officer for the Arthur M. Blank Foundation in Atlanta, Georgia. She is currently a Corporate Citizenship and Corporate Affairs Manager for IBM-International Business Machines in Atlanta, Georgia. Dr. Dogan wrote:

"One thing in particular that I want to thank you for is having the African American Professors Program scholars publish articles for the monograph. I have to admit that writing the
articles seemed like extra work at the time. However, in my recent interview process, organizations have asked me for samples of my writing. Including an article from a published monograph helped to make my portfolio much more impressive. You were 'right on target' in having us do the monograph series." (AAPP 2003 Monograph, p. xi)

The African American Professors Program continues its tradition as a promoter of scholarship in higher education as evidenced through the inspiration from this group of interdisciplinary manuscripts. I hope that you will accept these published papers as serving an invaluable contribution to your own professional and career development.

John McFadden, Ph.D.
The Benjamin Elijah Mays Distinguished Professor Emeritus
Director, African American Professors Program
University of South Carolina
TRANSCULTURAL APPROACHES THROUGH COUNSELOR EDUCATION PROGRAMS:
PREPARING STUDENTS FOR COUNSELING EFFECTIVENESS IN A GLOBAL SOCIETY

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Including transcultural approaches in counselor-education programs not only addresses the standards of the Council for Accreditation of Counseling and Related Educational Programs (CACREP, 2009) and ethical guidelines of the American Counseling Association (ACA, 2005), but such methods also prepare graduate students for counseling effectiveness in a global society. Consequently, transcultural approaches to counseling seem to comprise an expected component within counselor education programs. For many programs, however, this component may be only one aspect of a required cross-cultural counseling course, while other counselor educators (e.g., Dinsmore & England, 1996; Hartung, 1996) call for infusing transcultural approaches throughout the entire program. In this monograph chapter, transcultural counseling is defined, and the relevant CACREP standards and ACA ethical guidelines are identified. In addition, pedagogical examples and relevant perspectives of transcultural approaches in counselor-education programs are provided to illustrate the utility and benefits of this approach for preparing counselors.

COUNSELOR EDUCATION PROGRAMS

For purposes of this publication, it is necessary to include definitions of pertinent terms as a measure to provide clarity on commonly used terms for the reader. Counselor-education programs are those aspects of graduate-level training that prepare students to become professional counselors. Counselor educators are those individuals who hold faculty positions in counselor-education programs at colleges and universities (i.e., faculty who teach, train, prepare, and mentor students to become future counselors), and the counselor-education curriculum refers to all classes taught within a counselor-education program. Pedagogy is defined as "a set of strategies implemented by teachers that is intended to facilitate student learning in an academic setting" (Walvoord & Pool, 1998, p. 35). Multicultural training/education typically is described as an educational component that is included in counselor-education programs in which instruction is provided on awareness, knowledge, and skills when interacting with someone from a different cultural group. Infusion consists of the process of addressing multicultural education in all classes within a counselor-education program. Multicultural is a "...term denoting the diversity of racial, ethnic, and cultural heritage; socioeconomic status; age; gender; sexual orientation; and religious and spiritual beliefs, as well as physical, emotional, and
mental abilities" (CACREP, 2009, p. 61). Diversity describes the "...distinctiveness and uniqueness among and between human beings" (CACREP, 2009, p. 60).

As multicultural education evolved within counselor-training programs, multicultural competence surfaced as a palpable concern. McRae and Johnson (1991) examined the literature that pertained to multicultural education in counselor-education programs. As a result of the literature review, these authors made recommendations for enhancing the level of multicultural training in counselor-education programs, which revolved around building higher competence levels among students and future counselors. By doing so, they encouraged counselor educators to include an emphasis on counselor values, the counseling relationship, and the "application" of multicultural knowledge. McRae and Johnson also proposed the development of training models that include four elements: Self-dimension (i.e., self-cultural awareness), an information and knowledge dimension (i.e., cultural knowledge), a relationship dimension (i.e., examination of the therapeutic relationship), and a performance dimension (i.e., cultural skills).

TRANSCULTURAL COUNSELING

Transcultural counseling is a "...broad term that transcends culture and nations and is a reciprocal process between the counselor and the client" (Harper & McFadden, 2003, p. 3). "Moreover, transcultural counseling includes the counselor’s and the client’s ethnicity, locale, region, nation, ecology, and universality. Through this mode, counselors smoothly transcend cultural differences by engaging and understanding external cultures from intellectual and experiential analysis" (Harper & McFadden, 2003, p. 49).

Transcultural Theory: A Counselor Development Model

Transcultural theory is a counselor-development model that was created by Counselor Educators John McFadden of the University of South Carolina and Marty Jencius of Kent State University. This model encompasses information dealing with self-inquiry, skills and techniques, introspective reflections, and theoretical applications as they relate to transcultural theory and counseling (Harper & McFadden, 2003).
Stylistic Model for Counseling across Cultures

To ascertain that counselors are prepared adequately to work effectively with clients from diverse cultures, it is recommended that *stylistic counseling* be integrated into counselor-education programs (Harper & McFadden, 2003). "Stylistic counseling is a model based on the belief that the implications of culture are multilayered and that effective transcultural counseling requires successfully uncovering those layers on behalf of both the client and the counselor" (p. 210).

The *stylistic model* is based on three dimensions, which are the cultural-historical (CH), psychosocial (PS), and scientific-ideological (S-I; Harper & McFadden, 2003). They are described as follows:

CH is predicated on the assumption that our broad cultural backgrounds provide the core for who we are. PS assumes that our social interactions and psychological responses are interrelated and relevant to our cultural base. S-I is action oriented and allows us to express our concreteness. (p. 210)

In addition, there are 27 cubical descriptors that are represented by the stylistic model: Ethnic/racial discrimination, ethnic/racial identity, ethnic/racial relations, dynamics of oppression, psychological security, logic-behavioral chains, value system, self-inspection, individual goals, family patterns, personality formation, meaningful alternatives, monocultural membership, social forces, media influences, historical movements, mind building, politics, cultural traditions, human dignity, economic potency, leaders and heroes, perception of others, relevant programs, language patterns, self-development, and institutional goals (Harper & McFadden, 2003).

The basic rationale is that our cultural identities are deeply ingrained and the result of historical influences and social interactions cannot be separated from our actions. To effect positive changes, counselors must likewise have a strong sense of cultural awareness. (p. 210)

**ACCREDITATION GUIDELINES, ETHICAL STANDARDS, AND MULTICULTURAL COMPETENCIES**

In an effort to address the professional and ethical standards of CACREP (2009) and ACA (2005), a core transcultural component is included in many counselor-education programs. In
order to gain an understanding of the emergence of multicultural approaches in counselor-education programs over time, it is helpful to review the guiding principles and ethical standards proposed by accrediting and professional associations such as CACREP (2009) and ACA (2005). There certainly is a need for counselors to be trained in the area of transculturalism in order to practice effectively and ethically with clients of diverse backgrounds (ACA, 2005; Arredondo, et al., 1996; CACREP, 2009).

CACREP Standards

Transcultural training or education was addressed not always with a pedagogical emphasis in counselor-education programs. This was the case until societal changes and research contributors prompted CACREP to address transculturalism in their standards. CACREP, which evolved in the late 1970s, developed mission statements in 1993 and reemphasized these statements in 2002 (CACREP, 2009). CACREP also developed eight core curricula areas, one of which specifically addresses social and cultural diversity (CACREP, 2009). Consequently, counselor-education programs that seek CACREP accreditation are required to address transcultural counseling in their curricula.

The most common pedagogical components of counselor-education programs consist of courses that address professional orientation and ethical practice (i.e., formerly known as professional identity), human growth and development, career development, helping relationships, group work, assessment, research and program evaluation, and clinical instruction. Particularly for counseling programs that are seeking accreditation from CACREP (2009), this specific pedagogical template is required. In addition to the aforementioned outline, counseling programs that desire CACREP accreditation under the most recent set of standards also are responsible now for incorporating another pedagogical component, social and cultural diversity, into their curricula. As our population becomes more diverse and individual differences are mounting, the need for transcultural training is pronounced more than ever. CACREP (2009) has recognized, undoubtedly, the growing need for cultural-diversity training in the counseling profession; hence, the addition of the social and cultural diversity component to counselor-education pedagogy.
ACA Ethical Standards

As members of the counseling profession, counselor educators must adhere to the ethical standards issued by ACA (2005). While adhering to these standards, counselor educators also must model and teach these standards to students in their programs of study. Just as in the CACREP (2009) standards, the ACA ethical standards also integrate the transcultural element into several areas. The ACA Code of Ethics addresses the following categories: The counseling relationship; confidentiality, privileged communication, and privacy; professional responsibility; relationships with other professionals; evaluation, assessment, and interpretation; supervision, training, and teaching; research and publication; and resolving ethical issues (ACA, 2005). Throughout the ACA Code of Ethics, cultural sensitivity, diversity, multicultural issues, multicultural considerations, and multicultural competence are addressed as they pertain to these eight categories. Among some of the specific areas, ACA addresses transculturalism in the following manners: Faculty and student diversity, multicultural competence, multicultural issues and diversity in assessment, instrument selection with culturally diverse populations, and culturally sensitivity in diagnosis of mental disorders (ACA, 2005). Competencies to address such areas are contained in documents developed by the Association for Multicultural Counseling and Development (AMCD).

The AMCD Multicultural Counseling Competencies

There is a need for counselors to be trained in the area of transculturalism in order to practice effectively and ethically with clients of diverse backgrounds (ACA, 2005; Arredondo, et al., 1996; CACREP, 2009). More than a decade ago, Arredondo et al. declared that counselors will face diverse clients in their work settings and, therefore, will need to demonstrate cultural competence in their practice. Accordingly, the Association for Multicultural Counseling and Development (AMCD) developed multicultural-counseling competencies as guidelines for training future counselors. These competencies entail three major areas: Attitudes and beliefs, knowledge, and skills (AMCD Web site, 1996). Furthermore, Arredondo, et al. (1996) presented the multicultural-counseling competencies in relation to three categories pertaining to the counselor’s attitudes and beliefs, knowledge, and skills, which include: (a) counselor awareness of one’s own cultural values and biases, (b) counselor awareness of client’s worldview, and (c) culturally appropriate intervention strategies.
TRANSCULTURAL PEDAGOGICAL TOOLS

Along with guiding accreditation and ethical standards and the multicultural counseling competencies, a number of professionals have shared methods for expanding transcultural pedagogy within counselor-education programs. Some of the methods described in the literature consist of transcultural internet resources (Jencius, 2010), experiential learning (Arthur & Achenbach, 2002), diversity exercises (Moore, Madison-Colmore, & Collins, 2005), cross-cultural contact (Diaz-Lazaro & Cohen, 2001), immersion experiences (Alexander, Kruczek, & Ponterotto, 2005), interactive drama (Tromski & Doston, 2003), teaching about racism (Locke & Kiselica, 1999), and combining multicultural and career counseling competencies (Evans & Larrabee, 2002). Similarly, Munley, Lidderdale, Thiagarajan, & Null (2004) recommended utilizing a variety of activities that could aid in the enhancement of multicultural competence among students, such as experiential learning exercises and immersion experiences. Also, Hill (2003) presented suggestions in her article about enhancing and celebrating multicultural competence in counselor training programs. She proposed that empathy is the foundation of establishing a level of multicultural competence among students. She proffered that committees should be formed at the university or college level to discuss multicultural-training programs. She continued to state that multicultural training was needed for faculty members. Further, she imparted information about several activities that could be infused throughout multicultural-training programs and classes, such as practicum and internship experiences, case studies, and experiential exercises. It is clear that the importance of transcultural counseling was highlighted by these individuals in this review of literature.

Internet Resources

Jencius (2010) presented a list of internet resources that can be instrumental in the teaching and understanding of transcultural counseling. His list includes resources that pertain to the transcultural framework as well as transcultural education. The list also contains resources that offer ideas for transcultural activities and transcultural practice. Furthermore, Jencius highlighted professional organizations and websites that are relevant to the area of transcultural counseling.
Experiential Learning

Experiential learning is a way in which to enhance transcultural training in counselor education programs. Arthur and Achenbach (2002) supplied information related to this particular theme. In doing so, the authors advocated for the use of experiential-learning activities in order to maximize the multicultural component in counselor-education programs. As a result, Arthur and Achenbach provided both ethical and feasible guidelines for employing such activities via experiential learning in the counselor-education curriculum.

Diversity Exercises

Moore, et al. (2005) furnished some activities in their article in the Journal for African American Studies that professionals could use in order to promote transculturalism. Some of the suggested activities include retreats, field trips, class presentations, field observations, community assessments, and show-and-tell presentations. The authors of this article explained that in order for students and other individuals to develop an understanding of multiculturalism, they need to experience first-hand the culture of others. This concept epitomizes the essence of transcultural counseling and theory as well as the stylistic model for counseling across cultures.

Cross-cultural Contact

Diaz-Lazaro and Cohen (2001) studied how cross-cultural contact in a multicultural course had a significant effect on students’ multicultural counseling competencies in helping students to develop as competent counselors. The authors described cross-cultural contact as utilizing role-play exercises and guest speakers as supplemental activities in the multicultural class. Students participating in this course, which involved cross-cultural contact, were assessed in terms of their multicultural counseling competencies. As a result, Diaz-Lazaro and Cohen found that the students’ multicultural counseling competencies were higher at the end of the multicultural course in which cross-cultural contact was included. Such activities can be utilized in counselor-education programs in order to enhance transcultural training as well.
Immersion Experience

Alexander, et al. (2005) depicted a case for an immersion experience that could augment the level of multicultural competence in counselor-education programs, particularly for school counselors. The authors of this article gave an overview of an international field experience that they capitalized on in their particular school-counseling program. Accordingly, Alexander, et al. furnished a plan that other counselor educators could implement into their programs in order to provide similar experiences for their school-counseling students. This experience provides yet another useful method for expanding the transcultural-educational component within counselor-education programs.

Interactive Drama

Tromski and Doston (2003) explained how the use of interactive drama could be used as a tool to enhance transcultural training in counselor-education programs. The authors discussed how teaching through interactive drama could improve students’ awareness, understanding, and skills in the area of multiculturalism. Tromski and Doston asked the students open-ended questions after the interactive drama in order to evaluate the effect this mode of teaching had on the students. They found that the interactive drama influenced the students’ multicultural awareness, understanding, and skills. The authors also mentioned how students could ask questions of the actors in the interactive-drama exercise in order to intensify the amount of learning that could result from the activity. This teaching strategy also could serve as an instrumental transcultural approach in counselor-education programs.

Teaching about Racism

Locke and Kiselica (1999) presented an insightful and useful tool, teaching about racism, which could contribute to the transcultural curriculum in counselor-education programs. According to these authors, teaching about racism as a part of their multicultural training proved to be successful; they expounded that doing so could improve the current level of multicultural training in counselor-education programs. Furthermore, the authors provided a template of their recommendations for including this component into the multicultural curriculum. In this template, Locke and Kiselica
applied course objectives, general strategies, and teaching strategies all of which they developed and utilized in teaching about racism in a multicultural-education course.

Career Counseling Competencies

Even more authors have offered creative suggestions on how to incorporate multicultural teaching into counselor-education programs. For example, Evans and Larrabee (2002) provided a template in their article about how to combine the teaching of multicultural competencies with career counseling competencies. They gave the rationale that counselor educators are responsible for the teaching of both sets of competencies and that the competencies are compatible for doing so. Also, the authors encouraged the use of technology in implementing the combined teaching of these multicultural and career counseling competencies. Furthermore, they presented other resources in their article that counselor educators could utilize while teaching these competencies (e.g., case studies and videos).

Transcultural Quest

Professor John McFadden (personal communication, January, 2008) assigned an activity, known as the transcultural quest, in his advanced transcultural courses, which he taught at the University of South Carolina. As part of this activity, students were encouraged to become engaged in a culture to which they never had been exposed previously. Throughout this cultural exposure and engagement, students also were required to conduct an interview with a member of the engaged culture. Further, students were asked to compose a poem, identify several proverbs, and write personal reflections based on their experience of their transcultural quest. Finally, students were required to complete a track product based on their transcultural quest experiences that could offer information to others interested in learning more about the chosen culture.

TRANSCULTURAL EDUCATION PERSPECTIVES IN COUNSELOR PREPARATION

According to Sue and Sue (2008), students may not receive adequate preparation in the area of transculturalism. In fact, they suggest that while it may seem that multiculturalism has achieved prominence in counselor training, such training often is incomplete. One course in
multicultural or cross-cultural counseling may not prepare future counselors effectively for their work with diverse clients. Sue and Sue suggest that to be adequate, a course must include four components: Consciousness-raising, affective/experiential, knowledge, and skills. Carter (2005) and Vera, Buhin, and Shin (2006) were concerned that many courses omit anti-racism, anti-sexism, and anti-homophobia training, which actually would reduce such courses to the "knowledge" component only.

Jasinski (2009) interviewed several practicum and internship students at two southeastern universities in order to learn more about the transcultural training that occurred in their school-counselor education programs. Specifically, she wanted to know how this training influenced students' multicultural knowledge, attitudes, and skills as well as how well the training prepared them for their practicum and internship work. In describing this educational component, the students also noted strengths and weaknesses of this specific element in their program and offered suggestions for enhancing the multicultural education in their programs as well as in other programs. The students favored multicultural infusion in counselor-education programs instead of having only one required multicultural-counseling course. While students reported that infusion of the multicultural-educational component was being carried out in their respective programs, they believed that some areas needed more attention (e.g., Lesbian, Gay, Bisexual, and Transgender [LGBT] issues; Hispanic and Asian populations; and emotional expression among cultures). As for their practicum and internship experiences, students reported that they believed they were unprepared for "certain situations."

More than a decade ago, several researchers were interested in examining the transcultural training involved in counselor-education programs. Dinsmore and England (1996) looked at a number of CACREP-accredited counselor-education programs as an attempt to gauge the amount of training that was taking place in the area of multiculturalism. They attributed their positive findings of programs' work in terms of multiculturalism to the CACREP standards, which these programs followed. They also found that the role of multiculturalism constituted a very small part of the theories classes throughout these particular counselor-education programs. The researchers believed that students in these programs may have lacked a solid multicultural basis particularly in relation to research, assessment, and evaluation. Additionally, their findings suggested that students in many of the programs were deprived of practicum and internship experiences that included a
strong multicultural component. Furthermore, the authors voiced that having only one required course in a counselor education program in order to cover the multicultural realm is questionable.

Similarly, Hartung (1996) argued for a transition from monocultural training to more of a multicultural emphasis. He presented a model in his article on how to infuse multiculturalism into a theories course. He also explained how this transition could occur more effectively by teachers participating in some of the following tasks: Revising current teaching methods, making course revisions, assessing outcomes, and performing relevant evaluations.

Along similar lines, Ramsey (2000) explored the influx of research conducted on the need to enhance transculturalism in counselor-education programs and the changes that actually have occurred in programs by offering insight as to the causes of a gap that seems to exist between the two. To begin offering insight, the author explained her personal possession of a multicultural awareness and her disclosures regarding this information to her students in her teaching experiences. She also shared her practice of using a variety of experiential activities in her teaching. Further, she provided examples of some teaching strategies, assignments, tests, and evaluations, which she implements throughout her classes.

Henriksen and Trusty (2005) investigated how ethics and values relate to transcultural training in counselor-education programs. The authors of this article called for a restructuring of multicultural training while yielding a multicultural pedagogy for teaching. They explained that by doing this, both counselor educators and counselors-in-training would be taking a proactive role into multicultural training and learning. Moreover, Fier and Ramsey (2005) explored the ethical challenges that may occur while teaching in the area of transculturalism. These authors stated that the competence level of counselor educators would play a crucial role in how they train their students in the area of multiculturalism. They even appealed for more guidelines from professional associations that could help facilitate the teaching of multicultural components.

Some research has been conducted in order to assess the level of transcultural competence among counselors. Constantine (2002) investigated school counselors' racial-identity attitudes and the relationship to their perceived levels of multicultural competence. The author's findings suggest that the less school counselors feel competently trained in multiculturalism, the more racism attitudes they hold. The opposite also could be inferred from the article: The more
competent the school counselors felt in their multicultural training, the less racism attitudes they possessed. The researchers concluded that more multicultural training was associated with school counselors' increased multicultural competence levels.

Fortunately, more resources are becoming available to those counselor educators who desire a higher level of transcultural teaching in their counselor-education programs. Professional organizations, journal and research articles, counseling divisions, and interest networks are on hand as means for support and obtaining tools for collaboration. Moreover, there are a number of noteworthy articles that address some of the other components of transculturalism in relation to counselor-education programs, such as spirituality, sexuality, and gender. In these articles, the authors offer explanations about how to implement such multicultural aspects into counselor education programs (e.g., Cashwell & Young, 2004; Comstock, Duffey, & George, 2003; Humphrey, 2000; Matthews, 2005; Nelson, Englar-Carlson, Tierney, & Hau, 2006; Pearson, 2003; Smith-Adcock, Ropers-Huilman, & Choate, 2004; Young, Cashwell, Wiggins-Frame, & Belaire, 2002; Young, Wiggins-Frame, & Cashwell, 2007). Additionally, other relevant articles have been written, which address the importance of transcultural counseling as it relates to training programs for school counselors (e.g., Bemak, 2005; Gainor & Constantine, 2002).

CONCLUSION

Infusing transcultural approaches throughout counselor-education programs can prepare students to become effective and competent counselors for the global society with which they will be faced. A number of counselor educators have shared various transcultural pedagogical tools, as is evident within the literature and highlighted in this manuscript. Experiential-learning activities (Arthur & Achenbach, 2002), diversity exercises (Moore, et al., 2005), and immersion experiences (Alexander, et al., 2005) are a few such pedagogical tools that can enhance the transcultural-educational component in counselor education programs. As Sue and Sue (2008) have expressed, students may be limited in the area of transcultural training. Therefore, it would seem beneficial to include some of the aforementioned pedagogical tools in counselor-education programs.

A further step that would appear helpful is to assess the usefulness of those implemented pedagogical tools and how they may have influenced students' transcultural competence levels. For
instance, Jasinski (2009) interviewed school counselor-education students, as they encountered practicum and internship experiences, in order to learn how influential the transcultural education in their program was in shaping their competence level. This information provided a glimpse of the effect the transcultural education had on the students' competence level in working with an array of diverse clients. It seems clear that the implementation and assessment of transcultural approaches in counselor-education programs could aid significantly in the preparation of transculturally-competent students for doing effective counseling in a global society.

REFERENCES


PART 1:
COLLEGE OF MASS COMMUNICATIONS AND
INFORMATION STUDIES
THE T. BOONE PICKENS ADVERTISING CAMPAIGN: A STUDY OF FRAMING
Anthony Palmer

Department of Journalism and Mass Communication

The 2008 United States presidential campaign treated the nation to a parade of stars, both familiar and unexpected. Chuck Norris became Mike Huckabee's right-hand man during the primaries (Associated Press, 2008). Oprah Winfrey placed her prestige on the line by endorsing and campaigning for Barack Obama (Zeleny, 2007). Britney Spears and Paris Hilton became fixtures in John McCain's attack ads (Mooney, 2008). Finally, the breakout star of the final presidential debate, Joe Wurzelbacher, better known as "Joe the Plumber," served as a rallying cry for the final stages of McCain's campaign (Fortune, 2008).

In contrast to these sensationalistic icons, there was one unique presence in the 2008 campaign season whose purpose was a bit more serious than serving as a political punch line or a source for a few rhetorical zingers in a campaign stump speech. This unlikely figure sparked some serious debate among voters and policymakers alike and apparently spawned a new wave of citizen activism with the goal of fundamentally changing how the United States uses energy. This person is Texas billionaire and oil tycoon T. Boone Pickens, who launched an advertising campaign during the summer of 2008 informing voters about his energy policy, which was known as the Pickens Plan (Pickens, 2009b).

The purpose of this analysis is to investigate the effectiveness of the energy independence advertising campaign pursued by Mr. Pickens based on the media frames used to report it. A content analysis of television and NPR radio stories about Pickens and his energy plan from 2007 and 2008 was conducted to examine which frames were dominant in the plan's rollout. Findings and an explanation of effectiveness also are provided.

BACKGROUND

The son of parents who worked in the oil industry, Pickens learned about risk-taking and entrepreneurship at an early age (Pickens, 2009a). After finishing college, he started Petroleum
Exploration Inc., a domestic oil and gas firm, and Altair Oil and Gas Company, which focused on oil exploration in Canada (Pickens, 1987). This experience culminated in bringing Mesa Petroleum public. Under Pickens' stewardship, Mesa Petroleum became the largest independent oil company in the world in 1985 (Pickens, 1987). Much of Pickens' wealth, however, came not from oil and gas revenues but rather was generated from strategic business acquisitions that he would later sell for profit to other investors. His history of corporate acquisitions and takeovers led him to gain a reputation as a corporate raider (Forbes, 2009).

During the 1990s, Pickens became a strong advocate for expanding the use of natural gas and cleaner energy sources and for reducing foreign oil imports because of the volatility associated with the countries from which the United States imports the oil. He founded Pickens Fuel Corporation in 1997, which is now incorporated as Clean Energy and operates natural gas fueling stations from Mexico to Canada (Pickens, 2009a). In addition, he has led initiatives in his home state of Texas to increase the number of wind farms and is the largest private owner of water in the United States because of a large underground aquifer on his property (Berfield, 2008).

Energy Independence and Its Political Impact

Rising oil prices and global instability, particularly in the oil-rich nations of the Middle East, heightened the importance of energy independence in the 2008 United States presidential campaign. According to the United States House of Representatives Select Committee on Energy Independence and Global Warming (2009), energy independence has three components: National security, the environment, and the economy. More specifically, energy independence entails reducing American dependency on foreign-energy sources, protecting the environment by both preserving natural resources and decreasing reliance on nonrenewable fossil fuels, and by creating green jobs in the United States that cannot be shipped abroad as a result of outsourcing.

In American politics, there is a political divide between Republicans and Democrats when it comes to energy independence. Republicans place a greater emphasis on increasing energy supply through expanded offshore oil drilling, drilling in the Arctic National Wildlife Refuge, and the construction of new oil refineries and nuclear power plants (Republican Party, 2009). Democrats, on the other hand, place a greater emphasis on both energy conservation and reducing demand by
increasing fuel efficiency standards for automobiles as well as by increasing the use of renewable energy sources like solar and wind power (Democratic Party, 2009).

Despite these policy differences, both parties are in agreement that it is not in the United States' best interest to purchase oil from "countries that don't like us very much" (FactCheck.org, 2008, Summary section, ¶ 4) and that the country should stop borrowing money from China so it can pay Saudi Arabia (CNN, 2008). Energy independence is described as freeing the United States' energy supply from disruptions that could result from global conflict or changes in the global economy. This presumed fact, combined with the high fuel prices during the summer of 2008, is one reason why energy independence has become such a potent political issue.

The Pickens Plan

Pickens, however, believed he had an energy plan that was better than what both major political parties were proposing and spent about $60 million explaining why (Thill, 2008). In July 2008, he launched a nationwide advertising campaign detailing what he called "the Pickens Plan" for energy independence. These advertisements appeared on network and cable television stations until the days after the presidential election in November. These ads also were available on the Pickens Plan Web site (Pickens, 2009b).

To start, the Pickens Plan advocates investing $1.2 trillion in expanding the nation's wind-energy infrastructure. It would cost $1 trillion to build wind facilities throughout the Great Plains and Upper Midwest, the nation's largest wind corridor (Jacobson, 2005) and another $200 billion to "deliver power where it is needed, when it is needed, [and] in the direction that it is needed" (Pickens, 2009b, New Jobs from Renewable Energy and Conservation section, ¶ 3). According to Pickens, building wind farms offers several benefits with minimal disruptions. It would create construction and manufacturing jobs, often in economically depressed rural areas, that would attract new workers and provide economic opportunity to local businesses. Local economies would not be threatened by wind farms because the wind farms do not interfere with farming or grazing (Pickens, 2009b).

According to the web site, expanding the use of natural gas constitutes the other major component of the Pickens Plan. He notes its domestic abundance, lower costs, and reduced emissions as reasons why it should be used more widely in automobiles, as opposed to gasoline. A
photo of the natural gas-powered Honda Civic GX, the "world's cleanest internal-combustion vehicle" (Cornell, 2008, ¶ 3), is posted online in this section of the Pickens Plan (Pickens, 2009b).

The goal of the Pickens Plan is to reduce the United States' foreign oil imports by one-third in ten years (Pickens, 2009b). He also touts this plan as a "bridge to the future" that would allow the United States to buy time while better and more efficient technologies are developed. During the presidential campaign, Pickens endeavored to serve as an advocate of this plan apparently with the ultimate goal of influencing the election winner's energy policy. There is a sign-up link posted at the end of the plan to make it easy to enlist the support of people who also seek energy independence and want to take proactive steps to achieve it (Pickens, 2009b).

One of the main reasons why Pickens' advertising campaign has garnered so much attention is the fact that Pickens is an unlikely advocate for energy independence (McClure, 2008). One might expect such an advocate to be an environmentalist or a liberal politician, not someone who has described himself as being "an oilman" all his life (Pickens, 2009a). Pickens is a lifelong Republican and a billionaire who has made a large amount of his wealth from the oil wells of Texas, so advocating a reduction in oil imports and the use of fossil fuels in general would seem to run counter to his economic interests at first glance. Although his motives have been called into question (Michaels, 2008), Pickens insists that he is not advocating this energy plan for his own economic benefit (Solomon, 2008). When asked about the potential for Pickens to profit financially from the adoption of his energy plan, he claims that he is "rich enough," suggesting that his intentions are benign (CBS News, 2008). This skepticism illustrates how the media's coverage of Pickens and his plan, specifically the frames the media use when reporting it, could influence public opinion.

LITERATURE REVIEW

Framing and its effects have received much attention from researchers of public opinion, political science, and mass communication (e.g., Iyengar, 1987, 1990, 1996; Lowry, 2008). Despite the popularity and proliferation of studies examining how the news media frame an issue, Entman (1993) contends there is no clear theoretical definition of framing, suggesting instead that framing is characterized by selection and salience. As a result, framing "determines whether most people notice and how they understand and remember a problem" (p. 54). It is for this reason that politicians
and corporations often compete with each other and with other journalists over the frames that will be used in media stories (Entman, 1993).

The Pickens Plan has an environmental component as well as an economic component. In the context of economic messages, Levy (2007) argued that the proper framing of economic messages could not only inform the public about matters of economic importance but also may allay their anxieties and dissuade a “well-intentioned” government from pursuing policies that could actually make economic conditions worse. Knowing this, corporations (or Pickens himself in this case) have a major incentive to ensure that their desired frames are the ones the media use when information about the economy or their corporations is broadcasted or published. Because of Pickens’ connections to the oil and energy industries, he has to compete with possible perceptions that the motives behind his energy plan are insincere despite his assurances to the contrary.

Pickens seems to have launched his advertising campaign with the goal of mobilizing the public and influencing Congress to adopt his policy recommendations. This goal introduces a political context to his advertising campaign. The framing of political news was the subject of research by Raghubir and Johan (1999), who examined how public opinion of the 1997 transition of Hong Kong from British to Chinese control was affected when the transition was framed as a “handover,” a “takeover,” or a “reunification.” They found that using a hostile frame (i.e., takeover) yielded the most negative responses among the public. In the context of Pickens, these data suggest that a negative news story that questions Pickens’ motives could limit potential public and political support for the plan. Although the present study does not measure framing effects on audiences, such framing is important for the present study’s methodology because it provides guidance on the types of frames that Pickens or journalists may use to report on the Pickens energy plan.

Shah, Watts, Domke, and Fan (2002) studied the framing of stories about President Bill Clinton’s Monica Lewinsky scandal and how these stories impacted audiences. Clearly, Clinton enjoyed high approval ratings during this period of highly-negative media coverage. According to these researchers, framing the scandal in political terms (e.g., conservatives’ strategic attacks on Clinton) made audiences have a more favorable opinion of Clinton because the conflict frames used by the media made audiences mistrust his political enemies. These findings are relevant to the present study in that they show how framing the Pickens Plan in political terms could produce a
significantly different reaction from framing it in purely economic terms. This contrast is relevant to
the present study because Pickens explicitly avoids mentioning any politicians or political parties in
his advertising campaign messages. Shah, et al.'s (2002) study of the Clinton sex scandal provides
considerable clarity on the impact of the framing of political news, but the present study focuses on
the Pickens-related stories themselves, rather than on a politician or a political campaign.

Pickens argues that the United States' over-reliance on foreign-energy sources constitutes
a problem that threatens national security (Pickens, 2009b). Politicians and opinion leaders may
blame energy companies, foreign leaders, or American consumers for the United States' energy
woes, which can be reflected in media coverage. Iyengar (1991) suggested that the news media
may shape people's perceptions of who is responsible for a particular social problem. For example,
one media organization may frame the discussion of high gas prices as the fault of SUV owners
and people who drive sports cars, potentially fueling outrage among conservationists by implying
that wasteful consumers are driving up demand. Another media organization may frame rising gas
prices as the result of manipulative foreign leaders, absolving consumers of any responsibility they
may have for the consumers' plight.

Nevertheless, the framing of news stories is not restricted to attributions of responsibility.
News stories also can be framed in terms of conflict, consensus, or stability. Porto (2007) studied
the difference in the framing effects of newscasts and political advertising over the course of a
presidential election in Brazil. He found that viewers who watched the country's most popular
newscast were more likely to support the president's economic policies, which were framed by the
newscast in terms of stability. In contrast, viewers who had more exposure to political advertising
were more likely to reject this frame in favor of the president's opponents' frames, which focused
more on Brazil's social and economic problems. This study is useful in that it highlights two discrete
frames that stories about Pickens' energy plan can take (i.e., a positive frame of national stability
and security or a negative frame of economic and international upheaval), but it compares television
news coverage with political advertisements. The present study seeks to examine only television
and radio newscasts without considering political advertisements.
RESEARCH QUESTIONS

While this study's literature review provides sources illustrating the concept of framing and its impact on public opinion and news reporting, to the extent of this researcher's knowledge, there are no studies that have specifically examined the Pickens Plan in the context of framing. Considering the lack of existing research on this subject, this monograph chapter is an attempt to examine research questions as opposed to testing hypotheses.

RQ1: Which media channels has Pickens used to articulate his energy plan?

This research question could shed light on Pickens' intended audience when rolling out his plan. Appearing on business-related television stations would suggest his audience was the corporate community, whereas appearing more often on network television would suggest he is trying to reach the widest audience possible. Understanding Pickens' media strategy could shed light on how he sought to rally public opinion behind his energy plan.

RQ2: How has the Pickens Plan been framed in television newscasts?

Before attempting to assess the effectiveness of Pickens' energy plan, this research also is an attempt to examine how the plan itself was framed by journalists and by Pickens himself. Understanding whether the Pickens Plan was portrayed as an economic plan, a political plan, or something else could help future researchers examine whether the frames used contributed to the effectiveness of his advertising campaign.

METHODOLOGY

This study consists of a content analysis using transcripts obtained from the LexisNexis online news archives, which is regarded as the best source for obtaining news transcripts for content analysis research designs (Weaver & Bimber, 2008). Using the keywords "pickens plan," "boone pickens," or "pickens" appearing in the headline, index terms, or lead paragraphs, the researcher retrieved television news transcripts from the three primary television networks (i.e., ABC, CBS, and NBC), the cable news and business-news networks (i.e., CNN, Fox News, MSNBC, Fox Business Network, and CNBC), and radio news transcripts from NPR.

Transcripts containing the search terms from broadcasts that aired between January 1, 2007 and December 31, 2008 were selected for coding. These dates were chosen in order to allow
for possible comparisons to be made between Pickens' media appearances before and after the rollout of his energy plan.

*LexisNexis* identified 87 news transcripts matching the keywords "pickens plan," "boone pickens," or "pickens." Unfortunately, 32 of these transcripts could not be included in the sample because they consisted of duplicate transcripts, were about someone else who had the last name "Pickens," or made only a passing reference to T. Boone Pickens. This left 55 transcripts (63% of the total number of transcripts *LexisNexis* originally identified) that were either about T. Boone Pickens himself, his energy plan or an interview with him. These transcripts were all scanned to make sure they were relevant for this study.

**Coding Categories**

There are 16 coding variables that were used for this study. General variables include the television or radio network from which the transcript was taken, the story's date, the story's format, and the length of the transcript. The transcript length variable ultimately had to be excluded from the final analysis, however, because several of the CNN and Fox News transcripts were of their programs' entire broadcasts, rather than of individual stories.

Variables specifically related to Pickens and his energy plan include the tone of the interview, whether the Pickens Plan was explicitly mentioned, and the presence or absence of ten frames as they relate to how the plan was portrayed. The following ten categories were identified: (1) a solution to America's energy problems, (2) a plan that creates more problems than it solves, (3) an environmentally-friendly plan, (4) an economic plan, (5) a national security imperative, (6) a practical or feasible plan, (7) an impractical plan, (8) a plan that should be viewed with skepticism because of Pickens' motives, (9) a plan that a political party should support, and (10) a plan that a political party should oppose. All data were analyzed using SPSS 15.0 for Windows.

**RESULTS**

**Frequency: Stories and Appearances**

The data yielded information that could allow one to make some inferences about which media channels Pickens wanted to use to convey his plan to the public. The data suggest Pickens
favored appearing on cable television networks more than the three major broadcast networks. Pickens appeared more times or had more stories on CNN from 2007-2008 than on the three major broadcast networks combined, answering RQ1 (see Table 1). Caution must be taken when making generalizations from these results because the cable news stations have 24-hour news holes that allow them to devote more time to a larger number of stories. In comparison, the broadcast networks generally only report news during their two- or three-hour morning news programs and their 30-minute flagship evening-news programs. Another interesting observation is that there were more than twice as many Pickens stories or Pickens interviews on the Fox News Channel and Fox Business channel than on MSNBC and CNBC. In addition to being arguably more sympathetic to Republicans and conservative ideas, the Fox News Channel in particular dominated the cable news ratings (i.e., during 2007-2008). Consequently, it appears that Pickens wanted to reach the largest audience possible during the time period studied.

Table 1: Frequency and media channel of Pickens stories

<table>
<thead>
<tr>
<th>Television Network</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC</td>
<td>5</td>
<td>9.1</td>
</tr>
<tr>
<td>CBS</td>
<td>5</td>
<td>9.1</td>
</tr>
<tr>
<td>NBC</td>
<td>4</td>
<td>7.3</td>
</tr>
<tr>
<td>CNN</td>
<td>18</td>
<td>32.7</td>
</tr>
<tr>
<td>Fox News/Fox Business</td>
<td>14</td>
<td>25.5</td>
</tr>
<tr>
<td>MSNBC/CNBC</td>
<td>4</td>
<td>7.3</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>9.1</td>
</tr>
</tbody>
</table>

**Frequency: Story Format**

The vast majority of stories about Pickens and his energy plan consisted of interviews with Pickens himself, suggesting that he had ample opportunity to convey his message (see Table 2). In an interview (i.e., 58.2%), it seems clear that Pickens has more control over his ability to frame his plan because even though he may not be able to control an interviewer's questions, he has total control over whether he responds and how he frames his responses. In a news story consisting of a
Table 2: Frequency of formats used to report Pickens stories

<table>
<thead>
<tr>
<th>Type of story</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reader/voiceover/live shot</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td>Voiceover with sound clip</td>
<td>3</td>
<td>5.5</td>
</tr>
<tr>
<td>Reporter package</td>
<td>4</td>
<td>7.3</td>
</tr>
<tr>
<td>... Interview</td>
<td>32</td>
<td>58.2</td>
</tr>
<tr>
<td>Multiple formats</td>
<td>11</td>
<td>20.0</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>7.3</td>
</tr>
</tbody>
</table>

A voiceover, a reader (i.e., 1.8%), or a reporter package (i.e., 7.3%), the frame can be set by the anchor or the news reporter.

Likelihood of Frame Selection

Chi-square calculations were used to examine whether certain frames were more likely to be used when the Pickens Plan was explicitly mentioned (see Table 3). The table shows eight categories of frames that were identified, and their significance level also is given.

When the Pickens Plan was explicitly discussed in a news story, the solution, economic, environmental, and national security frames were significantly more likely to be used ($p < .01$) than the other four frames. These data suggest that Pickens chose to identify his energy plan as a solution to the United States’ energy problems, a plan that was environmentally friendly, a plan

Table 3: Relationship between discussion of the Pickens Plan and how the plan was framed.

<table>
<thead>
<tr>
<th>Frame</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solution</td>
<td>.000**</td>
</tr>
<tr>
<td>Problem</td>
<td>.154</td>
</tr>
<tr>
<td>Environmentally friendly</td>
<td>.003**</td>
</tr>
<tr>
<td>Economically beneficial</td>
<td>.000**</td>
</tr>
<tr>
<td>National security imperative</td>
<td>.000**</td>
</tr>
<tr>
<td>Practical</td>
<td>.199</td>
</tr>
<tr>
<td>Impractical</td>
<td>.432</td>
</tr>
<tr>
<td>Skeptical</td>
<td>.092</td>
</tr>
</tbody>
</table>

** $p < .01$ for chi square calculations
that would be a boon to the national economy, and a plan that would improve national security by 
weaning the country off of foreign energy sources, answering RQ2. The implementation of these 
positive frames should have allowed Pickens the greatest opportunity to use the media to portray his 
plan in terms that the public could support.

Interestingly, the usage of practical ($p = .199$) and impractical ($p = .432$) frames showed 
no statistical significance (see Table 4). This finding could be significant because regardless of the 
merits of Pickens’ energy proposals (i.e., environmental, economic, and national security benefits), 
if the plan was neither portrayed as practical or impractical, that potentially gave other entities, 
including opponents of Pickens and his plan, the opportunity to frame it on that dimension as they 
wished.

These data underscore the risk that not portraying the Pickens Plan as practical or 
impractical may have impacted the success of Pickens’ energy campaign. When the energy plan 
was portrayed using the solution frame, the media also were significantly more likely to frame 
Pickens or his plan in skeptical terms ($p = .026$). While Pickens claimed numerous times in the 
stories that he was not endorsing any particular political candidate, he has made no secret of the 
fact that he is a lifelong Republican. Compounding this is his wealth, which he obtained from his 
lifelong work in the energy industry (Pickens, 2009a). Undercutting the merits of his energy plan by 
journalists’ questioning his motives and whether he stood to profit from the adoption of his energy 
policy may have hampered his ability to get his desired message out to the public clearly enough to 
create a groundswell of support for it.

<table>
<thead>
<tr>
<th>Frame</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
<td>.948</td>
</tr>
<tr>
<td>Environmentally friendly</td>
<td>.000**</td>
</tr>
<tr>
<td>Economically beneficial</td>
<td>.000**</td>
</tr>
<tr>
<td>National security imperative</td>
<td>.000**</td>
</tr>
<tr>
<td>Practical</td>
<td>.482</td>
</tr>
<tr>
<td>Impractical</td>
<td>.647</td>
</tr>
<tr>
<td>Skeptical</td>
<td>.026*</td>
</tr>
</tbody>
</table>

** $p < .01$, * $p < .05$
DISCUSSION

T. Boone Pickens' advertising campaign for his energy plan provides a useful case study for public opinion research in that a wide variety of frames could be used either to report or analyze the story. These frames arise from the dimensions a national energy policy entails, as well as from the complex biography of the policy's advocate. It is instructive in that it requires one to address adequately the identity of the communicator, the content of the message, the goal of the message, the value of the message, the implications of the message, the restrictions placed on the message, and the ability for competitors and opponents to convey their own messages in response.

Research Limitations

This study is not without its limitations. To start, at only 55 stories, this study suffers from a small sample size. This may result from LexisNexis search terms that were too restrictive, or it may be the result of a lack of media interest in this story. Regardless, this small sample size may give each individual story more weight than should be allotted.

A second limitation is that the study only measures the transcripts of television broadcasts (with only two radio broadcasts). It is impossible to ascertain the tone of an interview by merely reading a transcript. As a result, important communication elements such as nonverbal communication, sarcasm, or humor are difficult for an observer to pick up. This added context could have assisted in the coding of these stories, especially as they pertain to the skeptical frame. Future researchers may wish to study not just the transcripts but also the broadcasts themselves when examining how the Pickens Plan was covered in the media. The timing of these Pickens stories and interviews also should be examined, as placing the interview earlier in a broadcast may suggest greater importance because of a larger audience, whereas placing it in the middle of a broadcast may suggest the trivialization of his plan.

Finally, even though this study only measured television broadcasts, the Pickens Plan was certainly covered in print and online media. Future researchers may wish to examine newspaper, Internet, and even blog coverage of Pickens and his energy policy. Online news sources often have comment features that could allow researchers to gain some sense of public opinion regarding their stories' content. Newspapers that provide more local than national coverage and cable-broadcast...
networks may report on the Pickens Plan in a different way. The impact of building wind farms on local property or what the farms could do in terms of creating jobs in economically depressed areas may lead print reporters to cover this story using a different balance of frames or new frames altogether.

Conclusions

The data show that although what were likely to be Pickens' desired frames were used often in the reporting of stories about him and his energy plan, not all of the positive frames available were used; perhaps, this omission potentially minimized the effectiveness of his advertising campaign. The United States was plagued by high gas prices during the summer of 2008, so the public might have been receptive to a new energy policy that would be economically beneficial; but that desired benefit was only to the United States' economy, not to the economies of foreign nations that may be hostile to this country. Apparently, the prevalence of frames that called Pickens' motives into question may have given his audience pause and led them to express reservations about Pickens and his energy plan.

Future research probably should focus on the public opinion aspect of this story by examining the public's perception of Pickens, his energy plan, and his motives. This research could validate the hypothesis that media skepticism of Pickens' energy plan may have led the public to be skeptical of it as well. This research could be significant in that it could explain why politicians have yet to adopt Pickens' energy recommendations even though more than two years has passed since Pickens formally launched his energy campaign. If the public does not feel compelled to follow Pickens' energy plan, it seems clear that they would be less inclined to pressure their congressional representatives to support it. Moreover, if congressmen do not sense public support regarding Pickens' plan, they potentially have less incentive to see that it becomes law.

Another follow-up to this particular study would be to examine the individual television networks' coverage of Pickens' plan in terms of bias. The current study only sought to examine the frames themselves, rather than provide a comparative analysis of which television networks were more likely to use certain frames than others when reporting this story. The fact that there were so many more stories about Pickens and his energy plan on cable television than on network
television suggests that Pickens was trying to reach a more sophisticated and more civic-minded demographic. Whether CNN and Fox News reported the plan differently could be a good direction for future research because it could show that certain media outlets were more sympathetic to his plan than others. If this proves to be true, future advocates of new energy policies would have a better roadmap to follow in terms of media rollouts to ensure the most favorable coverage possible.

In addition to studying the media's portrayal of Pickens' advertising campaign, future public opinion researchers could examine the impact of the advertisements themselves. If the public perceives that the energy plan offers economic, environmental, and national security benefits while not sensing any skepticism, it would suggest that Pickens and future energy-policy advocates should rely less on traditional media in order to potentially minimize the impact of a hostile media.

REFERENCES


PART 2:

COLLEGE OF ARTS AND SCIENCES
A persistent issue confronting educators, researchers, and policymakers is the underachievement of many African American youth. Although African American students have shown marked gains in academic achievement, they continue to fall far behind their White and Asian American peers in many educational achievement and attainment indices (Public Schools of North Carolina, 2002; U.S. Department of Education, 2007). Because of this gap, a better understanding of the processes that promote the motivation and academic success of African American adolescents is needed.

One of the obstacles to research in this area is that many measures of motivation were designed for and have been used primarily with White youth; thus, the psychometric properties of these measures have not been established with Black youth. In addition, valid and reliable measures are needed that permit the examination of race-related factors that may impact achievement motivation in Black youth such as discrimination and stereotyping. Education officials and policymakers have acknowledged the powerful role that discrimination and stereotypes play in the achievement motivation of African American children (Public Schools of North Carolina, 2002). Because of the challenges these children and adolescents face associated with their growing awareness of racial discrimination and limited educational opportunities, it is important not only that rigorous research is conducted on factors that promote success but also that researchers consider race-related constructs in such research endeavors.

The purpose of the current project was to investigate the test-retest reliability and internal consistency of several measures that are related to academic-achievement striving in African American adolescents. Specifically, the stability and internal consistency of five measures that have been used to examine the distal and proximal causes of academic success in African American youth...
youth were examined. Some of these measures have established test-retest reliability with other age or racial groups but not with African American adolescents; thus, establishing the psychometric properties of these measures with middle-school aged African Americans is expected to enhance ongoing research on the many factors that may influence the achievement motivation of African American youth.

DISTAL CAUSES OF ACADEMIC ENGAGEMENT IN AFRICAN AMERICAN YOUTH

In general, proximal causes of a phenomenon can be defined as mechanisms that directly and concurrently influence a given outcome; in contrast, distal causes can be described as acting on outcomes indirectly, usually in large part through their influence on proximal causes. Racial socialization (e.g., Bowman & Howard, 1985; Caughy, O'Campo, Randolph, & Nickerson, 2002) and racial centrality (e.g., Chavous, Bemel, Schmeilck-Cone, Caldwell, Kohn-Wood, & Zimmerman, 2003; Sellers, Chavous, & Cooke, 1998) have been examined as distal influences on the motivation and academic achievement of African American youth.

Racial socialization is the process whereby parents instill in their children pride in their cultural heritage and prepare their ethnic minority children to function in a society that may be, at times, hostile toward members of minority groups (Hughes & Chen, 1997; Stevenson, 1994). Three types of racial socialization are examined in the current study: Racial pride (e.g., Thomas & Speight, 1999), preparation for bias, (e.g., Hughes & Chen, 1997), and negative messages (e.g., Neblett, Smalls, Ford, Nguyen, & Sellers, 2009). The majority of African American parents report giving their children messages about racial pride (Hughes & Johnson, 2001). These messages, which stress the strengths and accomplishments of African Americans, have been found to be positively related to self-esteem (Constantine & Blackmon, 2002) and ethnic identity (Demo & Hughes, 1990), both of which have positive impacts on academic achievement outcomes (Chavous, et al., 2003; Wigfield & Eccles, 1994).

The process of preparation for bias socialization alerts children to the racial barriers in society. Because these types of messages may help adolescents develop better responses to individual and systemic bias, they may lead to positive achievement outcomes (Bowman & Howard, 1985). Although parents report using this type of socialization infrequently, theorists have nonetheless
noted that such practices undoubtedly influence children's development through the influence of
such socialization on identity beliefs, coping, and attributions about social phenomena and academic
outcomes (Harris-Britt, Valrie, Kurtz-Costes, & Rowley, 2007; Hughes, Rodriguez, Smith, Johnson,
Stevenson, & Spicer, 2006; McLoyd, Cauce, Takeuchi, & Wilson, 2000). Negative messages, on
the other hand, are regarded as reinforcing negative stereotypes about African Americans (Neblett,
et al., 2009). Although these messages are of even lower frequency than preparation for bias, they
have been found to be related negatively to self-worth in African American adolescents (Neblett, et
al., 2009).

Racial centrality, one aspect of racial identity, refers to the extent to which an individual's
race is an important component of his or her identity (Sellers, Rowley, Shelton, Smith, & Chavous,
1997). Several studies have shown that a strong racial identity is positively correlated with
achievement (e.g., Chavous, et al., 2003; Sellers, Chavous & Cooke, 1998). Generally, researchers
assume that racial identity is related to healthy motivational beliefs through mediating variables
such as self-concept. A strong group identity may enhance self-concept, which in turn may impact
achievement motivation (Gerardi, 1990). Racial identity also may act as a moderator. For example,
stereotypes have a more negative impact on academic self-concept among youth for whom race is
highly central (Okeke, Howard, Kurtz-Costes, & Rowley, 2009). Along with these distal influences,
some characteristics and beliefs of individuals are posited to influence academic achievement
outcomes more directly.

PROXIMAL INFLUENCES ON ACADEMIC ENGAGEMENT IN AFRICAN AMERICANS

According to the previously stated definition, proximal factors are known to act directly on
the outcome of interest. The achievement-related beliefs assessed in the current study that might
be proximal causes of motivation and achievement outcomes are self-concept, group attributions,
and perceptions of group competence.

Academic self-concept is how a student views his or her academic ability when compared
with other students (Lent, Brown, & Gore, 1997). Research has confirmed that academic self-concept
is positively related to grade point average among African American youth (Cokley & Chapmen,
2008; Gerardi, 1990). Research with other racial and ethnic groups has established a bi-directional
relationship between academic self-concept and achievement: Academic success leads to more positive self-views, and a positive self-concept enhances subsequent academic achievement (Cokley & Chapman, 2008; Gerardi, 1990; Lent, et al., 1997).

Motivational theorists suggest that children's attributional beliefs about the causes underlying performance outcomes influence achievement striving. Attributional beliefs also are important in shaping behavior when children encounter failure or difficult tasks (Weiner, 1979). Most attribution research reviewed by this author has examined children's perceptions of the reasons underlying their own successes or failures. In the current study, the psychometric properties of a measure of beliefs about reasons for possible racial group differences in academic outcomes are assessed. The persistent Black-White race gap in academic achievement might be attributed to numerous factors. Group attributions about the achievement-race gap had not been measured directly in previous research, yet such attributions are likely to be important for African American students' beliefs about their own abilities and/or their beliefs about systemic discrimination that puts them at a disadvantage compared to White students.

In addition to the above motivational beliefs, measures of racial and gender stereotypes were deemed potentially important proximal influences on academic achievement. Researchers have documented many ways that stereotypes influence achievement, and some are direct (e.g., stereotype threat, Steele, 1997), whereas others are distal (Kurtz-Castes, Rowley, Harris-Britt, & Woods, 2008; Okeke, et al., 2009). One's awareness of stereotypes (for both race and gender) about group differences in abilities increases during early adolescence (Rowley, Kurtz-Castes, Mistry, & Feagans, 2007). One of the most prevalent race stereotypes in the U.S. is that Whites are better than African Americans in academic domains (Bobo, 2001; Steele, 1997). Among African American adolescents, belief in this stereotype is negatively related to academic self-concept (Okeke, et al., 2009). Another prevalent stereotype in the United States is that boys are more talented than girls in mathematics and science; girls, in contrast, are viewed as more capable in verbal domains (Blanton, Christie, & Dye, 2002; Schmader, Johns, & Barquissau, 2004). In the current study, the psychometric properties of measures of the competence of boys, girls, Blacks, and Whites also were assessed. These group competence measures have been used to construct a measure of racial and gender stereotypes (e.g., Rowley, et al., 2007).
Establishing Reliability of Psychological Measures

Test-retest reliability, a common indicator of survey reliability, is estimated when researchers administer the same test to a sample on two (or more) different occasions (Furr & Bacharach, 2008). This type of reliability is described as essential in testing because if a measure is being used to test for a specific construct that does not produce the same or approximate results for the same person across time, then researchers can not be sure that the measure actually examines what it is intended to examine; therefore, good test-retest reliability is indicated when respondents answer items in similar ways on two different occasions. In general, one assumption of this approach is that there is no substantial change in the construct being measured between the two assessment times. If the time interval is too long, responses might differ across the two measurement points because of actual change. On the other hand, if the testing interval is too brief, participants might remember their responses from the first time point, and scores might be biased by respondents' desires to be consistent. In this project, a two-to-three week time interval between the two assessment points was used.

In addition to examining the test-retest reliability of these measures, the internal consistency of the measures also was assessed by calculating both alpha and split-half reliability. Alpha reliability is used to estimate the internal consistency of a multi-item scale for a given population (Furr & Bacharach, 2008). Furr and Bacharach explain that Alpha coefficients, which are computed by assessing the relationships between all pairs of items in a scale, range in value from 0 to 1, with higher scores indicating a more reliable scale. Nunnaly (1978) indicated that 0.70 is an acceptable reliability coefficient. Split-half reliability is another measure of consistency, and its calculation is described as follows: A composite score is computed for each half of the items in a measure, and the correlation between the two scores is calculated; thus, the higher the correlation, the higher the consistency. If a test is consistent, researchers have confidence that scale items are measuring the same underlying construct.

The Present Study

In the current research, both test-retest reliability and internal consistency were assessed for the measures of racial socialization, racial identity, academic self-concept, group competence, and
group attributions in a sample of African American youth that was selected by school administrators. It was expected that the correlation for each measure between Time 1 and Time 2 scores would exceed 0.70, indicating that the measures were stable over time. It also was predicted that each measure would have an alpha coefficient exceeding 0.70, indicating acceptable internal consistency.

Sellers, et al. (1997) established the reliability and validity of each subscale of the Multidimensional Inventory of Black Identity (MIBI) using African American college students from a predominately African American university and a predominately White university. Hughes and Chen (1997) demonstrated the reliability and validity of the race socialization scale with African American parents. Nevertheless, in the current study, the intent was to extend prior findings by determining whether the racial socialization and racial centrality measures, which are reliable with African American adults, have strong psychometric properties with young adolescents. In addition, three measures for which no psychometric data with African Americans previously were available were examined.

METHOD

Participants

Thirty African American middle school students (12 boys; 18 girls) from a single middle school located in the southeastern region of the United States participated in this research project. Approximately 70% of the student body in that school was African American, with approximately 66% of the student body considered economically disadvantaged based on county records. School administrators selected students as potential participants for the project. The average age of the students was 13.0 years with a range of 11 to 15. No participants were lost due to attrition.

Measures

Five measures were administered: Academic self-concept, group attributions, perceptions of group competence, racial socialization, and racial centrality. In addition, demographic data (i.e., age, sex, and race) were collected from each student. The same measures were administered at Time 1 and Time 2.
**Academic Self-Concept.** Students ranked their own competence in math, writing, science, language arts, music, sports, grades, making friends, and general intelligence compared to their classmates by circling a figure in a column of 25 stick figures. Anchors at the top and bottom of each item were “the best” and “the worst” respectively. Item scores ranged from 1 to 25, and scores were averaged across the six academic items: Math, writing, science, language arts, school grades, and general intelligence (i.e., “smart”). Higher scores indicated more positive perceptions of self-competence.

**Group Attributions.** Group attributions were assessed with a 5-point scale (1 = Strongly Disagree, 5 = Strongly Agree) with which students indicated how much they agreed or disagreed with 12 items regarding possible reasons why some Black students fail in school (see Appendix A for sample items). Factor analysis confirmed two subscales: Discrimination/Lack of Resources (6 items; e.g., “Because of their race, Black kids are usually placed in lower achieving classes than Whites”), and Attitudes and Behaviors (6 items; e.g., “For Black students, studying a lot is not cool”). Scores were averaged within each subscale, yielding a composite score ranging from 1 to 5.

**Group Competence.** Group competence was assessed using visual analog scales in which students marked a 100-millimeter line between left and right anchors (i.e., “very hard” to “very easy;” “not well at all” to “very well;” “not good at all” to “very good”) for several domains (i.e., English, math, music, science, school grades, sports, and making friends; see Appendix B). These assessments of competence were made for four social groups: Blacks, Whites, boys, and girls. All items for each social group were on a single page and arranged within the questionnaire in the following sequence: Girls, Whites, boys, and Blacks. The distance in millimeters from the left endpoint of the scale to the child’s mark was measured, with scores ranging from zero to 100. The six academic items were averaged to form a score for students’ perceptions of the academic competence of each racial/ethnic (i.e., Blacks and Whites) and gender group (i.e., girls and boys).

**Racial Socialization.** Racial socialization was measured with two subscales of the Race Socialization Scale, cultural socialization and preparation for bias (Hughes & Chen, 1997) and one subscale (i.e., Negative) of the Racial Socialization Questionnaire-Teen developed by Lesane-Brown and colleagues (i.e., Lesane-Brown, Scottham, Nguyen, & Sellers, 2006). Sample items appear in Appendix C. Students were asked to indicate how often in the past year their parents engaged
in specific behaviors regarding being African American (1 = Never, 5 = More than 10 Times). The Preparation for Bias subscale included 7 items (e.g., “Said that people might treat you badly due to race”). The Cultural Socialization subscale included 7 items (e.g., “Taken you to Black cultural events”). Hughes and Chen (1997) reported alpha reliabilities of .91 and .84 for these two scales, respectively. The Negative subscale was composed of 5 items (e.g., “Told you that being Black is nothing to be proud of”). Scores were averaged within each subscale, yielding a composite score ranging from 1 to 5.

Racial Centrality. Racial centrality was assessed with a revised version of the Racial Centrality subscale of the Multidimensional Inventory of Black Identity (MIBI). Sellers, et al. (1997) reported an alpha reliability exceeding 0.70 for the original measure with college students. Sample items that were used with adolescents appear in Appendix D. Students used a 5-point scale to indicate how much they agreed or disagreed with each of the 6 items assessing the extent to which being African American is central to their definition of themselves (e.g., “Being Black is an important part of who I am”). Item scores were averaged, ranging from 1 to 5.

Demographics. Each student was asked to provide his or her age, gender, and race/ethnicity. Race was assessed with a checklist asking students to select their race from five choices, which were White, African-American/Black, Latino, Asian/Asian American, and Other.

Procedures

Informed parental consent was obtained for all participants in compliance with policies of the University of North Carolina Institutional Review Board. At Time 1, students were asked to complete the questionnaires in a private setting with other student participants. During the group testing, students were seated in a way in which classmates could not see what others wrote. Students were given instructions on how to complete the questionnaires, and any questions regarding the testing procedures were answered. Completion of the questionnaires took approximately 30 minutes for each student. Two to three weeks following Time 1, students completed the measures a second time. The Time 2 procedures were the same as Time 1 procedures. Students received modest incentives (valued $15) after the Time 2 assessment.
RESULTS

The data were analyzed using the SPSS Version 16 statistical program (SPSS, 2008). Preliminary analyses indicated that all variables were normally distributed. Means, standard deviations, and ranges (minimum, maximum) from Time 1 and Time 2 are reported in Table 1. Some students did not respond to all the items; therefore, the degrees of freedom in the analyses below reflect instances where cases were dropped from individual analyses because of missing data.

Test-retest reliability, split-half reliability, and alpha reliability are reported below. Consistent with the recommendations of Cohen (1988) and Furr and Bacharach (2008), Pearson product-moment correlations were used to assess test-retest reliability, and Spearman Brown coefficients were used to assess split-half reliability. Cronbach's alpha was computed to assess internal consistency. Split half and alpha reliabilities were calculated using data from Time 1. Reliability analyses are reported in Table 2.

Academic Self-Concept

Students' scores on the six academic self-concept items (i.e., math, writing, science, language arts, grades, and general intelligence) were averaged at each time point, and the Pearson product-moment correlation between the two was calculated. The correlation was significant and reached the desired cut-off of 0.70, indicating good reliability from Time 1 to Time 2, $r(27) = 0.78, p < .001$.

The Spearman-Brown coefficient was $r(27) = 0.76$, showing a strong relationship between the two halves of the scale, and Cronbach's alpha for the six academic items yielded a mean inter-item correlation of 0.46 and an alpha reliability of 0.83.
Table 1. Descriptive Statistics for Motivational Measures, $N = 30$

<table>
<thead>
<tr>
<th>Study Variables (Time 1)</th>
<th>Mean (SD)</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic self-concept</td>
<td>17.4 (4.30)</td>
<td>4.7</td>
<td>24.0</td>
</tr>
<tr>
<td>Attributions (discrimination/resources)</td>
<td>2.1 (0.84)</td>
<td>1.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Attributions (attitudes/behaviors)</td>
<td>2.2 (0.73)</td>
<td>1.0</td>
<td>3.7</td>
</tr>
<tr>
<td>Group competence (Blacks)</td>
<td>65.5 (14.0)</td>
<td>48.3</td>
<td>93.3</td>
</tr>
<tr>
<td>Group competence (Whites)</td>
<td>67.5 (19.7)</td>
<td>14.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Group competence (Girls)</td>
<td>69.3 (17.2)</td>
<td>38.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Group competence (Boys)</td>
<td>58.9 (16.8)</td>
<td>24.2</td>
<td>94.8</td>
</tr>
<tr>
<td>Preparation for bias socialization</td>
<td>2.5 (0.80)</td>
<td>1.5</td>
<td>4.1</td>
</tr>
<tr>
<td>Cultural socialization</td>
<td>3.4 (0.95)</td>
<td>1.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Negative Messages</td>
<td>1.7 (0.91)</td>
<td>1.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Racial Centrality</td>
<td>3.8 (0.63)</td>
<td>2.5</td>
<td>5.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study Variables (Time 2)</th>
<th>Mean (SD)</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
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<tr>
<td>Academic self-concept</td>
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<td>7.8</td>
<td>22.2</td>
</tr>
<tr>
<td>Attributions (discrimination/resources)</td>
<td>2.0 (0.68)</td>
<td>1.0</td>
<td>3.3</td>
</tr>
<tr>
<td>Attributions (attitudes/behaviors)</td>
<td>2.0 (0.63)</td>
<td>1.0</td>
<td>3.8</td>
</tr>
<tr>
<td>Group competence (Blacks)</td>
<td>70.4 (18.8)</td>
<td>36.6</td>
<td>99.9</td>
</tr>
<tr>
<td>Group competence (Whites)</td>
<td>75.3 (15.8)</td>
<td>47.1</td>
<td>97.6</td>
</tr>
<tr>
<td>Group competence (Girls)</td>
<td>68.7 (16.2)</td>
<td>38.0</td>
<td>99.7</td>
</tr>
<tr>
<td>Group competence (Boys)</td>
<td>64.9 (16.8)</td>
<td>40.3</td>
<td>94.8</td>
</tr>
<tr>
<td>Preparation for bias socialization</td>
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<tr>
<td>Cultural socialization</td>
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<td>4.7</td>
</tr>
<tr>
<td>Negative messages</td>
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<td>1.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Racial Centrality</td>
<td>3.8 (0.58)</td>
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<td>5.0</td>
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</table>
Table 2. Scale Reliabilities

<table>
<thead>
<tr>
<th>Scale</th>
<th>Test- Retest</th>
<th>Split Half</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Self-Concept (Academic Items)</td>
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<td>.76</td>
<td>.83</td>
</tr>
<tr>
<td>Stereotype Attributions</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Discrimination/Lack of Resources</td>
<td>.70**</td>
<td>.90</td>
<td>.87</td>
</tr>
<tr>
<td>Attitudes and Behaviors</td>
<td>.73**</td>
<td>.88</td>
<td>.84</td>
</tr>
<tr>
<td>Group Competence (Gender and Race Stereotypes)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Students’ competence</td>
<td>.65**</td>
<td>---</td>
<td>.84</td>
</tr>
<tr>
<td>White Students’ competence</td>
<td>.74**</td>
<td>---</td>
<td>.95</td>
</tr>
<tr>
<td>Girls’ competence</td>
<td>.57**</td>
<td>---</td>
<td>.92</td>
</tr>
<tr>
<td>Boys’ competence</td>
<td>.75**</td>
<td>---</td>
<td>.89</td>
</tr>
<tr>
<td>Race Socialization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparation for Bias</td>
<td>.84**</td>
<td>.69</td>
<td>.80</td>
</tr>
<tr>
<td>Cultural Socialization</td>
<td>.91**</td>
<td>.84</td>
<td>.81</td>
</tr>
<tr>
<td>Negative Messages</td>
<td>.70**</td>
<td>.85</td>
<td>.80</td>
</tr>
<tr>
<td>Race Centrality</td>
<td>.79**</td>
<td>.77</td>
<td>.73</td>
</tr>
</tbody>
</table>

** p < .01

Group Attributions

Test-retest reliability was assessed separately for each of the two stereotype attribution subscales: Discrimination/Lack of Resources and Attitudes and Behaviors. Both scales showed good test-retest reliability, r(28) = 0.70 and 0.73, p < .001, respectively.

The two stereotype attribution scales also showed strong split-half reliability. The correlation between the first half and second half of the Discrimination/Lack of Resources subscale was r(28) = 0.90. The correlation between the first half and second half of the Attitudes and Behaviors subscale was r(28) = 0.88. Mean inter-item correlations were 0.52 and 0.46, and alpha reliabilities were 0.87 and 0.84 for the Discrimination/Lack of Resources subscale and the Attitudes and Behaviors subscale, respectively.
Group Competence

Reliability analyses were conducted for ratings of each racial and gender group (i.e., Black students, White students, girls and boys). Test-retest reliability was $r(28) = 0.65$, $p < .001$ for ratings of Black students and was $r(28) = 0.74$, $p < .001$ for ratings of White students. Similar results were found for the stability of ratings of gender groups ($r(28) = 0.57$, $p < .001$ for ratings of girls, and $r(28) = 0.75$, $p < .001$ for ratings of boys).

Cronbach's alpha was used to estimate the alpha reliability of the group competence scores. Mean inter-item correlations ranged from 0.46 to 0.76, and score reliabilities were strong, ranging from 0.84 to 0.95 (see Table 2). Because of the small number of items, split-half reliability was not examined for these measures.

Racial Socialization

Reliability analyses were conducted separately for the three subscales assessing parental socialization messages: Preparation for Bias, Cultural Socialization, and Negative Messages. All three scales showed excellent test-retest reliability, $r(27) = 0.84$, $r(28) = 0.91$, and $r(28) = 0.70$, respectively, and significance levels for all were $p < .001$.

Internal consistency of these measures also was strong. Split-half reliabilities were $r(28) = 0.69$, 0.84., and 0.85 for the Preparation for Bias, Cultural Socialization, and Negative Messages subscales, respectively. Mean inter-item correlations ranged from 0.35 to 0.47 with adequate reliability demonstrated for all three subscales (see Table 2).

Racial Centrality

Analyses on the six items assessing racial centrality indicated strong test-retest reliability, $r(28) = .79$, $p < .001$. The Spearman-Brown correlation between the two halves was $r(28) = 0.77$. The mean inter-item correlation was 0.32, with an alpha reliability of 0.73.

DISCUSSION

Using a sample of African American youth, this study examined the reliability of five achievement-motivation related measures (i.e., academic self-concept, attributions about group
differences in academic outcomes, perceptions of group competence, race centrality, and racial socialization). With the exception of two of the group competence scales, all of the measures examined in this study showed strong test-retest reliability from Time 1 and Time 2. That is, all test-retest correlations except for competence of Blacks and competence of girls were 0.70 or greater, which is the criterion defined by Cohen (1988) for adequate stability of measurement. In addition, all of the alpha coefficients exceeded 0.70, which has been recognized as an acceptable reliability coefficient (Nunnaly, 1978), and most exceeded 0.80. The examination of the split-half reliability mirrored the alpha reliabilities. All of the measures had acceptable reliability coefficients; thus, the scales were measuring the same underlying construct.

The present findings suggest that these measures have promise for use with students of middle-school age and can be useful tools for researchers to explore factors that are related to achievement striving in African American adolescents. These results further extend possible applications of two of the measures previously used with adults. In particular, the Multidimensional Inventory of Black Identity had previously been found to be a reliable measure of racial centrality with young adults (Sellers, et al., 1997), and racial socialization had been reliably measured by Hughes and Chen (1997) in parents. The present study demonstrates the strong psychometric properties of these two measures with a sample of young adolescents. Additionally, the academic self-concept measure, which was first used with White students, has demonstrated strong reliability in this sample of Black middle-school students.

Measurement of Motivational Constructs

A number of changes can be made to improve the measurement of these constructs. Because any test is only a sample of all possible items, the item sample itself can be a source of error. As such, longer tests are typically more reliable than shorter tests; thus, for the group competence measures, it is clear that more items are needed to better understand students' underlying beliefs.

In addition, other measurement methods might produce measures with stronger psychometric properties. For example, the gender and race stereotypes measure utilized visual analog scales (VAS). Some researchers have argued that VAS attempt to produce interval/ratio data
out of subjective values that are at best ordinal (Wewers & Lowe, 1990); thus, ordinal measures of
group competence might be preferable.

Study Limitations

It is important to interpret the findings of this study in the context of its methodological
limitations. First, this study was based on a non-representative, purposively selected sample of
African American middle-school students in Guilford County, North Carolina. As such, the findings
in the present study can not be generalized to African American students of other age groups and
different schools. Factors such as age, educational level, and region of the country might preclude
reliability in samples of other African American students.

Second, because of the difficulty in recruiting African American adolescents, the sample
was fairly small for the reliability analysis conducted in the present study. Generally, researchers have
acknowledged the highly variable estimates produced by small sample sizes and have recommended
larger sample sizes to increase statistical power (Strube, 1991). As such, future researchers need
to determine the extent to which the results found in this study are generalizable to other adolescent
populations, and they should use a large sample. Despite these limitations, the results from the
present study are promising in providing researchers with reliable motivational measures that will be
useful in research aimed at better understanding the factors that lead to academic success in African
American youth.

REFERENCES

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Appendix A
Stereotype Attribution Scale Items

1. Black kids don’t have as many advantages as Whites that help them at school.*

2. For Black students, studying a lot is not cool. **

3. Because of their race, Black kids are usually placed in lower achieving classes than Whites.*

4. White students usually go to schools with more resources (e.g., computers, books, lab equipment) than Black students.*

5. Black students don’t care as much about school success as White students. **

6. Black kids don’t work as hard as White kids.**

7. Teachers expect White kids to do better in school than Blacks.*

8. Black students are often discouraged from being in Honors or AP classes.*

9. For Black students, doing well in school is not important in order to become successful. **

10. White students are smarter than Black students.*

11. Black students don’t study very much. **

12. Black teenagers are better at sports and music than at school work. **

---

* Discrimination/Lack of Resources Item

** Attitudes and Behavior Item
Appendix B

Group Competence Items

I think that in MATH _______ (White, Black, girl, boy) students do this well:
I think that in SCIENCE _______ (White, Black, girl, boy) students do this well:
I think that in MUSIC _______ (White, Black, girl, boy) students do this well:
I think that in ENGLISH _______ (White, Black, girl, boy) students do this well:
I think that in SPORTS _______ (White, Black, girl, boy) students do this well:
I think that _______ (White, Black, girl, boy) students find ENGLISH:
I think that _______ (White, Black, girl, boy) students find MATH:
I think that _______ (White, Black, girl, boy) students find SCIENCE:

When it comes to MAKING FRIENDS, I think that _______ (White, Black, girl, boy) students:
I think that _______ (White, Black, girl, boy) students' SCHOOL GRADES are:
I think that _______ (White, Black, girl, boy) students are this SMART:

Appendix C

Sample items from the Race Socialization Scale

1. Talked to you about racism.*
2. Said that people might treat you badly due to race.*
3. Told you to dress in ways that are less Black.***
4. Talked about something you saw on TV that showed poor treatment of Blacks.*
5. Told you that being Black is nothing to be proud of.***
6. Taken you to Black cultural events.**
7. Told you it is best to act like Whites.***
8. Taken you to get Black clothes (FUBU) or hair styles (e.g., corn rows).**
9. Told you that Black kids must be better than White kids to get the same rewards.*
10. Talked about the accomplishments of Black individuals.**
11. Told you that White businesses are more reliable than Black businesses.***
12. Told you that learning about Black history is not important. (reverse coded)**

*Preparation for Bias Items; **Cultural Socialization; ***Negative messages.
Appendix D

Sample Items from the Race Centrality Scale (Sellers, et al., 1997)

1. Being Black is an important part of who I am.

2. I have a strong sense of belonging with Black people.

3. I prefer to watch movies or television programs in which Black people are the main characters.

4. I feel close to other Black people.

5. Most of my friends are Black.

6. I prefer to read books in which Black people are the main characters.
IS MEDICAL MARIJUANA THE 21ST CENTURY LOTTERY?
DIFFUSION PATHWAYS FOR STATE ADOPTION OF MEDICAL MARIJUANA LAWS

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While the U.S. government and law enforcement continues to fight the "War on Drugs" (a term the Obama Administration prefers not to use) (Fields, 2009), public debate over the continued illegality of certain drugs apparently has increased over the years—in particular, the use of Cannabis Sativa (commonly known as "marijuana"). In recent years, several states have enacted policies that both allow the use of marijuana for medical purposes by individuals with certain medical conditions and the dispensation of marijuana by their physicians (Medical Marijuana, ProCon.org, 2010a). In addition, this author observes that the current news cycle is replete with stories of states considering passage of their own policies to allow its sale and use. What factors influence states to promulgate policies allowing medical marijuana use (or to pass existing, perhaps previously dormant, bills into law)?

In this monograph chapter, an examination is conducted of determinants that may foster policy innovation and influence states to consider or to adopt medical marijuana laws that would: (1) allow individuals with certain diagnosed medical conditions to use marijuana as part of their treatment plan, (2) allow doctors to dispense the drug to patients with "acceptable" medical conditions as part of their treatment plan, and (3) allow certain individuals to grow and sell the drug without the negative legal repercussions that currently exist for both users and suppliers (i.e., on the state level). Using ordered logit modeling, the investigation is focused on factors influencing consideration and/or eventual promulgation of medical marijuana laws by states in a context that is comparable to a traditional policy-innovation framework. Addressing medical marijuana legislation is important because in the wake of current debate regarding health care reform, rising drug costs, and the economic downturn affecting government revenues (e.g., Cohen, 2006; Cohen & Clark, 2003; Heinrich & Mathre, 2001; Kreit, 2003; Schrag, 2002; Skidmore, McCaffery, Krumm, & Glick, 1998), the passage of medical marijuana legislation by several states (e.g., California, Oregon, Michigan,
etc.) suggests that the illicit connotation of marijuana usage has been outweighed by its potential usefulness as a cheaper alternative medication for alleviating certain disease symptoms. As such, it has the potential to generate additional revenue in cash-strapped economies.

**MEDICAL MARIJUANA – THE 21ST CENTURY LOTTERY?**

In the early 1990s, several states began justifying the implementation of a lottery as a plausible means of raising state revenues (Berry & Berry, 1990, 1992). Over the decade, other states followed suit. As of 2009, 41 of the 50 states have some type of lottery in place (e.g., scratch-off games, Lotto, and daily games) (Lottery Results, www.usa.gov). According to the "Lottery Results" website, several of these states are located in the ultra-conservative South where the justification for the lottery, which originally may have been deemed immoral gambling activity that would breed illegality, apparently is that lottery proceeds are to be used for education, which is considered a positive end.

In the 21st Century, it seems clear that many states are justifying promulgation of policies allowing legalization of marijuana—a drug considered a "gateway drug" and hence both illegal and immoral (Cohen, 2006; Cohen & Clark, 2003)—for medical use and to generate revenues for the states. In addition, these authors conclude that recent federal and state policy changes have made state consideration of medical marijuana production, sale, and usage a more attractive offer. Currently, 14 states have laws allowing medical marijuana production, sale and usage (beginning with California in 1996), and 12 more have pending bills in the state legislature favoring legalization (Medical marijuana, ProCon.org web site, 2010b). In January 2010, the State of New Jersey legalized medical marijuana laws (with fairly strict standards), and a California Assembly panel has voted to legalize marijuana across the board (regardless of usage) (Grim, 2010). In addition, two more states (i.e., Arizona and Maryland) have passed more favorable laws towards medical marijuana but have not drafted specific bills to legalize it (Medical Marijuana, ProCon.org, 2010b). This ProCon.com web site also indicates that as part of the legislation most states require sellers and users to obtain identification cards to establish legitimacy. In addition, in many states, users are only allowed to possess certain usable amounts of the drug and a certain number of plants, and identification cards obtained in one state may or may not be honored in another state. Furthermore,
this web site documents that despite an individual’s adherence to state law, federal agents still were able to pursue and arrest marijuana growers and users, as the drug was still illegal under federal laws. On October 19, 2009, the federal government issued a new medical marijuana policy whereby the government will no longer pursue pot-smoking patients or sanction suppliers in states that allow medical marijuana (Stout & Moore, 2009). This policy essentially reverses the Court’s decision in Gonzalez v. Raich in which the Court ruled that patients using marijuana as part of a medical treatment plan should be prosecuted for possession (Gostin, 2005; Rosenbaum, 2005). Finally, it seems that the notion of growing medical marijuana as a vocation is gaining steam in some circles. A November 2009 article in The New York Times by Tamar Lewin addressed the fact that individuals are taking classes to learn how to grow medical marijuana in Michigan, which has recently adopted its own pro-legalization medical marijuana laws.

THE MEDICAL MARIJUANA LEGALITY/PHARMACOLOGY NEXUS

Marijuana is regarded as a “Schedule 1 substance” under the Controlled Substances Act of 1970 (Chapter 1 §811). Drugs placed under Schedule 1 (including heroin, LSD, and methaqualone) are characterized as substances with “(1) a high potential for abuse, (2) no currently accepted medical use in treatment in the United States, and (3) a lack of accepted safety for use of the drug or other substance under medical supervision” (Chapter I, The Controlled Substance Act, 2001). Though illegal under federal law, the use and/or possession of Schedule 1 substances have been found acceptable under approved research conditions (Clark, 2000). Over the years, it has been argued that marijuana should be moved from Schedule 1 classification to Schedule 2 (e.g., which include cocaine, methadone, methamphetamine, and morphine, Chapter 2, 2001). According to this Drug Enforcement Administration (DEA) web site, Schedule 2 drugs “(1) have a high potential for abuse, (2) have a currently accepted medical use in treatment in the United States or a currently accepted medical use with severe restrictions, and (3) if abused, may lead to severe psychological or physical dependence” (http://www.justice.gov/dea/pubs/ abuse/1-csa.htm#Schedule%20II). Schedule 2 drugs are available by prescription; however, attempts to move marijuana to Schedule 2 have been halted by the DEA perhaps because the agency personnel apparently believe the drug has no redemptive medical value, despite studies to the contrary. In addition, the DEA would only
consider re-categorization upon the completion of controlled, double-blind clinical trials by the Food and Drug Administration (FDA), and their approval of the change (Clark, 2000). As of 2006, the FDA determined there were no “sound scientific studies” to support the use of medical marijuana; as such, the likelihood of the drug’s re-categorization currently seems unlikely (Harris, 2006). Nevertheless, a medical marijuana/federalism nexus exists in the sense that the federal government has left issues of production and dispensation of marijuana for medical purposes to the states; as such, each state has the option to promulgate their own laws related to medical marijuana dispensation, possession, and usage.

Despite the government’s stricture, marijuana has been used for decades for medicinal as well as for recreational purposes in the United States since the mid-1800s (Grinspoon & Bakalar, 1997). The most common medical usage of marijuana is to alleviate symptoms related to several medical conditions, primarily cancer, glaucoma, and AIDS (Annas, 1997; Clark, 2000; Grinspoon & Bakalar, 1997; Pacula, Chriqui, Reichmann, & Terry-McElrath, 2001; Schrag, 2002; Voth & Schwartz, 1997). The active ingredient of marijuana is a chemical known as tetrahydrocannabinol (THC), which is the chemical that produces the pharmacological effects. As such, the THC in marijuana has been found to (1) alleviate pain and is used as palliative treatment in cancer patients, (2) lessen the side effects of drugs used in treating certain conditions (including cancer) such as nausea, anorexia, cachexia, depression, lethargy, etc., and (3) relieve intraocular pressure in patients with glaucoma (Grinspoon & Bakalar, 1997; Schrag, 2002; Voth & Schwartz, 1997). Because of these medical benefits, several organizations openly accept and support the use of medical marijuana (e.g., AIDS Action Council, National Association for Public Health Policy); other groups, however, do not support the current use of medical marijuana, but do support additional research on the potential uses of medical marijuana (e.g., American Academy of Addiction Psychiatry, American Cancer Society) (The 2002 petition to reschedule cannabis..., 2006).

Arguments For and Against Adoption of Medical Marijuana Laws

Despite favorable reviews on the usage of marijuana for medicinal purposes and the number of states giving serious consideration to adopting their own laws, many state legislatures (and individuals within the legislatures) still argue for or against their home state’s promulgation of
comparable laws. In addition to its medical benefits, many of the more current arguments for adoption of marijuana laws include: (1) the states will control the revenues—not the criminal element (Pros of marijuana legalization, 2010); (2) growth, production, distribution, sale, and taxation of marijuana can be a source of employment and revenue for the state (Mcdonald, 2009); and (3) the use of marijuana for certain illnesses can provide health benefits that may equal or supersede those of man-made, ostensibly more expensive pharmaceuticals (Pros of marijuana legalization, 2010). Under the first three arguments above, (4) marijuana can be re-categorized and conceivably removed from the “war on drugs,” and it could be placed in a category commensurate to that of alcohol in terms of regulation. Finally, advocates for legalization of medical marijuana see this action as a federalism issue because it allows for devolution of power from the federal to state/local governments (Kreimer, 2001; Kreit, 2003; Pickerill & Chin, 2007).

Just as there are arguments for adoption, there are those who argue against legalization of medical marijuana. One of the current arguments against adoption is the notion that states do not need the additional revenues so badly and that justifying an already illicit drug is not necessary (even in the wake of the current economic downturn and the across-the-board budget cuts suffered by state and local governments). In fact, Stutman (2009) who writes on the Bloomberg Business Week web site asserts that tax revenues would be outweighed by costs related to problems associated with increased use. Another argument – this one made by the federal government itself – is that a synthetic version of THC (“Marinol”) is already available by prescription, allowed by the federal government, and has been tested by the FDA (i.e., the synthetic version is available in pill form, which is considered to be a much more effective drug-delivery system than smoking; “Medical” marijuana web site – The facts..). Other arguments against adoption may point to challenges from pharmaceutical companies who manufacture Marinol (e.g., Solvay Pharmaceuticals, Inc; Marinol product information, 2010), issues regarding the quality and effectiveness of smoked marijuana versus Marinol, and individuals who have religious/moral objections to the consumption of marijuana—regardless of its potential benefits.
Innovation, a word used primarily to describe policy movement, is defined as "an idea, practice or object that is perceived as new to [the state] or unit of adoption" (Rogers, 1983, p. 135). According to Satterthwaite (2002), each state that adopts a policy—not just the first state to adopt a policy—is an innovator. Furthermore, the actions of the states passing pro-legalization policies or drafting pro-legalization legislation represent a type of policy innovation. In the next section, those factors that may cause a state to join the existing list of innovators with regard to medical marijuana legalization will be addressed.

**Diffusion: Internal and External Determinants**

In order to explain why some states adopt policies before others, scholars (e.g., Berry & Berry, 1990, 1992; Boehmke & Witmer, 2004; Glick & Hays, 1991; Hays 1996; Mohr 1969; Mooney, 2001; Satterthwaite, 2002) have defined and identified three types of explanations: (a) Internal determinants, or factors within the state and may include political, economic, and social characteristics; (b) external determinants, which are "influences that come from outside the state and may include regional diffusion, federal incentives, and professional associations" (Satterthwaite, 2002, p. 117); or (c) a model which combines both internal and external determinants (Berry & Berry, 1990; Satterthwaite, 2002). In much the same manner, these explanations can be used to determine if states will follow the examples of others and file a lawsuit/join an existing lawsuit in pursuit of relief that is comparable to that of neighboring states.

With regard to internal determinants, most studies related to diffusion and innovation regard economic factors of a state as a major predictor of a state's ability to adopt a policy (Berry & Berry, 1990; Boehmke & Witmer, 2004; Daley & Garand, 2005; Mooney, 2001; Satterthwaite, 2002; Volden, 2006; Walker, 1969). For example, Walker (1969) found that large, wealthy states have more economic resources; therefore, they usually are able to develop more new programs and thus are considered more innovative than smaller, poorer states. In addition, the state's fiscal condition may determine its innovativeness as well (Berry & Berry, 1990; Boehmke & Witmer, 2004). In their examination of lottery adoptions, Berry and Berry found that in states where the expenditures superseded revenues, the state itself was more likely to give consideration to the lottery as a means
of increasing state revenue. Boehmke and Witmer found that similar budgetary shortfalls may be
taken into consideration when a state decides to enter into a Class III gaming compact with an Indian
nation. Given the 2008 economic downturn, these authors conclude that virtually all states currently
are experiencing budgetary shortfalls. Moreover, several states, such as California, are identified
as using medical marijuana revenues to help address those shortfalls. It is feasible to assume that
shortfalls are more damaging to poorer states and may entice some to consider passage of some
form of pro-legalization legislation in the future.

External determinants that drive policy studies generally incorporate some form of regional
diffusion, which apparently is influencing a state or country into action regarding a policy based on
the behavior of its neighbors. The regional diffusion model presented by Berry and Berry (1990) and
Haider-Markel (2001) indicates that states try to imitate their neighbors regarding policy adoption,
and they generally are most likely to adopt the policy if states in the same region already have done
so. In terms of medical-marijuana legislation, it is anticipated that at some point, neighboring states
will be influenced by the states that have such legislation or that are in the process of taking similar
legislative action. Finally, many studies, beginning with Berry and Berry (1990), present models
combining both the internal and external determinants to explain policy diffusion (e.g., Boehmke
& Witmer, 2004; Daley & Garand, 2005; Mintrom, 1997; Mintrom & Vergari, 1998; Mooney, 2001;
Satterthwaite, 2002; Volden, 2006).

In studies regarding “traditional” policy innovation, the researcher is concerned with
temporal changes in state participation in an activity (i.e., how long it takes for states to adopt a
policy). In this study, the temporal effects of participation in the passage of medical marijuana laws
by states will not be examined. The first referenda regarding medical marijuana laws were passed
in 1996; since then, approximately 60% of the states in the union actively have addressed the idea
of legislation regarding medical marijuana (i.e., 14 states have laws on the books, two states have
passed favorable laws toward medical marijuana use but have not legalized its use, and 14 more
states are considering such laws; Should Medical Marijuana Be An Option?, Procon.org, 2010). In
light of the factors mentioned earlier and policies passed in late 2009 and early 2010 on either
the federal and state level as well as the notion that remaining states are ostensibly having (or, at
least contemplating) this debate, it seems clear that examining this research question while taking
temporal effects into consideration is premature. There are still approximately 20 states that have not addressed this issue based on this author’s review of print and internet sources, and it is unknown as to (a) how long it will take for one of these states to initiate legislation or (b) when, if ever, these states will adopt a policy for medical marijuana legalization.

The model employed in this study is the third type of model in which the internal and external determinants generally addressed in policy innovation are combined to analyze factors perhaps influencing an entity to adopt a policy legalizing medical marijuana or to put forth legislation regarding legalization, excluding temporal effects (i.e., without consideration as to how long it takes for the phenomenon to occur). The internal and external determinants for this study are combined to create the following model:

\[
\text{LEGISLATION}_t = \beta_0 + \beta_1 \text{FISCAL} + \beta_2 \text{TAX} + \beta_3 \text{RELIGION} + \beta_4 \text{DIVGOVT} + \\
\beta_5 \text{PARTY} + \beta_6 \text{NEIGHBORS} + \epsilon
\]

The Dependent Variable

In the current study, the dependent variable is the existence of pro-legalization legislation regarding medical marijuana by a state, whether or not it has been formally adopted and promulgated into policy. A “1” is assigned if a state has adopted a pro-legalization policy or has pending legislation favoring legalization; if there is no evidence of existing legislation or policy promulgation, a “0” is assigned. Because the dependent variable is dichotomous, logit modeling is used to examine these data.

The data are collected for all 50 states for the years 1996 (the year of the first state adopting a medical marijuana law) through 2008. In this analysis, independent variables for which data are not collected every single year are assumed to remain constant across more than one year.

The Predictor Variables

Based on the literature review, six predictor variables were selected for inclusion into the model for the current study. They include: Economic indicators (i.e., fiscal spending ratio and per capita taxes), religious indicators (i.e., proportion of a state’s Christian adherents), and political indicators (i.e., party control, party strength, and regional diffusion).
Economic Indicators

Berry and Berry (1990) point out that states are more likely to be innovative in terms of tax policy when they are in poor fiscal condition or if they have greater financial need. This was especially true of the adoption of lotteries across poorer states in the South (including South Carolina in the late 1990s). States already struggling to increase revenue sought to dam the potential revenue stream flowing to neighboring states that already had the lottery system in place yet were being patronized by their own residents.

The FISCAL variable is the fiscal condition of a state in the previous year. To control for size, it is measured as ratio of total state revenue minus total state spending to that state’s total spending per annum (Berry & Berry, 1990; Satterwaite, 2002). The variable is lagged since policy decisions usually are made based on the budget of the previous year. Also, lagging this FISCAL variable ensures that a state’s fiscal condition is causing them to consider medical marijuana legalization. The values were obtained from the U.S. Census Data – State Government Finance Data. Along with the FISCAL variable, the TAX variable is a common indicator of a state’s fiscal capacity and represents the average amount of taxes paid, per capita, in each state (Satterthwaite, 2002): Like FISCAL, the TAX variable also is lagged because policy decisions are made based on the figures from the previous year. The 1996-2005 TAX data are obtained from U.S. Census Data – State Government Finance Data, while the 2006 data are obtained from The Tax Foundation, and the 2007-2008 data are from the Federation of Tax Administrators, State Tax Collection Comparisons (i.e., the U.S. Census ceased collecting per capita income information in 2006).

It is expected that states in fiscal distress are more likely to draft or pass pro-legalization legislation because of the potential additions to the revenue stream. In addition, states experiencing lower per capita tax returns in the previous year are expected to be more likely to legalize medical marijuana or draft pro-legalization legislation. This is summarized in the first hypothesis:

\[ H_1: \text{The more negative economic indicators (i.e., poorer fiscal condition and/or lower tax collections) present in a state the higher the probability the state will have pro-legalization legislation or policies.} \]
Religious Indicators

Studies show that religion (i.e., followers of religious fundamentalism) bears considerable influence on whether a government passes this type of legislation, which may conflict with the religious beliefs and practices of its followers. Members of the "Religious Right" (i.e., Protestant Fundamentalist Christians) are generally at the forefront of opposition with regard to legislation related to drinking, drugs, gambling, and homosexuality (Berry & Berry, 1990; Haider-Markel, 2001). It stands to reason that states with larger groups of people identifying themselves as devout Christians will be less likely to adopt a pro-legalization policy for marijuana regardless of whether the drug will be used for medicinal purposes because marijuana is regarded typically by these individuals as an illicit drug which prompts people to engage in additional behavior that runs counter to their religious beliefs. RELIGION is a variable that represents the number of religious adherents (i.e., Christian adherents) as a percentage of state populations. The data are obtained from the Association of Religion Data Archives, Churches and Church Membership in the United States, 1990 (State level data) and the Religious Congregations and Membership Study 2000 (State level data).¹

It is expected that states with higher proportions of Christian adherents will be less likely to draft or pass pro-legalization marijuana legislation. This position is summarized in the second hypothesis:

\[ H_2: \text{States with lower proportions of Christian adherents increase the probability of those states having pro-legalization legislation or policies.} \]

Indicators of Political Party Control

Studies have shown that partisan conflicts and divisions in government affect the ability of a state to engage in innovative activity (Berry & Berry, 1990; Boehmke & Witmer, 2004; Haider-Markel, 2001; Satterthwaite, 2002; Volden, 2006; Wong & Shen, 2002). With regard to marijuana usage, this author argues that Republicans (and conservatives in general) are less likely to separate the criminal element of marijuana possession and usage from the potential benefits and revenue potential (even though the states deciding their own fate regarding medical marijuana would be a 10th Amendment right, which is highly favored by conservatives). On the other hand, Democrats (and liberals in general) tend to favor legalization of marijuana for both medical and recreational

¹Since these data are available for 1990 and 2000 only, it is assumed that the state percentage population of Christian adherents remains stable during the data range periods (between 1996-2000 and 2001-2008).
purposes, and they typically are more likely to be supporters of legalization if it increases state revenue and hopefully reduces both criminal activity and the number of arrests/incarcerations due to drug possession. Consequently, if both houses of the legislature are made up primarily of Republicans, there is an expectation that legalization of marijuana for medicinal purposes is less likely. If Democrats are in the majority, there is an expectation that legalization of marijuana for medical purposes is more likely. At the same time, if one party controls the legislative branch and the other party controls the executive branch, the disparities become evident when the Republican (Democratic) governor attempts to veto legislation sent from a Democratic (Republican) legislature. If the executive and legislative branches of state government are controlled by a single party, the overall liberal or conservative nature of the unified government dictates the ability of the state to engage in innovative activity.

Divided Government (DIVGOVT) is a dichotomous variable specifying whether a single party controls the legislative and/or executive institutions of state government. A “1” indicates a unified government; and “0” indicates a divided government. These data are obtained from the National Conference of State Legislatures (2007); additional data regarding a governor’s party affiliation are obtained from the National Association of Governors. With regard to the medical marijuana legislation, it was expected that states with unified government are more likely to draft or pass pro-legalization legislation.

The PARTY variable is replicated from the work of Satterwaite (2002) on medicaid programs, and it measures the strength of the Democratic Party in a particular state’s institutions. A “4” indicates Democrats control both houses of the legislature and the governorship. A “3” indicates Democrats control one house and the governorship or both houses of the legislature. A “2” indicates Democratic control of the governorship only or one house in the legislature only. Finally, a “1” indicates Republican control of both the legislative and executive institutions. These data are obtained from the National Conference of State Legislatures. It is expected that states in which Democrats have greater control of the legislative and executive institutions are more likely to have pro-legalization medical-marijuana legislation. Conversely, it also is expected that states with Republican-dominated governments will have a lower probability of having pro-legalization medical-marijuana legislation.
These party-control indicators are expected to be applicable with regard to medical marijuana legalization for the purposes of this research. This expectation is summarized in the third hypothesis:

\( H_3: \) Party Control indicators that suggest Democratically-held majorities and a unified government increase the probability that a state will have pro-legalization legislation/policies.

**Indicators of Regional Diffusion**

The NEIGHBORS variable represents the number of neighboring states that have addressed legalization of medical marijuana (Berry & Berry, 1990; Boehmke & Witmer, 2004; Haider-Markel, 2001; Mintrom, 1997; Mintrom & Vergari, 1998; Soule & Earl, 2001; Satterthwaite, 2002; Volden, 2006; Wong & Shen, 2002). It is measured as the number of bordering states with pending pro-legalization legislation or that promulgated a policy of legalizing marijuana for medical use in a given year. The number will increase as more states officially pass their pending pro-legalization legislation or draft pro-legalization legislation. The expectation was that this indicator of regional (horizontal) diffusion exists, and it is summarized in the fourth hypothesis:

\( H_4: \) The Regional Indicator suggests that states with pro-legalization legislation or have already adopted a legalization policy increase the probability of neighboring states having pro-legalization legislation/policies.

**ANALYSIS AND DISCUSSION**

The results of the logit model analysis are shown in Table 1. Because logit parameter estimates do not lend themselves as easily to interpretation as OLS coefficients, the odds ratios also are reported as estimates.

As noted in the table on the next page, there is considerable support for all four hypotheses and several of the internal determinants based on the logit analysis. With regard to the economic indicator variables, only the per capita tax variable is statistically differentiable from zero and is evidence that an increase in the amount of per capita tax actually increases the probability of a state adopting pro-legalization legislation but not by much at all. Specifically, the
Table 1: Determinants of Pro-Legalization Legislation for Medical Marijuana

<table>
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<tr>
<th>Economic Indicators</th>
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<th>Parameter Estimate</th>
<th>Z-score</th>
<th>Odds Ratios</th>
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<td>.001***</td>
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<td>Christian Adherents by State</td>
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<td>.810</td>
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<td>Indicators of Party Control</td>
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<td>Divided Government</td>
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<td>.399*</td>
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<td>Indicators of Regional Diffusion</td>
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</table>

Dependent Variable: 1=state has pro-legalization legislation (promulgated or pending); 0=state has no pro-legalization legislation

* p<.05 ** p<.01 ***p<.001

The prospect of this legislative innovation is roughly one-tenth of one percent higher when there is a one-unit increase in the amount of per capita taxes paid. Furthermore, the fiscal condition of a state appears to have no effect on whether said state will have pro-legalization legislation or actively promulgate such policies. The results of the analysis of the two party control variables suggest the presence of divided government does not appear to have any discernible effect on the existence of said legislation; however, a Democratic majority in state leadership is more likely to result in pro-legalization legislation or policies. The odds ratios suggest this innovation is nearly 52 percent higher when there is a one-unit increase in states with a Democratic governmental majority. As predicted, states with higher percentages of Christian adherents as a proportion of the population are less likely to address pro-legalization legislation or promulgate a marijuana pro-legalization policy, and a one-
A unit increase in the percentage of Christian adherents in a state lessens the probability of innovation by nearly 20 percent.

The regional-diffusion indicator is statistically differentiable from zero, which supports the notion that as more neighboring states have pro-legalization legislation or a promulgated policy, the likelihood that a state will create its own legislation or policy will increase. In fact, the odds ratios suggest innovation is over 56 percent higher when there is a one-unit increase in the number of neighboring states having pro-legalization legislation or policy. Clearly, the hypothesis that states will be compelled to draft their own pro-legalization legislation because they are emulating their neighbors is supported.

The last thing assessed was the fit of the logit model. To do so, it was helpful to create a ROC (i.e., Receiver Operating Characteristic) curve graph, which is a highly beneficial way to assess model fit for binary response models.² Oftentimes used in medicine, a ROC curve estimates the sensitivity (i.e., in this case, the proportion of actual positives, or states with pro-legalization legislation/policies) versus specificity (i.e., in this case, the proportion of actual negatives, or states that have not addressed medical marijuana legalization with legislation or policies). In a ROC curve,

![Figure 1: ROC Curve, Medical Marijuana Logit Analysis](image-url)

Figure 1: ROC Curve, Medical Marijuana Logit Analysis

Area under ROC curve = 0.9179

²An introduction to ROC curves can be found at http://www.anaesthetic.com/mnm/stats/roc/Findex.htm.
the amount of area under the curve provides a summary measure of model fit. Values range from .50 to 1.00, are arranged in quintiles and descending order of fitness; thus, a ROC score between .90 and 1.00 indicates excellent model fit, .80-.90 indicates good model fit, and so on. The area under the ROC curve for the current study (See Figure 1) is approximately .9179, which indicates an excellent model fit.

CONCLUSION AND DIRECTIONS FOR FUTURE RESEARCH

Analysis of the findings of this research includes the suggestion that the potential for more states to engage in pro-legalization legislation regarding medical marijuana has been explained sufficiently by both a state’s internal and external determinants. The presence of neighboring states engaging in this type of policymaking appears to be the most compelling factor that will encourage a state’s political leadership to consider adopting medical marijuana policies. Nevertheless, the presence of a strong Christian base in the state may hamper a state’s progress towards policy promulgation, especially since the policy in question relates to “accepted” use of a currently illegal substance. It is clear, however, regarding a similar situation like the issue of lottery adoption in the 1990s, many states with strong percentages of Christian adherents eventually looked the other way and accepted the lottery in their states under the pretense that the proceeds are being used for “good” (i.e., education). This model, like other policy innovation and diffusion models that have come before, can be used to examine future situations where states consider certain policy actions and look to neighboring states to gauge potential success if said policy is implemented at home (See Berry & Berry, 1990; Boehmke & Witmer, 2004; Daley & Garand, 2005; Haider-Markel, 2001; Mintrom, 1997; Mintrom & Vergari, 1996; Mooney, 2001; Satterthwaite, 2002; Volden, 2006; Wong & Shen, 2002).

Over time, it is anticipated that every state will address the issue of medical marijuana legalization, and the legislatures will argue the pros and cons of promulgating such a policy. Several states have addressed medical marijuana in their 2009 legislative sessions and have bills that are pro-legalization bills. For future research, it seems reasonable to revisit this issue after these states and others have either adopted their own policy or have gone on record as to why they will not adopt a similar policy now or in the future. In any case, discussions of medical marijuana are unlikely to
abate any time soon as long as there are those who can ascribe positive uses to the drug, states in need of additional revenue, and no end in sight to the “War on Drugs”.

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Breast cancer is a heterogeneous disease with different tumor subtypes that have diverse genetic and environmental risk factors. Racial disparity in the presentation of breast cancer and the outcome of its treatment is well established. Incidence and mortality rates vary among different populations with African American (AA), Hispanic, Asian and Native American women, but all have a lower incidence and higher mortality rate compared to those of non-Hispanic white women (Chlebowski, et al., 2005). The overall incidence of breast cancer among African-American women is lower than that of European American (EA) women. Still, breast cancer occurs more frequently in young premenopausal AA women than in EA women (Ghafoor, et al., 2003). When diagnosed with breast cancer, AA patients of all ages are more likely to have characteristics of advanced-stage disease, higher risk of recurrence, and poorer overall prognosis which includes malignancy and metastasis (Cross, Harris, & Recht, 2002; Jatoi, Becher, & Leake, 2003; Rose & Royak-Schalder, 2001). These researchers found that in comparison to EA patients, AA patients were at higher risk for positive axillary nodes, hormone receptor-negative tumors, or positive axillary nodes associated with smaller tumors (Crowe, et al., 2005). Independent of socioeconomic status, AA patients are more likely to have poorer overall survival and disease-free survival rates for breast cancer in comparison to EA patients (Curtis, Quale, Haggstrorn, & Smith-Bindman, 2008).

Histologic grade in combination with hormone receptor expression status is used as an important standard prognostic factor when deciding patient management and treatment options. Among hormone receptors, human epidermal-growth factor receptor (HER-2/neu) is used as a strong predictor of survival (Henson, Chu, & Levine, 2003; Pinder, et al., 1998; Volpi, et al., 2004). A recent Detroit study evaluated the frequency of HER-2/neu over-expression in EA patients compared to AA patients along with the association of HER-2/neu expression with overall survival and other prognostic factors. HER-2/neu expression in AA patients was not different statistically from that
of EA patients nor was HER-2/neu expression associated with overall survival. Among the other prognostic factors analyzed, ER-α status and histologic grade were not significant statistically (Al-Abbadi, et al., 2006). Still, this study is not reflective of the overall consensus that AA women are diagnosed with late-stage/high-grade breast cancers more frequently than EA women (Crowe, et al., 2005; Curtis, et al., 2008).

There are several associations, including parity, breastfeeding, physical activity and diet, for the breast cancer severity disparity observed between populations (Beral, et al., 2002), but there are other associations that also can be made. Most studies that attempt to associate access to health care in the form of treatment options or screening find that such access reduces mortality rates in the United States (Berry, et al., 2005). The difference in frequency of particular tumor subtypes between populations may explain some of the differences in breast cancer incidence and mortality. Known genetic variants, such as BRAC1 and BRAC2 mutations, explain only a small percentage (5-10%) of breast cancer cases (Bergman, et al., 2007). One of several explanations for the higher incidence of ER-/PR- cancers in AA women is the observation of a higher frequency of hypermethylated genes in invasive breast cancer cells than in normal mammary epithelial cells (Mehrotra, et al., 2004). Still, there are no susceptibility genes that explain population differences in breast cancer severity (Zhang & Dolan, 2008). Studies attempting to associate the risk for particular tumor subtypes to confounding genetic and environmental or behavioral factors within different populations are needed to illuminate the incidence and mortality disparity seen between different populations. To design such studies, one must look at both genetic and behavioral- or environmental-risk factors that vary between subgroups of the population in which the study is to be conducted. One such risk factor is obesity.

OBESITY AS A RISK FACTOR

Disparity of Obesity between AA and EA Women

AA women are 60% more likely to be obese than EA women (Lewis, et al., 1997). Among those who are obese, AA women are 50% more likely to be moderately to severely obese than are EA women (Flegal, Carroll, Ogden, & Johnson, 2002). In a qualitative study that explored the perceptions of weight, weight loss, and body size among obese AA women, data displayed an attitude of acceptance of larger body sizes and a belief that body size should not influence a person's
feelings of attractiveness, self-esteem, or happiness in this study's participants (Befort, Thomas, Daley, Rhode, & Ahluwalia, 2008). Still, the women displayed concern about their weight and were largely self-conscious of their bodies. A majority of participants in the study reported wanting to lose weight for health-related reasons. This concern was emphasized by the fact that 75% of the Befort, et al. study's participants reported at least one of several co-morbidity issues including smoking, diabetes, hypertension, asthma, emphysema, and heart disease.

As is common among AA women, study participants expressed a collectivist orientation toward their lifestyles (Befort, et al., 2008). Befort and associates define collectivism as the belief that the central unit of society is social groups, most commonly the extended family, and not the individual. Collectivism prioritizes group goals over individual goals and thus emphasizes cooperation, responsibility for others, loyalty, helpfulness, forgiveness, family security, and respect for traditions (Kreuter & Haughton, 2006; Lukwago, Kreuter, Bucholtz, Holt, & Clark, 2001). The study participants' family-centered lifestyle was evident as they spoke about food as a way to bring family members together, and many women enjoyed cooking large meals for this reason. They also revealed a connection between family responsibility and weight gain; many seemed to prioritize family caretaking over their own health behavior change. When asked to assess behaviors that contributed to their obesity, study participants emphasized poor dietary behavior over the lack of physical activity for their weight gain. True to the collectivist cultural construct, the women in the study reported a need for more social support geared toward their weight loss (Befort, et al., 2008). As this qualitative study evinces, obesity in the AA community is culturally founded. To further illuminate the relationship between obesity and breast cancer in the AA population, further research, utilizing the community-based participatory research approach should be conducted.

**Obesity as a Risk Factor for Breast Cancer in Population Studies**

Though at one point it was considered a controversial relationship, a number of recent studies have found a negative effect of obesity (measured as weight gain, body mass index [BMI], waist-hip ratio or percent body fat) on prognosis in woman with breast cancer. The relationship between obesity and breast-cancer risk depends on several factors, including menopausal status (Carmichael, 2006; Dawood, et al., 2008; Kroenke, Chen, Rosner, & Holmes, 2005), extent of
Weight before diagnosis also has been found to be associated directly with breast cancer recurrence and death in breast cancer patients who never smoked (Kroenke, et al., 2005). In the patients who were categorized as obese (i.e., BMI >= 30 kg/m²), overweight (i.e., BMI of 25 to < 30 kg/m²), or normal/underweight (i.e., BMI < 25 kg/m²), high BMI has been associated with postmenopausal breast cancer. Among pre-menopausal women the opposite is true (Carmichael, 2006). Furthermore, being obese also influences more than cancer risk or progression; prognosis based on patient response to treatment is influenced by BMI. High BMI also has been shown to have a negative influence on pathologic complete response to neoadjuvant chemotherapy in women with operable breast cancer (Litton, et al., 2007).

With respect to breast cancer severity, locally advanced breast cancer (LABC), which includes breast tumors greater than 5 centimeters in diameter with no metastatic spread, those that involve the skin of the breast or the underlying muscles of the chest wall and cancers that have metastasized to local lymph nodes, typically has a worse prognosis in patients with high BMI. Obese LABC patients have been associated with higher incidence rates of inflammatory-breast cancer compared with overweight, normal, or underweight groups. LABC patients who were obese or overweight also have shown higher incidence rates of visceral cancer occurrence, worse overall survival rates, and worse recurrence-free survival (Dawood, et al., 2008).

To further illuminate the relationship between BMI and cancer development and progression, there has been a call for population-based cancer registries to include BMI information to assist with studies of cancer diagnoses and outcomes. Including BMI data would permit nationwide surveillance of BMI in a large population-representative cohort of cancer patients (Keegan, Le, McClure, & Glaser, 2008). As an example of such a study, a Swedish group created a cohort that followed-up hospitalized patients with a discharge diagnosis of obesity (Wolk, et al., 2001). Among cohort participants in the Wolk, et al. study, there was a 33% excess cancer incidence among obese people—25% among men and 37% among women. The study supports a positive association between obesity and elevated risks of several types of cancers including colon, brain, and larynx cancers. With breast cancer, there was an age-dependent effect of obesity on risk—there was lowered risk for young woman and an elevated risk for older women. In another
cohort study of 1,169 breast cancer patients from the Northern Alberta Breast Cancer Registry, data supported an inverse relationship between patient survival and BMI in estrogen receptor negative patients; however, BMI and estrogen-receptor level independently influenced breast cancer survival (Newman, Lees, & Jenkins, 1997). In a separate cohort of 14,709 patients, obesity was shown to be a negative prognostic factor for metastasis recurrence, disease free interval, overall survival, and second primary cancer outcome even in patients with more advanced tumors at diagnosis time (Majed, et al., 2008). In assessing the effect of BMI on prognosis in women with lymph node-positive breast cancer, increased BMI was associated positively with shorter time to recurrence and decreased survival. The negative relationship between BMI and these prognosis factors was stronger for younger women, those with progesterone receptor-negative disease, and those with a greater number of lymph nodes that were positive (Vitolins, et al., 2008). Overall, these cohort studies support the hypothesis that obesity has a negative influence on breast cancer prognosis.

**Molecular Explanations of Obesity as a Risk Factor for Cancer**

The endocrine system is an integrated system of small organs that are involved in the release of hormones, which are extracellular signaling molecules; therefore, the endocrine system is instrumental in the regulation of key body functions such as metabolism, growth, development (e.g., puberty), and tissue function (Prins, 2002). In addition, Prins indicates that the hormones released from the endocrine system also play a part in determining mood. Adipose tissue also provides several biological benefits. For example, in situations where there is not a consistent availability of food sources, the ability to store excess consumed energy is advantageous for survival. Because of the roles of biological factors that are produced by adipose tissue, it is now considered an organ of the endocrine system (Prins, 2002). As an endocrine organ, Prins notes that fat cells provide energy stores for gestation and lactation in females and hormones necessary for reproduction, as in the case of “leptin” for ovulation. Still, excess fat storage can be disadvantageous for long-term survival in that it is linked with orthopedic diseases, endocrine dysfunction, metabolic disease, psychological and psychiatric dysfunction, and increased cancer rates (Jazet, Pijl, & Meinders, 2003; Prins, 2002).

Pathologic conditions associated with obesity, such as hyperinsulinemia, metabolic syndrome, and diabetes, seem to increase the risk of breast cancer (Carmichael, 2006). Carmichael
indicates one possible mechanism explaining associations between obesity and cancer is insulin resistance, also known as hyperinsulinemia. Insulin is known to enhance the activity of insulin-like growth factor-1 (IGF-1). High levels of circulating IGF-1 are correlated with risk of development of breast cancer (Pollak, Schernhammer, & Hankinson, 2004). Another possible link between breast cancer risk and obesity is the hormone estrogen. Obese women have higher levels of estrone and estradiol in the serum (Folsom, Kaye, Potter, & Prineas, 1989; Wolk, et al., 2001) and decreased levels of SHBG (sex-hormone binding globulin), which in turn leads to an abundance of bioavailable estrogen (Davidson, et al., 1981; Wolk, et al., 2001). This bioavailable estrogen contributes to the risk of breast cancer. Among postmenopausal women, the primary source of estrone is aromatization of plasma dehydroepiandrosterone (DHEA), which is abundant in adipose tissue (Longcope, Bourget, & Flood, 1982); there is a direct relationship between BMI and breast cancer risk in post-menopausal women (Carmichael, 2006). Increased estrogen expression may be the link between obesity and breast cancer risk.

**ADIPOKINES AND BREAST CANCER**

Genetic polymorphisms in adipokines and their signaling pathways in combination with endogenous (steroid) and exogenous (nutritional and environmental) factors can affect breast cancer development. Type 2 diabetes (Patterson, et al., 2010) and the metabolic syndrome (Bjorge, et al., 2010), which are more common in AA women, also have been associated with breast cancer risk. Moreover, each of the individual components of the syndrome has been associated with increased breast cancer risk (Rose, Haffner, & Baillargeon, 2007). The relationship between adipokine expression or genetic polymorphism and breast cancer are highlighted in several studies. Several of these studies find variation in adipokine genes and expression may play an important role in risk and progression of breast cancer in obese people whereas others find no significant relationship at all (Rose, et al., 2007).

**The Tumor Necrosis Factor Alpha and Breast Cancer Association**

The tumor necrosis factor alpha (TNF-α) is involved in many diseases including malaria, AIDS, and cancer. As a 17 kDa soluble cytokine, it elicits a wide range of biological responses such as septic shock, inflammation, apoptosis, necrosis, cell proliferation, and immunity (Liu, 2005).
TNF-α exerts its biological activity by activating NF-κB (nuclear factor kappa-light-chain-enhancer of activated B cells) and signaling with its two receptors, TNF-RI and TNF-RII (Gupta, 2002). Similar to other adipokines, such as leptin, TNF-α has the potential to regulate glucose metabolism and insulin action indirectly in the target organs upon which insulin acts (Arner, 2005).

TNF-α is found in high levels in the fat cells of murine models, and once released into circulation, it can be counter-acted by neutralizing with TNF-α antibodies (Hotamisligil, Shargill, & Spiegelman, 1993). In contrast, TNF-α is described as being localized in the adipose tissue of humans, and TNF-α antagonists do not normalize insulin sensitivity in humans. Accordingly, the link between TNF-α obesity and insulin resistance in humans is thought to be indirect and is explained by the stimulatory effect of TNF-α on adipocyte lipolysis, which releases non-esterified free fatty acids (NEFAs) into the circulation. In obese humans, an increased level of TNF-α is thought to contribute to the elevated circulating NEFAs, which are observed in states of insulin resistance and consequently have adverse consequences for diabetes (Arner, 2005; Mohamed-Ali, et al., 1999). Though its role in insulin resistance is not direct when produced in large amounts, TNF-α can act as a tumor promoter by enhancing angiogenesis, by improving interaction between stroma and malignant cells within the extracellular matrix, and by inducing a growth-promoting hormone localization (Purohit, Newman, & Reed, 2002). It has been shown that TNF-α induces expression of angiogenic factors such as vascular endothelial growth factor, Interleukin-8, monocyte chemotactic protein-1, and matrix metallopeptidase 9, which facilitate invasion and metastasis in cancer progression (Seeger, Wallwiener, & Muecke, 2006).

One common hypothesis states that chronic inflammation in the vicinity of the breast tumor microenvironment, particularly induced by elevated levels of TNF-α can regulate the growth and progression of breast cancer through its relationship with estrogen receptors (Leek, et al., 1998). Estrogen receptors are known to exist in two forms—ERα and ERβ, regulate the biological activity of their ligand—estrogen. When ERα is bound to its ligand, transcription of proliferative genes is initiated via binding to the estrogen response elements of genes or by phosphorylating proteins that are involved in the signaling of cell-cycle progression (A. V. Lee, Cui, & Oesterreich, 2000). According to A. V. Lee and associates, estrogens (mainly 17β-estradiol) promote the growth and differentiation of reproductive tissues, including sexual organs, and it is hypothesized that the
proliferative activity of estrogen in these reproductive tissues is a risk factor for carcinogenesis. In addition, 17β-estradiol has been shown to induce proliferation of MCF-7 cells, which is a breast cancer-cell line that originated from a 69-year-old European American woman who previously underwent two mastectomies in a five-year span (Kim, Lee, Kim, Kim, & Min, 2005).

Alternatively, TNF-α may partly regulate the growth of MCF-7 breast cancer cells through the down-regulation of ERα expression (S. H. Lee & Nam, 2008). The inverse relationship between TNF-α and tumor promotion has been seen in other cancers as well. In a study involving pancreatic cancer cells, treatment with TNF-α increased the products of a marker of apoptosis, poly(ADP-ribose) polymerase, and decreased PANC-1 cell proliferation by 23% in PANC-1 cells (Kondo, et al., 2008). Nevertheless, in population studies, the TNF-α and anti-proliferative hypothesis is not supported. In a nested, case-control study conducted on 142 white women who were diagnosed with primary breast cancer, no increased or decreased risk of breast cancer was associated with high endogenous levels of TNF-α or its receptors (Krajcik, Massardo, & Orentreich, 2003). Since TNF-α stimulates the activities of the enzymes involved in estrogen synthesis in both normal and malignant breast tissue, these results indicate that exogenous TNF-α antagonists may not be an appropriate therapeutic approach with reducing inflammatory response and subsequently breast cancer risk in patients.

Though TNF-α protein expression levels do not corroborate the TNF-α and anti-proliferation hypothesis, increases in TNF-α protein resulting in anti-proliferative effects may be attributed to genetic polymorphisms in the gene encoding the protein. The TNF gene is located on chromosome 6 (6p21.3) and contains several sites of single nucleotide polymorphisms, which modify gene expression (Ostashkin, Malivanova, Yurchenko, & Mazurenko, 2008). A common G-to-A SNP within the promoter region, located 308 base pairs upstream from the TNF start site (rs1800629), has been associated with increased transcriptional activity of TNF-α in response to select stimuli (Kroeger, Carville, & Abraham, 1997). Other studies have corroborated a relationship between breast cancer risk and a second TNF-α mutation (rs1800629) (e.g., Mestiri, et al., 2001; Park, Mok, Ko, Tokunaga, & Lee, 2002; Smith, Bateman, Fussell, & Howell, 2004). In Russian studies, this allele also has been associated with breast cancer risk. Within the study population, the allele frequency for this SNP varied between women diagnosed with invasive-ductal versus invasive-
lobular breast cancer (Gaudet, et al., 2007; Ostashkin, et al., 2008). Genetic polymorphisms in the TNF gene may support the anti-proliferative effect of the TNF-\(\alpha\) hypothesis.

The Leptin and Breast Cancer Association

Leptin is a 16-kilodalton adipocyte-derived hormone composed of 167 amino acids that circulates in the serum in both the free and bound form (Mantzoros, 1999). Leptin is expressed mostly in white adipose tissue (Jazet, et al., 2003) and is associated with energy balance in humans (Montague, et al., 1997). Mantzoros (1999) explains that Leptin acts by binding to specific receptors in the hypothalamus to alter the expression of several neuropeptides that regulate neuroendocrine function. Leptin also is involved with energy intake and expenditure which signals to the brain whether there are adequate amounts of energy stores or a state of food deprivation; thus, leptin plays an important role in the pathogenesis of obesity and eating disorders (Mantzoros, 1999). Leptin is thought to promote weight loss because its signaling leads to decreased food intake, increased energy expenditure, and increased thermogenesis (Jazet, et al., 2003). Leptin is known to exert its physiological action through the leptin receptor (OB-R), a member of the cytokine family of receptors. OB-R was initially identified in the brain, which explained the negative feedback mechanism of controlling food intake and body weight (Malik & Young, 1996). Serum levels of leptin reflect the amount of body fat mass, or energy stored in adipose tissue (Mantzoros, 1999), and these levels increase in a logarithmic fashion with an increase in body mass in mice (Hoggard, et al., 1997).

Mutations in leptin are associated with extreme hyperphagic obesity, infertility (Montague, et al., 1997), and cancer risk. Still, obesity is indicated to be a leptin-resistant disease because most obese humans have increased serum leptin levels and normal ob genes (Considine, et al., 1996; Montague, et al., 1997; Strobel, Issad, Camoin, Ozata, & Strosberg, 1998). In association with hyperinsulimia, insulin has been found to stimulate leptin mRNA and protein expression, which is associated with increased activation of the leptin gene promoter (Bartella, et al., 2008). The A-allele of the G to A SNP at the -2548 site in leptin gene, LEP, has been associated with over-expression of the gene product (Hoffstedt, Eriksson, Mottagui-Tabar, & Arner, 2002; Li, et al., 1999; Mammes, et al., 2000). Some studies have evinced the polymorphism in LEP to be relevant to prostate cancer risk and progression, which indicates leptin's involvement in prostate carcinogenesis (Ribeiro, et al., 2000).
Thus, SNPs in *LEP* are not only associated with obesity and infertility but also with cancer risk.

Though data link LEP SNPs and prostate cancer risk, the influence of leptin and its receptors on breast cancer risk is still inconclusive. Some data indicate that breast cancer risk may not be related to serum leptin levels or polymorphisms in the leptin receptor gene (*LEPR*). In a Korean case-control study of 45 breast cancer patients with 45 age-matched controls, no significant difference between mean serum leptin concentrations within the patient and control groups in both pre- and post-menopausal women was found (Woo, Park, Ki, Park, & Bae, 2006). No increased risk estimate was found for the four *LEPR* polymorphisms at codons 109, 223, 656, and 1019. Yet, another Asian study indicates leptin involvement in the carcinogenesis and metastasis of breast cancer in an autocrine manner (i.e., Ishikawa, Kitayama, & Nagawa, 2004). From the resected breast tumors and axillary lymph node tissue of 67 cases of invasive ductal carcinoma in Tokyo, normal mammary epithelial cells were shown not to express a significant level of OB-R, but this was not the case with the cancerous breast cells. Though both normal epithelial cells and carcinoma cells expressed leptin, overexpression of leptin was observed in the cancer cells. This study also showed a relationship between OB-R and distant metastasis; over a third of the tumors that were positive for OB-R expression displayed distant metastasis, whereas none of the tumors that lacked OB-R expression showed distant metastasis (Ishikawa, et al., 2004). Because of discrepant results between the Korean and Tokyo studies, more investigations are needed to determine if functional inhibition of leptin may be effective for the prevention and treatment of breast cancer.

The Adiponectin and Breast Cancer Association

Adiponectin, also known as AdipQ, apMi and Acrp30, is a 244 amino acid, 30 kDa protein hormone (Prins, 2002). A Mediterranean diet, which is rich in whole grains and fat, along with glycemic control, and physical activity have been shown to increase AdipQ levels (de Lemos, et al., 2007; Mantzoros, Li, Manson, Melgs, & Hu, 2005; Mantzoros, Williams, Manson, Meigs, & Hu, 2006). This adipokine plays a major role in the regulation of glucose (Combs, Berg, Obici, Scherer, & Rossetti, 2001), lipid balance, and atherogenesis (Berg, Combs, & Scherer, 2002). In fact, a major role of AdipQ is in enhancing hepatic insulin function and reducing hepatic glucose output
AdipQ has been reported to induce activation of caspases-3, -6, and -8, which leads to endothelial cell apoptosis (i.e., death) and the reduction of tumor angiogenesis or neovascularization (Brakenhielm, et al., 2004). Brakenhielm and associates indicate it also may inhibit inflammatory responses through several pathways. One such pathway may be the induction of apoptosis by treatment of acute myelomonocytic leukemia lines with AdipQ inducing the appearance of subdiploid peaks and oligonucleosomal DNA fragmentation. Another pathway by which AdipQ may induce apoptosis includes suppression of mature macrophage functions as evidenced by the inhibition of phagocytic activity of cultured macrophages treated with the adipokine (Yokota, et al., 2000). AdipQ has been shown to bind several growth factors, including fibroblast-growth factor and platelet-derived growth factor-beta polypeptide, and both of these peptides induce cell proliferation. AdipQ also inhibits nuclear factor-κB (NF-κB), which is involved in breast cancer development (Wang, et al., 2005), and hinders production of TNF-α in macrophages and its actions in endothelial cells (Ouchi, Shibata, & Walsh, 2005).

The anti-proliferative and pro-apoptotic effect of AdipQ is linked to its ability to upregulate genes with known growth inhibitory or apoptotic functions in mammary epithelial cells (Treeck, et al., 2008). Reduction in plasma AdipQ levels could be a risk factor for breast cancer in that AdipQ can control directly cancer-cell growth as shown in its role as a growth inhibitor in breast cancer cell lines. Treatment of MDA-MB-231 with AdipQ caused suppression of cell proliferation, cell growth arrest, and apoptosis (Kang, et al., 2005). In addition, growth stimulation with estradiol of MCF-7 cells is suppressed in the presence of AdipQ (Dieudonne, et al., 2006).

AdipQ signaling is associated with breast cancer risk; individuals with intermediate or high AdipQ signaling have been shown to have significantly lower risk for breast cancer (Kaklamani, et al., 2008). AdipQ levels are reduced in obese individuals (Prins, 2002), which indicates a possible relationship between high BMI and breast cancer risk, and decreased levels of AdipQ have been shown to be associated with increased breast cancer risk (Duntas, Popovic, & Panotopoulos, 2004). In fact, the information in the literature is not consistent regarding AdipQ, its signaling, body mass index (BMI), and breast cancer risk. One particular case-control study of Korean women showed no significant relationship between plasma glucose level, BMI, and age with plasma AdipQ (Kang, Yu, & Youn, 2007).
Low AdipQ levels also appear to impact the proliferation of other types of hormone-dependent cancers. In a study of 105 obese women, significantly lower concentrations of AdipQ were found in patients with endometrial cancer when compared to that of patients who had polyps or normal endometrium (Rzepka-Gorska, Bedner, Cymbaluk-Ploska, & Chudecka-Glaz, 2008). These researchers found that though the stage of cancer had no significant correlation with AdipQ level, when cancer grade was compared, lower serum levels of AdipQ were observed in patients with higher grade G3 cancers. Likewise, in a Korean case-control study of 41 breast cancer patients and 43 controls, the mean serum AdipQ level was lower in the case group than in the control group of patients, but this difference did not reach statistical significance (Kang, et al., 2007). In contrast, these researchers reported that statistically significant low levels of AdipQ were associated with lymph-node metastasis and estrogen-receptor negative histology.

Like serum protein levels, several studies support the idea of functionally relevant single nucleotide polymorphisms of genes that code for products involved in AdipQ signaling and may predict breast cancer risk. In the gene coding for AdipQ, the heterozygous genotype of SNP rs2241766 is associated with a 39% decreased risk for breast cancer, whereas the TG and GG genotypes of SNP rs1501299 are associated with 59% and 80% increased risk for breast cancer, respectively (Kaklamani, et al., 2008). Similarly, the GG genotype of SNP rs7539542 in the ADIPOR1 gene was associated with a 30-40% lower ADIPOR1 mRNA levels and with both coronary artery disease and Type 2 diabetes (Qi, et al., 2006; Soccio, et al., 2006). Conversely, the CC and CG genotypes of SNP rs7539542 in the ADIPOR1 gene have been shown to increase mRNA levels and have been associated with 43% lower breast-cancer risk (Kaklamani, et al., 2008).

**CONCLUSION**

Epidemiological studies discussed in this review indicate that differences seen in incidence and mortality rates among different populations may be attributable in part to variation in obesity and body-fat distribution. These changes include elevated estrogen and androgen bioactivity (e.g., Davidson, et al., 1981; Wolk, et al., 2001), hyperinsulinemia (e.g., Pollak, et al., 2004), and lack of homeostasis of the adipokines (Purohit, et al., 2002; Seeger, et al., 2006). Additionally, AA women more frequently exhibit breast cancer with an aggressive and metastatic phenotype that could be
attributable to the endocrine and metabolic changes associated with obesity. Serum protein levels of adipokines and SNPs in genes coding for specific adipokines have been associated with breast cancer risk (Kaklamani, et al., 2008). It seems clear that because of discrepant results and the absence of studies dealing with the AA population, further research needs to be conducted regarding race-specific molecular markers of adipokines and breast cancer risk of the significantly obese AA population. Such studies also would benefit from a community based participatory research approach because of the collectivist social construct of the AA community.

Understanding the molecular circuitry of the cell that leads to carcinogenesis apparently is within the grasp of the basic scientist; however, harnessing this knowledge to predict cancer risk requires integration of molecular and population sciences. Furthermore, studies from the epidemiological perspective need to have biological plausibility, while molecular studies need to focus on illuminating risk-factor associations found in epidemiological studies. In addition, the identification of race-specific molecular markers could lead to a better understanding of the differences in the etiological factors contributing to the development of breast cancer in different sub-populations. Ultimately, the understanding derived from the combination of these approaches is expected to result in better clinical management and therapeutic interventions.

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A fundamental area of inquiry within the discipline of Philosophy is the consideration of the parameters of Knowledge and our interrogation of epistemic truth, which may be defined for consideration here as the correspondence between our perceptions and how the facts in the world we may be perceiving really are in actuality. Framed differently, epistemic inquiry examines what, exactly, is worthy of belief. If we assume the existence of a common human capacity for intuiting relations between internal and external phenomena, such a capacity would appear foundational to all designations of knowing and could profoundly affect how we may individually engage being in the world. This interactive ability would shape the character of our interactions with friends and with the environment as well as how we may choose to accomplish our goals. Whether knowing specific facts or propositions or developing an awareness of the habits and general character of an acquaintance, the human capacity for drawing upon accumulated experiences and impressions, or our ability to intuit certain forms of abstract information (i.e., 2+3=5), seems essential to our successful internal and external communications. How we may engage our peculiar internal mental processes relates quite directly to our ability to formulate judgments and participate in inferential, rational assessments. These epistemic processes are precedent to all subsequent knowledge-based acts; consequently, it seems reasonable to consider the challenge of conceptualizing how to describe what Knowledge is as essential to all further inquiry and to our understanding as it is applicable to all further categories. The following questions will be considered. Is Knowledge synonymous with certainty? If so, exactly what is certainty, and how may we achieve it? What is the scope of our knowledge, and how may we know that we know?

Interesting forays into the realms of inquiry encompassed by the genre of questions interrogating how we may know what we may claim to know have intrigued philosophers for millennia.
with important contributions by Socrates, Plato, and Aristotle laying the foundations for Western traditions (e.g., Ancient Greek Philosophy, 2010). Important arguments derived from significant differences of opinion concerning theories and concepts of knowledge developed over time are far from any probable resolution despite our increased understanding of brain function, psychological insight, and synaptic chemical exchanges that underlie perceptual functioning (Churchland, 1986). This brief article considers a selected post-Platonic contribution to the Western tradition that was undertaken to investigate the important questions of whether certainty is possible and what may be the reasoning for claiming certainty as a fact of our understanding, or the likelihood of a skeptical uncertainty as a more accurate description of the human perceptual condition.

THE PROBLEM OF A THEORY OF KNOWLEDGE AND ITS EXTENSIONS

An early attempt to reconcile the differing (and often disparate) accounts of knowledge evolving from the Greek tradition of the Platonic Academy is the project undertaken by the Hellenistic philosopher, Antiochus of Ascalon. Brittain, in Philo of Larissa: The Last of the Academic Skeptics (2001) discusses Antiochus' syncretism, specifically his claim of uniting the often differing ideas of Plato, Aristotle, and the Stoic philosophers, intending to show an overall coherence or commonality within the diverse threads of the Academic tradition that received considerable attention during his time and beyond. Of particular interest is his rupture with his former teacher, the philosopher, Philo of Larissa, concerning aspects of the epistemic problem.² This conflict and its implications for Antiochian ethics will be the subject of consideration in this monograph chapter.

Antiochus' Biography and Historical Significance

Despite a deficiency of surviving texts by Antiochus of Ascalon, his importance as a contributor to Hellenistic and early Roman philosophy is attested by his contemporaries, specifically Marcus Tullius Cicero.³ Born in the third quarter of the second century, c. 130 BCE, in Ascalon, Antiochus moved to Athens during his youth, probably around 110 BCE when he joined the Academy that had been established under the guidance of Plato.⁴ Antiochus became a member of the Academy during its skeptical phase and was originally a skeptic himself, following and defending of the views of Philo of Larissa.⁵ Sometime before 79 BCE, Antiochus appears to have become dissatisfied
with the Philonean mitigated skeptical view and its rejection of the Stoic definition of cognitive impressions that had been advanced by the founder of Stoicism, Zeno of Citium, and the Stoic criterion of knowledge. Antiochus embraced dogmatism, or the idea that certainty and knowledge are possible and that human beings can know truth. Moreover, he initiated a new school of thought, which attempted to unify and reconcile the differing philosophical traditions of Socrates, Plato and the Academy, Aristotle, the Peripatos, and the Stoics into an eclectic philosophical system, and he attracted important followers.

There is, however, no absolute certainty as to whether Antiochus ever succeeded Philo as head, or Scholarch of the Academy during the 1st century, or if his followers ever achieved any clear institutional status within the Athenian Academy.

**Antiochus’ Philosophical Context**

The 1st century philosopher, Cicero (106 BC-43 BC) describes Antiochus’ syncretic project in the speech given by Lucullus in Academia, Book II, which discusses the epistemology of the Old Academy with a defense of Zeno’s definition of the cataleptic impression, understood to be stamped and molded from its source in a manner such that it could not be derived from what is not its source. Acceptance of this idea leads to a discussion of Antiochus’ theory of reliance upon the judgments of the senses grounded firmly in concepts advanced by Zeno’s Stoicism. In attempting to reconcile the broad concepts of the Ancients (i.e., Socrates, Plato, and Aristotle) with aspects of the Peripatos and Stoic positions in counterpoint to certain skeptical ideas advanced by the New Academy (particularly the rejection of the Stoic criterion of “truth”), Antiochus sought to combine these diverse philosophical systems into a partnership rather than a competition. Through the arguments presented by Lucullus as the representative of the syncretic (Antiochan) view, in Cicero’s dramatic representation, Antiochus is regarded as indicating the two most important concerns of philosophy to be the criterion of truth and the ethical goal of human life; consequently it is not surprising that the information that has survived on Antiochus’ philosophy is primarily on topics of epistemology and ethics.

Antiochus’ controversy with Philo appears to stem principally from a disagreement concerning Philo’s denial that the Academics had ever advocated the view that nothing can be known, based on Philo’s rejection of the Stoic criteria of knowledge. The dramatic character, Varro, provides a narrative explaining Antiochus’ views on an interpretation of the history of ideas in the
Old and New Academies and his (Antiochus') understanding of returning to the Old Academic view in embracing the possibility of knowledge. Philo's ideas conflicted with Antiochus' neo-dogmatism and acceptance of the Stoic criterion as non-academic. Philo's position, described by Mansfield (1997), was that an Academic could remain an Academic and hold the view that nothing could be apprehended according to the Stoic criterion, and that one could hold opinions without absolute certainty and still be 'wise,' indeed that we can never be absolutely certain and therefore truly dogmatic, and here the term implies infallibility, for in the opinion of the Stoics, the truly wise man would "know" (grasp an absolute "truth") and, consequently, would be infallible. Philo's acceptance of a theory of probable impressions upon which humanity could operate did not deny the possibility of dogmatist certainty, he simply presents his position as one that suggests the apprehensive impressions defined according to the Stoic criterion are unknowable. Philo's insight suggests that according to the nature of the things themselves (not our impressions of them), they (things) are knowable, so in fact knowledge is not unattainable, but it is so only if one adheres to the Stoic criterion.

Antiochus is noted in Cicero's text as offering a strongly negative response to Philo's theory, suggesting that there had been only one Academy and rejecting the Stoic definition of knowledge (katalepsis) as untenable. Philo probably presented his ideas in his lost Roman lectures, declaring against the Antiochian form of neo-dogmatism in defense of his own, innovated and arguably 'dogmatic' revisionist view. Antiochus counters Philo, suggesting that it was from the period of Arcesilaus through the period of Carneades and finally the Scholarchy of Philo that the true Academic inheritance had been undermined, citing the skeptical phase of the school's development as the New Academy and setting forth his claim to be reviving the Old Academy with his more eclectic ideas. Clearly, Antiochus' epistemology is indebted to Stoic ideas to such an extent that Cicero questions why Antiochus did not transfer his intellectual allegiance from the Academics directly to the Stoics, citing his inconsistency in rejecting the skeptical version of Academicism he had studied under Philo as an important factor that was considered to have weakened his intellectual authority.
Antiochus’ Break with Philo and the New Academy

In On Academic Skepticism, Cicero (Brittain, 2006) opens Lucullus’ speech with some discussion of the disagreement that develops when Antiochus, who holds a view rejecting the skeptical Academic ideas concerning the wise man’s default to epoche or suspension of the possibility of certain knowledge, becomes aware of Philo’s ideas advanced in his lost Roman books concerning probabilism, or the idea that the wise person could make judgments based upon probable impressions as long as an awareness of the possibility of error was accepted. The controversy seems to have come to a climax when Philo suggested that his formulation was consistent with the teachings of Plato, Aristotle, and the Old Academic tradition. While Plato’s views on knowledge are arguable, either in his later works or in the earlier works that may represent Socrates’ views (which could be interpreted as ironic), if Socrates believed in “certainty” and the idea that human beings can know the “truth” absolutely, then his incisive form of inquiry upon which the authority for the later development of the Skeptical procedure is based, deriving from the “elenchus” (i.e., a systematic deep analytic questioning that generally achieved an “aporetic” or inconclusive result) could be interpreted merely as being performative. Although none of Antiochus’ books have survived, some knowledge of them is derived from citations by other authors. His “Canonica,” an epistemological work, was in at least two books. The title is derived from the term for “ruler” or “yardstick” applied by Hellenistic philosophers for the standard or criterion of truth by which correct judgments may be made and knowledge secured. Another work, the “Sosus,” is thought to have been in the form of a dialogue also on the topic of epistemology and probably derived from the late phases of his controversy and break with Philo of Larissa. He also wrote a book on the gods that has not survived, another book intended to resolve differences in the use of terminology between the Peripatetics (i.e., the successors of Aristotle) and the Stoics, arguing for their substantial agreement. Finally, he wrote works on the relation between the concepts of happiness and virtue.

Dorandi (1995) implies that after the schism Philo remains a Skeptic, whereas Barnes(1989) and Striker (1995) hold a differing view, suggesting that indeed Philo’s adoption of a mitigated skeptical position permits the possibility of knowledge and merely rejects the Stoic criterion for a cognitive impression as being so authoritative in its source that it could not be from something
other than the thing that produced it. Antiochus' defense of the traditional Stoic criterion of truth is a fundamental aspect of the argument he forms against the Academic critique of Stoic epistemology.

Components of Stoic Thought in Antiochus' Epistemology

Antiochus is a central figure in Cicero's *Academica* because he is acknowledged as the source for the anti-Academic arguments of Lucullus in *Academica* 2 (i.e., sections 11 - 62) and the history of Platonic philosophy and its revision by the Stoics in *Academica, Book I* (i.e., sections 15-42) where his ideas are referenced by Varro. Antiochus' defection from the skeptical Academy under Philo was effected in order to reclaim the Platonic heritage that he believed the Academics had betrayed. Using a syncretic method, he emphasized significant elements of the Platonic heritage shared by most of the dogmatic philosophical schools (i.e., those schools prior to the Skeptical turn of the Academy, including Plato and his followers, Aristotle and the Peripatos, and the Stoics) despite the conflicting ideas among these diverse groups. The distinctive aspect of Antiochus' position is his suggestion that the Old Academics and Peripatetics shared a single Platonic philosophy and that the Stoics advocated the same view, although they are acknowledged to have made a few "corrections" to it. Zeno's corrections, carried forth by Arcesilaus and cited by Antiochus to Varro, also are noted in the *Academica*. Cicero cites Varro who reports Antiochus' account of Stoic corrections of the Old Academic ethics (*Academica, Book I. sections 35-39*). Evidently, Antiochus agreed with the Stoics in rejecting the Platonic distinction of the soul into rational and non-rational parts, and he saw the implications of this idea with regard for some further Old Academic views concerning virtue and emotion. Varro reports that Antiochus saw Zeno's demotion of bodily and external goods to the status of "indifferents" as misconceived but essentially terminological innovations (section 37). In Lucullus' speech, the arguments against the skeptical Academics are Antiochus' views of the possibility of apprehension and the necessity for assent and are Stoic in origin. Brittain (2006) suggests that what Antiochus himself contributes to the tradition of academic discussion may be his revision of an argument by Antipater offered by Lucullus in the *Academica* 2 (i.e., sections 28-29), suggesting that it is essential for a philosophical system to apprehend its principles, especially its constitutive ones concerned with the criterion of truth and the final good.
Historical precedent and authority are important in the *Academica*, in part as an aspect of Cicero's rhetorical style with his constant lists of historical examples, offering three stages in the discussion of claims about the history of philosophy.27 Lucullus' narrative, which includes Antiochus criticism, also first includes a history of the development of "Skepticism" in reaction to the failures of reason or dogmatic philosophy: The pre-Socratics' despair of their efforts to attain knowledge, the methods of Socrates and Plato that provide a more reflective understanding of the failure to attain knowledge, and then the development of full-fledged Skepticism. The method leading to the suspension of all assent arises with Arcesilaus (who criticized Socrates for asserting dogmatically that he knew nothing could be known, which seemed to presuppose that he knew what would constitute knowledge).28 The second stage appears to be Antiochus' attempt to reclaim the Platonic heritage from the skeptical Academics in the period of the 90s BCE. Antiochus reinterprets Socrates and Plato from the Academic's more skeptical assessments of their work. Lucullus, presenting Antiochus' view, offers an ironic interpretation of the skeptical claims associated with Socrates, discounting Socratic professions of ignorance as mere methodologies. Brittain (2006) notes that it is Antiochus' arguments that offer early signs of a conception of Platonic authority that led later interpreters to search Plato's dialogues to discover their truth.

**Brief discussion of Stoic elements in Antiochus' Epistemological Account**

A number of authors have discussed the correspondences between Antiochus' ideas and elements of Stoic epistemology, particularly, Antiochus' acceptance of the Stoic idea of assent and the possibility of certain knowledge (i.e., dogma). Barnes (1989) in particular suggests that Antiochus felt there was one true philosophy derived from the Platonic Academy, with a legacy to Aristotle and the Lyceum (i.e., Peripatos), followed by Zeno and the Stoa (i.e., Porch). Antiochus interpreted the ideas of these diverse sources as being in essential agreement, with Stoicism being viewed by Antiochus as a revision of the Old Academy instead of being perceived as a completely new movement. Moreover, Barnes interprets Antiochus as claiming that the Stoics and Peripatetic thinkers were perceived as being merely in disagreement concerning terminology, not concerning substance.29
In Cicero’s narrative from On Academic Scepticism (2006, Book 2), as part of Lucullus’ representation of the Antiochan view on “assent,” he indicates Antiochus’ acceptance of the idea of action as a consequence of assent and knowledge. The assent-knowledge combination in a concept of action corresponds to Stoic ideas formulated by Zeno and is essential to Antiochus’ syncretic formulation. Other Stoic elements in the Antiochan epistemological representations include a defense of the veracity of the senses based on cognitive impressions as described in the Academia (Book 2, section 33). Arguments by Antiochus regarding an assessment of the (in his view) unconvincing idea of the probabilistic (or persuasive) impressions held in lieu of cognitive impressions offer further strongly Stoic alignments in contrast with the skeptical view. In addition, Barnes indicates Antiochus’ argues for the Stoic view of Antipater that the Sceptical Academic position is contradictory in its support of a skeptical position, while in fact, the Academics fail to acknowledge the possibility of dogma in their position (taking its authority on the tradition of Socratic claims of certain ignorance). This failure to acknowledge dogma in the form of a firm belief in uncertainty (i.e., the certainty that nothing can be known) is an argument that depends in part on the authority of Stoic sources.

Antiochan Ethics

The complexity of Antiochus’ ethical syncretism, presented by Cicero in Books 4 and 5 of On Moral Ends (2007), with some references in Books 1 and 2 of On Academic Scepticism (2006), perhaps is too daunting to evaluate in a comprehensive manner for this short essay due in part to its incorporation of complex Aristotelian, Perpatetic, Epicurean, and Stoic views in a single system. Barnes (1989) has argued that Antiochus’ Peripatetico-Stoic ethics is consistent in its founding upon his epistemological assertions concerning the certainty of apprehensions possibly leading to knowledge, and it offers a route to virtue as a consequence of certain knowledge. Of considerable significance is the syncretic emphasis in Antiochus’ system on unifying what even he clearly understood as disparate schools of thought, yet which he wished to prove stemmed from a common foundation, despite the use of differing terminology and some nuanced disagreement. Barnes articulates a compelling theory of how Antiochus’ ethical system, as an eclectic construction, seeks to reconcile the disparities that persist in its varied components.
Brief discussion of non-Stoic elements in Antiochus’ Ethics

Antiochus remains close to the Stoic view in his philosophy of virtue as sufficient for happiness; however, he suggests that for a supremely happy life, in addition to virtue, bodily comforts and external goods are necessary, thus, distinguishing between the concepts of a “happy life” and the “completely happy life.” This comparative degree of happiness approach apparently was his solution to the problem of Stoic absolutism (i.e., that virtue alone is the sole desirable good in life) in the face of his acceptance of the idea that “goods” (and “evils”) besides virtue alone could affect even the Stoic sage’s equanimity.

Antiochus’ view corresponds with Aristotle (and the Peripatos) regarding recognition of external and bodily goods in conjunction with virtue and rejection of Stoic accounts of virtue as the sole good. The Stoic view that happiness is simply the possession of virtue is rejected in Cicero’s presentation of Antiochus’ position, which posits that virtue is a principal or important good, yet it is not the one and only good. Antiochus further distinguishes between the happy life, for which virtue alone is sufficient cause, and the “truly,” or “most happy life,” which is benefitted by virtue and external and bodily goods. In accepting this account of what is truly good, he rejects Zeno’s and the Stoics’ idea that virtue alone is the single good upon which everything in the happy life necessarily depends.

Finally, representations of Antiochus’ view permitting the acceptance of the idea that the greatest enjoyment of life is achieved by enjoyment of goods stemming from following our natural impulses (e.g., the Stoics reject this pleasure-based idea as a “good”) are suggested in Cicero’s Academia (e.g., Book 1, sections 19, 22; and in On Moral Ends Book 5, sections 24-5), showing further that this combination of disparate elements from the diverse traditions are being construed as deriving from a single, Old Academic tradition.

Brief discussion of Stoic elements in Antiochus Ethics

Barnes notes that Antiochonian attention to children (i.e., the cradle argument) to understand human goals (i.e., noting that this idea was not endorsed by Aristotle and could be interpreted as a departure from consistency in Antiochus’ claim to continue or revive the doctrines of the Old Academy) may have a more complex extended explanation. Its use clearly departs from the character-based
and habituation theories suggested by Aristotle, which conflict with Antiochus' acceptance of the Stoic idea of the importance of the first, natural impulses, and on the whole those objects stem from this view that the Stoics cite.

CONCLUSIONS

Striker (1995) indicates what we may interpret as Antiochus' diversion from the Stoic account of the criterion of truth, in his argument regarding a “sign” or “mark” of truth, is noted in Lucullus' speech from Book II, numbers 32-36. Arguing that a true Stoic would not have used such language, Striker directs our attention to the likelihood that Antiochus' appropriation of Stoic ideas was mediated by his Academic training, and his interpretations, in conception, probably departed in spirit from their Stoic foundations. The suggestion by Antiochus that the mind, the source of the senses, which is in fact identical with them, provides the apprehension of facts that become apparent, offering an internal criterion for truth, which is an idea that may not be consistent with the Stoic idea of the clarity of an impression being formed from the thing external to the mind.

In his ethical views, Antiochus offers the idea that external bodily goods, in addition to virtue itself, are desirable, even though he suggests that virtue is the highest good. Striker indicates this view is, perhaps, his principal departure from the Stoic claim of virtue itself as the sole and absolute good. The attempt to unite aspects even of Epicurean and Stoic ideas of the early impressions from the cradle for (contrasting) formations of character is at odds with the Aristotelian ideas of habituation and ethical concepts of the supreme value of knowledge.

With no direct access to Antiochus' ideas through his own writings, any attempt to assess the success of his syncretic project is certainly presumptuous, however, it appears from the representations of his views noted primarily in the writing of Cicero that he tried with uneven results to reconcile sometimes subtly different and sometimes radically different ideas, into a single, unified system. Although such a system does offer the attraction of describing a communal intellectual legacy that reaches from his own time through the centuries, it leads directly into the past to the legacy of Socrates. In practical terms, perhaps an integrated narrative incorporating these highly disparate ideas cannot be accomplished and could not be articulated or achieved with either integrity or coherence.
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REFERENCE NOTES


2 See Charles Brittain, Philo of Larissa: The Last of the Academic Skeptics, 2001, for more information on Philo’s life and the importance of his contributions to Western philosophical tradition.

3 See Marcus Tullius Cicero, On Academic Scepticism, 2006. Cicero notes the importance of Antiochus contributions particularly in the speech attributed to Lucullus from the Academica, Book II, with mention of Antiochus from Cicero’s introduction, throughout Lucullus’ speech, again in Cicero’s response, and concluding with discussion of Antiochus’ views by the character Varro (pp. 5-37, particularly pp. 41-42ff, and pp. 92-104).

4 Brittain’s notes On Academic Scepticism (p. 117), in the glossary notes, give this date as an approximation of Antiochus birth probably based on his estimated age when he would have arrived at the Academy based on the date of the “scholarchy” of his teacher at the Academy (i.e., Philo of Larissa in 110). The chronology is explained by Jonathan Barnes in “Antiochus of Ascalon,” in Philosophia Togata, pp. 51-96.

See Brittain, *On Academic Scepticism*, in which Lucullus, in section 18, speaking in support of Antiochus (p. 12), notes objections to Philo's introduction of "novelties" into the debate on apprehension.

Barnes in *Philosophia Togata* (1989, pp. 83-90) provides a succinct account of Antiochus' syncretic project, attempting to reconcile the broad concepts of the Ancients, Socrates, Plato, and Aristotle with aspects of the Peripatos and Stoic positions in counterpoint to certain skeptical ideas, particularly the rejection of the Stoic criterion of truth. The J. Allen article, in the *Stanford Encyclopedia* (2008, p. 1), mentions the view of the writer, Sextus Empiricus, who is described as having written in the *Pyrrhoneae hypotyposes* of the different phases of the academy's changing doctrines, the development of a fourth Academy based on the views of Philo, and a fifth Academy, stemming from the ideas of Antiochus. However, the official character of the succession remains unclear, although Barnes (1989, p. 58) cites the *Index Academicorum* (via Dorandi in note 32 of his text) as citing Antiochus as an Academic Scholarch.

For more information on the probable scholarchy of Antiochus, see Barnes, *Philosophia Togata* (1989, pp. 51, 57-58).

Barnes (*Philosophia Togata*, 1989, p. 79) discusses (in note 103) Antiochus' syncretism rather than a description of his ideas as eclectic, emphasizing assimilation of disparities rather than a selection among the various aspects of the differing philosophical systems.

See Brittain/ Cicero, *On Academic Scepticism* (in Book 2, section 29, p. 19), in which he translates specifically "Antiochus seems to press this point more cogently (that is, the perceived inconsistency claim that nothing is apprehensible)....The criterion of truth and the ethical end are, he argued, the two principal issues in philosophy: no one can be wise while they [are] ignorant of either the origin of knowledge or the goal of appetite and so do [not] know where one sets out from or needs to arrive." See also the article "Antiochus of Ascalon," online, from the *Stanford Encyclopedia of Philosophy* (2008, p. 2 of 8).


See Barnes, *Philosophia Togata* (1989, p. 74) for a more extensive discussion of this idea.

Stoic criterion. Striker, in *Assent and Argument* (1995, p. 276), also concludes that Philo is a dogmatist and an extended discussion of the probable reasoning underlying Philo's Roman modifications is presented (pp. 273-75), including the suggestion that Philo may have discovered a non-inferential criterion of truth, achieving a distinction between evident truths grasped without inference and other true propositions that may be derived from argument and inference from signs, a non-inferential but not infallible means of grasping what is the case.


17 See Brittain/ Cicero, *On Academic Scepticism* (2006, in Book, section 69, p. 41) for the discussion of Antiochus' transference of allegiance and particular affinities for Stoicism. Britain suggests that Antiochus' agreement with the Stoics is primarily restricted to his acknowledgement of apprehensible impressions, but he also indicates that Cicero implies a more substantive intellectual debt to Stoic ideas (see note 94, p. 41).

18 See Brittain/ Cicero, *On Academic Scepticism* (2006, in Book 2, sections 11-13, pp. 8-9) for discussion of Antiochus' rejection of Philo's ideas. Political unrest in Athens caused Philo to move to Rome in 88 BCE, and in 87 BCE he was in Alexandria and associated with Lucullus, the Roman general and statesman prominently featured in Cicero's text (i.e., *On Academic Skepticism*) who Antiochus befriended for life. Antiochus' influence extended to other Romans besides Lucullus and Cicero, including the intellectual, Marcus Terentius Varro and Marcus Iunius Brutus, one of Julius Caesar's famous patrician assassins.


20 The Canonica is cited by the ancient writer Sextus Empiricus; however, its contents have not survived the ravages of time. Aspects of its text may be incorporated by Cicero in *On Academic Skepticism* (2006, pp. II, 12).

21 The Sosus is cited by Cicero in *On Academic Skepticism* (2006, Book 2, pp. II, 12) as Antiochus' refutation in dialogue form of Philo's claims of continuing the traditions of Plato's Academy.


23 Brittain, op. cit., notes that Cicero points out explicit disagreements between the Stoics and Old Academics or Peripatetics in epistemology and ethics (2001, see note 55, page xxxi, in the Introduction).


25 See Brittain, this information is reported by Cicero (2006, pp. 100-101).
26 See Brittain, Introduction, p. xxxiv, second paragraph.

27 See Brittain, Cicero's Academic Scepticism (2006, Book 2, Section 13).


29 See Barnes, Philosophica Togata (1989, p. 79), for a summary of Antiochian syncretism.


31 Britain suggests, in On Academic Scepticism (2006, pp. 21-22, notes 47-48), that Antiochus' interpretation may have slipped into an Academic misinterpretation of Stoic view that, in consideration of Antiochus' largely academic education, would not be an unusual misstep.


34 See Barnes, Philosophica Togata, 1989, p. 83 & 89.


36 Marcus Tullius Cicero, Tusculan Disputations (1971, pp. 446-449), notes Antiochus' views via the opinions of Brutus in the dialogue between A. and M. whose identities are not revealed (see p. xxvii of the introduction to the text), who have been discussing the excesses of Xerxes and wishing they could offer some reward to bring others to the realization that lust can never be completely satisfied. The discussion continues: translated as "A. I could wish the same, but I have a small point to raise. For while I agree that, of the statements you have made, the one follows the other, namely that, just as it would follow that a happy life is secured by virtue if that only be good which is right, similarly if happy life lies in virtue, nothing is good except virtue: but your friend Brutus on the authority of Aristus (Antiochus' brother) and Antiochus does not accept this; for he thinks happy life lies in virtue even if there should be some good besides virtue." Translator, J. E. King notes on p. 446, in note 3, that the Peripatetics held that there were goods of soul, body, and fortune. Aristotle in the Ethics I, 8, notes that it casts a shadow over happiness to be devoid of noble birth, fair offspring or beauty of person, also. Some of these external goods may have been accepted by Antiochus as requisites for the vita beatissima referenced on page 449, in Book V, 23.


See Barnes, *Philosophia Togata*, 1989, pp. 87-88, for a discussion of the Antiochan method for justifying his syncretic attempt, citing primarily that the differences between the Old Academy and the Stoa were principally verbal.


See Brittain/ Cicero, *On Academic Scepticism* (2006, in Book 2, section 30, p. 20) for the discussion of the mind’s role in apprehension. The Stoic view that the impression is the *pneuma*, which extends from the leading part to the senses and the “grasp” which comes through the senses is activated by the objects. See Diogenes Laertius in *Hellenistic Philosophy: Introductory Readings*, translated by Brad Inwood and L.P. Gerson, Hackett Publishing, 1997, pp. 113, 51, & 52.

For a detailed discussion of Antiochus’ epistemology and ethics, see Barnes, *Philosophia Togata*, 1989, pp. 83-89.
PART 3:

COLLEGE OF EDUCATION
SINGLING OUT BLACK GIRLS – DOES THE SINGLE GENDER CLASSROOM MUTILATE THE ACADEMIC ACHIEVEMENT OR IDENTITY OF THE “LOUDIES”

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There is no gender identity behind the expressions of gender... identity is performatively constituted by the very ‘expressions’ that are said to be its results. – Judith Butler

A generally accepted value in American education is that educating the entire child requires teachers to be mindful of the developmental stages and life experiences of every child that enters their classrooms (Carter, 2009; Mack, 2010). At any given time, children are learning about themselves, identifying what makes them unique yet “normal” persons, and categorizing themselves into varying levels of intelligence in addition to labels of gender and race (Austrian, 2002; e.g., Ford, 1998). Early adolescence proves to be a pivotal point for processing identification of self, gender, and race (Sroufe, Egeland, Carlson, & Collins, 2009). Famed developmental psychologist, Erik Erikson (1950), asserts children of early adolescence, ages 11-14, reach a point where they may suffer identity crises and/or role confusion. Single-gender programs have made recent appearances in public school classrooms to provide a gender-specific learning environment that will aid in better academic success while children, during early adolescence for instance, undergo these stages of identification (National Association for Single Sex Public Education, NASSPE, 2002). Research has yet to determine conclusively the efficacy of single-gender programs during early adolescence (Weil, 2008). Proponents claim it meets its intentions of improving classroom behavior for boys and improving tests results, while for girls it increases interests and participation in science and math (NASSPE, 2002). Critics wonder if single-gender classrooms are analogous to factories, molding girls and boys into society’s expectation of gendered norms and Anglo-Saxon perceptions (Kaminer, 1998).

Through the lenses of developmental psychologists, as well as research conducted on single-gender programs and gender and race identity development, the aim of this paper is

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to examine the pedagogical approach in single-gender classrooms and its potential influence on adolescent Black girls. In an effort to comprehend single-gender classrooms, it is imperative to explore the varied stages of gender and race-identity development. Lastly, this paper includes an examination specifically of whether the Black girls in these programs, who are oftentimes referred to as “Loudies,” may be challenged with their self-esteem when normative expectation of “Whiteness” are integrated in the pedagogical approach of the single-gender classroom. This work is an attempt to synthesize related literature with the goal of understanding the ramifications of single-gender teaching practices and if they, in fact, “mutilate” the academic achievement and/or the identity of the “Loudies” (Moms, 2007).

THE AIM AND ISSUES OF THE SINGLE-GENDER CLASSROOM

The National Association for Single Sex Public Education (NASSPE, 2002), led by Dr. Leonard Sax, has made great claims that implementation of single-gender programs in public schools can lessen the academic achievement gap between genders. According to the NASSPE web site, “In March 2002, when NASSPE was founded, only about a dozen public schools offered single-gender classrooms. As of January 2010, there are at least 547 public schools in the United States offering single-sex educational opportunities. Most of those schools are coed schools which offer single-sex classrooms, but which retain at least some coed activities” (NASSPE web site, Single-Sex Schools...“what’s the difference?”). Many single-gender education proponents tout the teachings of Dr. Leonard Sax, author of *Why Gender Matters* (Praise for Why Gender Matters, 2005). Sax and others like Dr. Abigail James, teacher at an all boy’s school and author of *Teaching the Male Brain* (2007) and *Teaching the Female Brain* (2009), firmly believe there are distinct biological differences affecting the way boys and girls learn, specifically, “different regions of the brain develop in a different sequence in girls compared with boys...” (NASSPE web site, Are there actually significant differences...?). Both Sax and James assert that boys and girls learn differently and should be separated in education to maximize on their individual differences. In addition, Sax and James state that they do not promote stereotypes born of social constructions; but rather, they are promoting teaching styles that speak specifically to different genders, ultimately being able to banish
or at least lessen the gaps in achievement in terms of gender in science and math and perhaps to
tame the rambunctious behavior of boys. For example, the NASSPE states on their website that:
...emotional activity is processed in completely different areas of the brain
in older girls compared to older boys. In older girls, brain activity associated
with emotion is localized primarily in the cerebral cortex, the same part of the
brain involved in reasoning, language, and higher cognitive skills. So, the older
girl is typically able to articulate her emotions fairly well, to explain what she
is feeling and why. In boys, on the other hand, the locus of emotional control
remains stuck in the amygdala, a phylogenetically "ancient" nucleus with no
direct connections to the cerebral cortex. So, asking a teenage boy to talk
about how a particular book makes him feel, or how he would feel if he were in
the same position as a character in the book, is a question guaranteed to make
most boys uncomfortable. (NASSPE web site, What are some differences in
how girls and boys LEARN?)

NASSPE's reasoning uses biological differences in girls and boys to explain or validate
girls' ability to better manipulate the use of words than boys, alluding to why girls oftentimes do better
in Language Arts/English and to why boys claim that they do not like to read. While Sax (2005)
and NASSPE concur that gender differences are born mostly of social construction, the confluence
of biological differences and nurture or societal influences are not seen here. In this statement,
NAASPE does not seem to take into account the research that asserts some of these language
differences in girls and boys could be due in part to society's different treatment of girls and boys
from birth. This statement by NASSPE also does not take into account the cognitive and behavioral
research conducted on children at any given stage. For instance, it would be interesting to note how
the development of the brain's cerebral cortex and amygdala parallel with Piaget's' (Piaget, Inhelder,
& Weaver, 1969) concrete and formal operational theory of cognitive development. In addition, it
would be interesting to note how this brain development compares with Kohlberg's (1966) theory
of gender constancy, which states that by the age of two children are keenly aware of gender roles
(Bandura & Bussey, 1999) or theories presented by Bandura and Bussey that children "...model their
behavior after same-sex models" (p. 4). For example, if females observe other females reading a
book more or participating in more dialogue, could this contribute to the faster development of these
particular areas in their brains? The NASSPE web site also adds the following tips for teaching boy's and girl's literature:

We also know that boys tend to prefer non-fiction over fiction. Boys like to read descriptions of real events—battles or adventures—or illustrated accounts of the way things work, like spaceships, bombs, or volcanoes. “Gross,” slimy, dangerous or poisonous things are also a hit with most boys, especially younger boys. Girls, on the other hand, usually prefer books which focus on dyadic or triadic relationships (relationships among two or three individuals). Girls tend to prefer books where they can be analytical about a character’s motives and behaviors. (NASSPE, 2002, What are some differences in how girls and boys LEARN?)

Statements like boys like books about, "...spaceships, bombs, or volcanoes.", and girls like books where the characters’ behavior in relationships can be analyzed have a stereotypical connotation. Again, it is not clear here why Sax (2005) does not address the impetus surrounding these particular gender preferences. According to Allen (2004), we are not born into a gender; instead, we are socialized through our contacts and interactions with others. Neither Sax, nor the NASSPE, mention how gender-identity development is constructed during children’s growth and development; however, Sax (2005) does mention in Why Gender Matters that gender development and identity may look varied in a same-sex classroom.

THE COMPLEXITY OF GENDER DEVELOPMENT

There may be teachers who read Why Gender Matters and the claims made by the NASSPE, who may begin to believe in and conduct their classroom in such a way that there are expected “norms” or behavior in terms of gender; thus, in an all female adolescent classroom, teachers implement gender strategies without ever thinking about how gender identity is developed. “A gendered identity is supposed to be an integral facet of ‘inner’ personhood produced by one’s biological sex. But there are problems with this [perspective]. To begin with, what is the mechanism by which sex produces this inner identity…and how does biological sex produce a gendered identity that invariably expresses itself into the same binary gender displays we inevitably see around us:
dresses and high heels or suits and ties, pipe smoking, big hair and long nails?" (Wilchins, 2004, p. 130).

In addition, Scholar Eleanor Maccoby (2000) makes the claim that in order to fully understand the developmental stages of gender identification one should take into account both the ethological and psychobiological perspectives. She asserts that when these two perspectives are integrated, wherein the ethological perspective claims that "... individual life experience and environmental contexts have little influence other than to provide the innate environmental triggers required to 'release' instinctive behavior" (p. 404), and the psychobiological, in which she asserts that "...genes and environment have a bidirectional, reciprocal relationship and cannot properly be understood as separate components whose effects can be independently estimated and then compared or summed" (Maccoby, 2000, p. 404). These two create a view explaining "...biological and experiential and cognitive factors work together when it comes to the enactment of gender" (p. 404). Moreover, Maccoby finds that there may be biological influences, yet social or environmental factors are so ingrained that it is difficult to determine where one obtains the ideas about what it means to be a "gentleman" or, in this case, a "lady."

GENDER DEVELOPMENT STEREOTYPES IN SINGLE-GENDER CLASSROOMS

Opponents of single-gender education (e.g., the American Civil Liberties Union, ACLU) purport that definitions of gender vary, especially since most gender traits are born of social constructions (Murphy, Lapidus, Warren, & Young, 2002). Accordingly, the ACLU strongly takes a stance against single-gender education, stating: "Educational opportunity should not be denied or restricted for any reason including a child's race, religion, sex, national origin, language, or family circumstances. Educational equality is not attained through single-sex programs in public elementary and secondary schools or institutions of higher education because sex segregation violates the equal protection guarantees of the Fifth and Fourteenth Amendments. Public schools have the obligation to ensure that both females and males can obtain an education in a coeducational setting free from sex discrimination" (ACLU, 2002, Murphy, et al., "Single Sex Notice...", paragraph.2). The ACLU apparently sees single-gender education in public schools as a direct violation of Title IX. Additionally, the ACLU argues that teaching practices that promote stereotypes of gender, based on erroneous belief about gender, will be counterproductive.
There is no conclusive evidence determining what factors exert definite influences on a person's gender identity development; therefore, it is understandable how single-gender teachers may become confused on what gender-specific teaching strategies are beneficial to students' learning and do not enforce stereotypes that have little or nothing to do with cognitive development (Kaminer, 1998). "In fact, research has shown that parents often note that single-sex schools have more traditional mission statements, which rely on gender stereotypes. Single-sex classes and schools reinforce in students stereotypes and negative attitudes about themselves and one another. Sex discrimination and gender reinforcement are more common in single-sex schools than in coeducational schools" (ACLU, 2002, Murphy, "Single... "). Gendered stereotypes are enforced as most teachers may consciously or unconsciously consider that:

"...both sexual identity development (generally understood as the process by which individuals come to acknowledge same-sex attraction and to gradually conceive of themselves as nonheterosexual) and gender identity development (understood as the process by which children come to think of themselves as unequivocally and permanently male or female) have adopted dichotomous and essentialist models of gender and sexuality, in which individuals possess and seek to publicly embrace one and only true identity (male or female, heterosexual or gay-lesbian)." (Diamond & Butterworth, 2008, p. 365).

Many teachers do not give consideration to the fact that individuals may feel any way about their sexuality and gender identity at any given time as they develop as human beings. Furthermore, it is important to understand the implications of a same-gender classroom environment and its potential for enforcing certain sex and gender norms during adolescence as students evolve into their perceived identities. Consequently, if a teacher believes and enforces the notion that his/her girls only will be engaged with books about princesses and women who are home makers, for instance, or that "real women" are "lady like" when they speak in low tones and wear nice dresses, then he/she may leave some in his/her class to feel as though the lesson is not inclusive of that particular student's interests. It also may result in suppressing the actual desires of females who wish to be something other than a home maker or a princess. In addition, if that student does not respond in the normative or typical manner of his/her gender and sexual expectations, the teacher could portray feelings to the student that he/she is "weird" or "strange," essentially inhibiting learning.
THE “NORM” AND STEREOTYPES IN AMERICAN CLASSROOMS

What are the sexual and gender norms teachers expect in a single-gender setting? According to the National Center for Education Information (2005), more than eighty percent of teachers are White; therefore, it is highly unlikely for students of color to avoid having contact with a teacher who may or may not hold them to this standard behavior of Whiteness during their academic careers. According to Frankenberg (2001, p. 76), Whiteness is, “...a ‘standpoint,’ location from which... [White people] see themselves, [and] others....”. Rivièrè (2008) asserts “...that the education system – as a social institution – preserves Whiteness and, thereby, perpetuates social inequalities such as racism...” (p. 357). Furthermore, this norm of Whiteness establishes a standard behavior for students. In a study, Teacher Judgments of Classroom Behavior of Negro and White School Beginners that was conducted in 1970, scholars found that there were distinct differences in what White and Black teachers felt determined a student’s success: While the teachers perspectives were of teachers teaching students who looked like themselves, still the White teachers determined that academic success was achieved when students' behavior mirrored the following expectations: “...(1) complete tasks, (2) obey rules, and (3) talks to other children...(4) few quarrels...” (Long & Henderson, 1971, p. 364). While Black teachers on the other hand, found academic success to be based more on other behaviors: “...(1) contributes to discussion, (2) follows discussion, (3) works independently, (4) is reliable, (5) welcomes leadership, (6) explores experiences eagerly” (p. 364).

When White teachers hold their students of color to the Whiteness gender and sexuality normative in classroom behavior and when they do not meet the expectation, stereotypes begin to emerge. Stereotypes, which spawn from racism, are “an exaggerated belief associated with a category...” (Allport, 1979, p. 191). From this author’s perspective and that of students of color, these stereotypes will be likely to “multiply like weeds” when teachers do not take the time to obtain “race training” or are not willing to make an effort to understand issues like “cultural capital.” Examples of such stereotypes include, but are not limited to Blacks being stupid, violent, and unclean, and Chicanas/os being dumb, lazy, and dirty (Solorzano & Yasso, 2001).
THE BLACK FEMALE IN A SINGLE-GENDER CLASSROOM

If indeed single-gender pedagogy has met its claims of carefully considering the confluence of gender and cognitive development, what if any portion of this pedagogy is inclusive of racial-identity development? In addition to an expected behavior of Whiteness, teachers often overlook the importance of racial-identity development. It is imperative that racial-identity concerns somehow permeate teachers' pedagogy, given that oftentimes the teacher and student's cultural backgrounds may vary. As well, teachers need to be cognizant of the fact that growth through other stages of development will be diverse. Erik Erikson proposed that "...human beings tackle a different developmental task at each [psychosocial] stage and that their achievements at that stage have lifelong implications" (McDevitt & Ormond, 2004, pp. 407-408). McDevitt and Ormond contend that in accordance with gender-identity and sexual-identity development, race and ethnic development is an ongoing process that is different for each person. Upon recognizing that students of color undergo continuous racial, gender, and cognitive development, teachers may be able to find value in their students' culture, thereby helping to achieve greater academic success.

William Cross (1978) developed the theory of Nigrescence (i.e., a French word meaning "...the process of becoming Black..." [Cross. 1991, p.318]) in an effort to define the impact of racial and ethnic-identity development on human development. If Nigrescence is accurate, indeed, Black girls in a single-gender classroom could be undergoing any one of the Cross' proposed five stages of Black-identity development: Pre-encounter, encounter, immersion-emmersion, internalization, and internalization-commitment (Cross, 1978; 1995). The breakdown of these five stages was succinctly presented by DeCuir-Gunby (2009) and include: Pre-encounter, "... (pro-White/anti-Black point of view), encounter (questioning of pro-White/anti-Black self-image and perspective), immersion-emmersion (embracing Blackness and development of anti-White sentiments), internalization (racial understanding), and internalization-commitment (commitment to Black identity and racial understanding)" (p.105). This author also indicates it is imperative to understand that "BRI [Black Racial Development] is a process that occurs over time, begins at birth, peaks during adolescence and continues to develop throughout adulthood" (p. 108). "Racial identity concerns the extent to which people of color are aware, understand, and value their racial background and heritage" (Grantham & Ford, 2003, p. 20). Torres (1996) argues that ethnic identity "...is developed from
shared culture, religion, geography, and language of individuals who are often connected by strong loyalty and kinship as well as proximity” (as cited in Chavez and Guido-DiBrito, 1999, p. 42).

In a qualitative study conducted by anthropologist Signithia Fordham (1993) well over a decade ago, she found that when White teachers normalized race, ethnicity, gender, and sexuality, students of color were held to a standard of Whiteness. This action leads to a perception of Black girls as “...aggressively feminine, which can justify restriction of their inquisitiveness and assertiveness in classrooms” (Morris, 2007, p.503). To deal with such behavior from Black females, teachers oftentimes encourage them to “...exemplify an ideal, docile form of femininity, emblematized in the prescription to act like “ladies”” (p. 490). For example, when five girls (four Black and one White) and two boys (one White and one Black) at Blythewood Middle school in Columbia, SC were asked in a survey conducted in 2009 by their afterschool coordinator to describe the attitudes of Black girls, as they see them in the classroom, they answered:

"...teachers are nicer when you don't act 'ghetto'' – Black girl
"...they like to talk back to the teachers" – White girl
"...they don't really care about school much. They are so loud and use a lot of profanity" – Black boy.
"...the ones I see in the hallway like to yell and argue a lot” – White boy.

These students have begun to take on the perception of the teachers, and they associate negativity towards Black girls' behaviors in school as they do not fit the expected White normative gender and race scripts. Fordham (1993) found that students' reactions to baffling White teachers Whiteness-gendered expectations was manifested in one of two ways for academic survival; either the female student of color became very vocal or very silent. Silence, Fordham found, was associated oftentimes with high achieving Black females, noting that they “...are taught to be silent by their parents, teachers and other school officials...in order to allay the perception that they are just women, that is, that they will behave in ways associated with women and femaleness” (p. 17-18). Students, who did not maintain a "ghost-like" silent existence in class, were deemed underachievers who held tightly to their positive notions of race and ethnicity.

In a single-gender class, Black females still can endure misconceptions about race and race-identity development. The inability to include race development in classroom pedagogical
practices can potentially lead students to feel they are outside of the norm, and it could essentially contribute to their under achievement. When gender is isolated in the classroom, different ideologies about gendered racial and cultural differences become more apparent, and pedagogical approaches should reflect the varying differences. For when race and cultural gendered expectations come together in any setting, it also is known as “intersectionality” in the context that it

"...underscores combinations, or intersections, of important modes of social advantage and disadvantage. Rather than isolate factors such as race, class and gender into distinct, independent effects, an intersection approach explores how these factors combine in daily life, because individuals do not experience them in isolation." (Morris, 2007, p. 491)

CONCLUSION

There is no real evidence that can define what it means to be a particular gender that isn't associated with social constructions, expectations, or stereotypes; there isn't any real evidence that supports the use of single-gender education over mixed/co-educational classes for girls in general. If Leonard Sax (2005) and his proponents are indeed correct then the “age old problem” of why girls “like dolls” and boys “like balls” is now and forevermore solved. Yet, from reviewing the teaching strategies and suggestions of Sax, single-gender classrooms can run the risk of perpetuating gender stereotypes, leaving some children to feel that the teacher’s pedagogy does not include them. It is this author’s contention that, in a same-gender environment, Black girls are oftentimes misunderstood and may be associated with more negative behavior. Consequently, it seems imperative that teachers undergo some sort of gender, sex, and racial-ethnic identity-development training in order to make sure that they: (a) Are not engaged in having all students stand up to a norm of behavior that reflects their own culture and (b) are engaged, especially in a single-gender setting, in uplifting and accepting all students instead of enforcing society’s expectations and stereotypes.

Based on the literature reviewed on single-gender education and racial-ethnic and gender-identity development, it seems clear that there is a need not only for appropriate training but also for specific research. “We need to learn more about what goes on in single-sex as compared with coeducational classrooms to more fully understand not only whether these programs do achieve
their targeted performance, achievement, and attitudinal goals, but also how and why they do so. To that end, researchers should examine curriculum content, teaching styles, classroom interaction among students and between students and teachers, overall classroom and school climate and organization, and other institutional factors that may influence specific student outcomes" (Salomone, 2006, p. 795). Previous studies have failed to examine fully if there is a dominant racial and cultural-gendered pedagogy in the single-gender classrooms. More research is needed in determining the impact of the single-gender classroom where certain norms are enforced, possibly leaving Black girls, for instance, feeling out of place.

REFERENCES


THE "ACHIEVEMENT GAP" AND THE DISUNITY OF KNOWLEDGE

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Professor Edward O. Wilson published Consilience: The unity of knowledge in 1998 through Knopf publishing. By most modes of categorization—Dewey decimal system, Library of Congress, University Library Systems—"Consilience" is placed in philosophy, and philosophical it is. Wilson presents the idea that "all knowledge is intrinsically unified, and that behind disciplines as diverse as physics, biology, anthropology and the arts, lies a small number of natural laws" (p. 5), and the interlocking of those laws is called consilience. Another poignant definition of consilience, proposed by philosopher William Whewell in his 1840 document "The Philosophy of the Inductive Science," gave Wilson a more useful purchase upon that notion. Whewell (cited in Wilson, 1998) defines consilience as a "jumping together' of knowledge by the linking of facts and fact-based theory across disciplines to create a common groundwork of explanation [my emphasis]" (p. 8).

Some would consider Wilson's text wordy and unnecessarily diffuse, but he did make a simple point: Only by understanding where the various disciplines of study overlap and how they overlap can lines of communication be created across those boundaries to solve our most pressing problems as members of a globalized society.

As our world becomes more and more complex, the problems that require our attention are expected to increase in complexity as well; thus, the ways in which we solve such dilemmas need to become largely more sophisticated. As a scholarly community, it seems vital to look past "interdisciplinary" perspectives for solutions to research questions. For this reason, it seems clear that answers to societal ills need to be sought through multidisciplinary lines of inquiry, particularly concerning education and the disparities between levels of achievement across race and socioeconomic status.
STATEMENT OF THE PROBLEM

The gap between African American students and achievement, as the late Dr. Asa G. Hilliard, III referred to it, has fallen victim to a lack of consilience (Perry, Steele, & Hilliard, III, 2003). Perry, et al., certainly imply that society lacks understanding, communication, and team work across many disciplines of which each have something tremendously valuable to contribute toward solving this dilemma (i.e., this disease if you will, that impacts each and every member of our nation)—unequal access to a high-quality education.

Many scholars have weighed in on the debate about the ways in which the education system in the United States has historically and systematically disadvantaged people of color and of low socioeconomic status by limiting their access to high-quality education (e.g., Bell, 2004; Diamond, 2006; Irvine, 1990; Lipman, 1998; Tate, 2008; Wells, 2006). One of the central arguments as to why a disproportionate number of African Americans are victims of poverty is that African Americans do not value education, which limits their access to employment and economic prosperity (e.g., Books, 2004; Oakes, 2005; Wilson, 1998). Logically, this argument has fueled much research in regards to African American students and the “achievement gap”. Ladson-Billings defines the achievement gap as “the disparities in standardized test scores between Black and White, Latino/a and White, and recent immigrant and White students (2006, p. 1). Most certainly, the deficit argument that African Americans are incapable of academic excellence is troublesome as is the pervasiveness of this argument in the media. What is even more disturbing, however, is that despite the scholarly power addressing this particular issue, our educational policy apparently consistently is reflecting a “unidisciplinary” approach. It is as if the left hand, right hand, left foot, and right foot are working on the same issue, but are not communicating effectively. It is as if a “head” does not exist to coordinate, integrate, and synthesize the efforts of the separate body parts.

Moreover, our educational policy appears to rely on nothing more than anecdotal evidence or hearsay rather than sound empirical and qualitative research. This essay is an attempt to demonstrate how several disciplines successfully “get at” the same issue or, rather, establish a “common groundwork of explanation” (Wilson, 1998, p. 8). Secondly, through a cursory discourse analysis of U.S. House of Representatives committee testimony, this essay is intended to demonstrate

1 Achievement gap is in quotations because as a faulty construct it refers to the difference in capacity between White and African American students to excel academically. Hilliard's approach to the achievement gap ultimately comes full circle to what he calls "the achievement gap between African Americans and excellence" (2003, p. 138). On the way to making his point, Hilliard (2003) debunks the misconceptions at the root of the "achievement gap."
the lack of consilience at work in our policy-making process in the field of early-childhood education. In fact, early childhood is the developmental point at which disparities in educational opportunities and resources begin to manifest themselves in a difference in achievement on standardized testing (Heckmann, 2006; Pungello, Burchinal, & Patterson, 1996).

**METHODOLOGY**

This essay explores research applicable to an examination of the "achievement gap" from the general areas of psychology, cognitive neuroscience, social policy, and education. Figure 1 illustrates a consilient use of such knowledge towards addressing this phenomenon. Informal peer nomination was the method of selecting the research represented in this essay. In other words, the research offered comes from literature used in graduate courses taught by faculty/researchers at University of South Carolina (USC) and is published by faculty/research peers at USC and elsewhere. The contributing faculty pool of authors is comprised of faculty in education (teacher education and instruction, curriculum studies), psychology, educational psychology, and cognitive neuroscience (See Figure 1).

![Figure 1. Consilient use of knowledge to address the "achievement gap."](image-url)
DATA/EVIDENCE

Education: Culturally- Relevant Pedagogy / Teacher Preparedness Research

Ladson-Billings (1994) and Boutte and Hill (2006) approach the disparities in achievement between African American students and their white counterparts from the perspective of culturally relevant pedagogy and teacher preparedness. Culturally relevant pedagogy “is instruction that uses students’ cultures and strengths (cultural capital) as a bridge to success in school achievement” (Pritchy-Smith, 1998, as cited in Boutte & Hill, 2006, p. 314). It is not prescriptive as in steps that can be followed. Rather, it utilizes “a teacher’s cultural knowledge base about her or his students upon which she or he can modify curriculum and instruction” (King, 1994, pp. 27-28.) Boutte and Hill suggest that “there is a powerful and affirming socialization taking place in African American communities that could be instructive to schools” (p. 311). Furthermore, these authors provide a definition of the African American community as communal, meaning embodying “...a commitment to social connectedness, which includes an awareness that social bonds and responsibilities transcend individual privilege” (p. 315). The Boutte and Hill study, situated in South Carolina, relates the ethos of the African American barbershop to tenets of culturally-relevant pedagogy that engage students and, in particular, empower male students.

Furthermore, culturally-relevant pedagogy reflects a pervasive use of counternarratives in the classroom such that the cultural piece reflective of African American culture becomes center and other representations follow. Among the larger examples of using culturally-relevant pedagogy in the classroom, Boutte and Hill (2006) illustrate the thread of culturally relevant pedagogy that connects a middle-school art class to a mini-history lesson. The initial art focus was on African American hair and hair styles with the white-powdered wig worn by America’s “forefathers” as an example of hair trends in another culture and historical period, as opposed to the other way around (i.e., per usual, in a Euro-centered curriculum). Consequently, Boutte and Hill provide tangible evidence suggesting that culturally-relevant pedagogy positively influences achievement in Hill’s study of a class of 15 male 3rd grade students:

At the beginning of the year, all students were at the 50th percentile in regards to required tests. [...] at the end of the year, all 15 of the students exceeded all of the district’s benchmark standards. Additionally, when students took

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2 Collectively, counternarratives are described by Perry, Steele, and Hilliard (2003) as consistent, planned actions that counter negative dominant ideology regarding the intellectual capacities of African American people.
the mandated state test, the Palmetto Achievement Challenge Test (PACT), which is required for the first time during the third-grade year, all students met or exceeded the state standard. The PACT has four categories: below basic (standard not met); basic; proficient; and advanced. Eight of Mr. Hill’s student scored advanced; five, proficient; and two, basic. At the beginning of the year, six of the students qualified for the academically gifted program. By the end of the year, 11 of them qualified—three scored high enough to be identified at the state level (Boutte & Hill, 2006, p. 320).

Culturally-relevant pedagogy takes into account parents’ differential access to teachers during daytime hours and facilitates communication using alternative strategies. In her study of a group of excellent teachers who were effective at teaching African American students, Ladson-Billings (1994) used the example of the phone tree that one teacher arranged with the parents of her students. For practical uses, the phone tree could be a tool to locate a child playing after school at a friend’s house, but it functions primarily to facilitate communication between teachers and parents who are not always available for in-school consultations between school hours. The use of the phone tree debunks the notion held by some teachers, both white and black, that parents of African American children are not concerned about and invested in their children’s education.

Furthermore, research by Jay (2006) on administrators of color working in North Carolina primary and secondary schools validates this commonly held misconception as well as Valenzuela’s (1999) research conducted with Mexican families in Texas. Jay (2006), for instance, showed that parents’ inability to meet teachers during school hours was misconstrued as parental indifference to education by demonstrating improved communication between parents, teachers, and administrators when meetings were at more flexible hours. Similarly, Valenzuela (1999) confirmed that parents of Mexican children demonstrated concern for their child’s education that was outside of the white cultural norms exercised by teachers in the local schools. The author noted that the teaching profession in Mexico is revered as reflected in a yearly celebration, Día de la Profesora (Teacher’s Day), that is “equal in magnitude and importance to Mother’s Day in the United States” (1999, p. 120). In this regard, parents typically do not question teachers’ notions about the schooling of their children. Valenzuela found that white teachers frequently misinterpreted the cultural practice
of accepting a teacher's wisdom without question as a lack of interest in a child's education. In instances of such miscommunication, culturally-relevant pedagogy would expose such differences in parental and teacher attitudes that tend to render parent-teacher communication ineffective, and its use could contribute to the betterment of the student's education.

In addition, Ladson-Billings (1994) presents Ann Lewis' practice of building her class of students into a social community so that as a learning community the students become responsible for the learning of all individuals within their group. By enacting the community aspect of culturally-relevant pedagogy, Ladson-Billings suggests that Lewis' emphasis shifts from the achievement of the individual (i.e., an Eurocentric emphasis) (e.g., Merriweather Hunn, 2004) to the achievement of the group, which is culturally relevant to African Americans. In her research on Black high school students and achievement, Fordham (1988) found that the notion of success for the group is valued above the success of one individual. Furthermore, success achieved by one individual is typically claimed as success for the entire group, demonstrating the concept of communalism at work within the learning community of those students. In the classroom, Ladson-Billings observed a teacher's emphasis on collaborative learning in her class that complements students' cultural heritage of working together. In particular, this teacher's practice emphasized the importance of the extended family in the African American community and demonstrated this characteristic at work in the classroom to the advantage of African American students. Common to all of the research discussed above is that each individual research endeavor, on its own, offers either quantitative and/or qualitative data as evidence that could support policy change to the advantage of African American students, if it were put in the right hands. As a body of work, the evidence is even more compelling when juxtaposed to Jonathan Kozol's social-policy research that paints a picture of schools and classrooms in which not all of the aforementioned criteria for success of African American students are utilized in classrooms and schools that serve urban, African American students.

Social Policy Research

In his landmark study, *Shame of the nation: The restoration of apartheid schooling in America*, Kozol (2005) approaches the topic of the achievement gap from the perspective of inequities in distribution of resources. Between 2000 and 2005, Kozol visited approximately 60
schools in 30 districts, situated in 11 different states to assess the inequities in education that plague the United States. What he found is that the wealthy urbanites use their zip codes and influence to sequester the majority of the resources available in public education. Moreover, they lobby and use their influence to keep white, middle, and upper-middle class children segregated from poor children, who were in majority African American in the places that Kozol visited.

He found that many African American and white teachers in the poorer schools do not value their students' cultural capital and underestimate their students' abilities to the detriment of the children's futures. These findings echo Boutte and Hill (2006) who drive home the point that to be successful at culturally-relevant pedagogy, teachers must educate themselves about the sources of knowledge students of color bring to the classroom, and they absolutely must extend students' worldview of themselves as individuals within a community to that of members within a global context. This critical stance is a cornerstone of culturally-relevant pedagogy from which all students can benefit regardless of culture of origin and socioeconomic status. In stark opposition to the warm and inquiry-driven classroom of the teacher practicing culturally-relevant pedagogy, Kozol (2005) found that a manner in which "education" deals with the achievement gap is to force military-style classroom practices on poor African American children that can do nothing to prepare these students for the standardized tests forced upon them. This course of action persists despite the fact that these children have not been prepared like their financially wealthy white counterparts, who have been primed to participate in a system of standardized testing since they were 2-and 3-years-old.

Kozol found a different phenomenon at work in the suburban schools. He found that both African American and white suburban parents aggressively resist rezoning to segregate their children. He found that these kinds of activist partnerships are formed in multicultural neighborhoods where the children have gone to school together and have shared resources since elementary school; therefore, the parents are friends and value the exchange of cultural-background knowledge. Moreover, these parents are described as collectively and aggressively protecting the cultural diversity they have in their neighborhoods. Finally, Kozol suggests that nothing short of a national-political movement such as a new civil-rights movement will dissolve the educational inequities that plague this nation.
Thus far, research has been presented from two perspectives of inquiry. Education research on culturally-relevant pedagogy and teacher preparedness shows that African American children can excel in the classroom as well as their white counterparts. On the other side of the fence, Kozol’s research most certainly presents the impact upon African American children and low-income children when a learning environment lacks resources as well as compassionate and well-trained teachers.

Psychological Research

The psychology of African American student achievement presents an interplay of variables as complex as in any social-policy research. Moreover, four articles in particular make sense of the issue and give a representation quite different from the popular notion of the “achievement gap.” Of the recent literature available, the following articles were selected because they relate in some way to the sociology and education literature with regard to investigating African American students and their achievement. Rouse and Austin (2002), for example, add to the psychological literature with their conclusion that patterns of motivation within ethnic groups vary across ethnic groups, which demonstrates that “motivation does not look exactly the same in each ethnic group” (p. 113). Since these authors’ findings indicate that motivation should be investigated within ethnic groups, it speaks directly against the notion that research on motivation can be applied across ethnic groups and that conclusions made pertaining to one ethnic group can be applied to another ethnic group. Undoubtedly, these findings have implications for any policy that ignores between-group differences.

Powell and Arriola (2003) also add to that literature from a psychological perspective. The researchers executed a cross-sectional study to determine psychosocial factors associated with African American students’ high-school achievement. The variables under consideration were community service, academic motivation, social support, and students’ methods of handling unfair treatment. The researchers found a negative association between grade-point average (GPA) and the way a student copes with unfair treatment, suggesting that students who talk with others about their problems are more likely to seek help with their schoolwork and to be more successful academically. This finding relates to the mentoring literature on African American female-doctoral

3 The research shows that cultivating an interest in learning is important at all ages. However, the Powell and Arriola (2003) research has particular relevance to the age group that immediately precedes college attendance.
students that suggests students who are able to discuss challenges with their mentors are more successful academically (e.g., Davidson & Foster-Johnson, 2001; Wills, 2008).

In response to much of the pre-1993 psychology literature that sought to explain achievement among African American students from a cultural-deficit-oriented approach, which concentrated on socioeconomic status, marital status, occupational status of parents, and family composition (e.g., Jencks, et al., 1972; Moynihan, 1965), Ford (1993) took a different approach. First, Ford selected upper-elementary level students from fifth and sixth grades in an urban school district. Studying this age and demographic is advantageous because students at this developmental level are “ideal for psychological and educational intervention, yet old enough for accurate measurement of attitudes, beliefs, and values” (p. 51), and often times students from urban districts are disproportionately stigmatized (e.g., Books, 2004; Oakes, 2005). Ford (1993) examined parental beliefs regarding education and the relationship between these beliefs and students’ attitudes, beliefs, and values about schooling. Statistical analyses were employed to explore specifically the students’ responses by family demographic and family achievement-orientation variables. One of Ford’s most significant findings reveals that children’s beliefs about social, cultural, and psychological variables related to achievement orientation are not influenced significantly by the presence or absence of a father in the home. This finding is validated by the sociology literature (e.g., MacLeod, 2009) and simultaneously speaks against antiquated notions that matriarchal families and decline in family structure are to blame for the masses of African American families in poverty (e.g., Moynihan, 1965). Another important finding that relates to research on African American student achievement outside of the field of psychology is that children who “strongly agreed” that their parents consider school important communicated more cultural support compared to students who responded “agreed” to the same question.

Cognitive Neuroscience Research

The social sciences have long investigated the connection between poverty and achievement. As Kozol’s social-policy research describes, African American children and low socioeconomic-status children are more likely to have inadequate resources for learning and, thus, lower standardized test scores than their white and wealthy counterparts. Certainly, children cannot
study from books they do not have, and sweltering heat or bitter cold impede concentration as do sleep deprivation and persistent hunger. The sociology and psychology research literature clearly makes the case that socioeconomic status matters to children’s cognitive development (e.g., Bradley & Corwyn, 2002; Conger & Donnellan, 2007; McLoyd, 1998). Moreover, the connection between achievement and income manifests by kindergarten age and worsens over time (e.g., Heckman, 2006; Pungello, et al., 1996). In other words, the farther children fall behind their peers, the more unlikely it is that they will attain enough education to rise above the poverty that victimized them in the beginning. Nevertheless, the question remains, what exactly is it about an impoverished childhood that influences academic achievement? Cognitive neuroscience research fills in the gap by specifying how it is that inadequate resources results in decreased learning.

Evans and Schamberg (2009) offer this response in regard to income-related deficits in academic achievement: “the longer the duration of childhood exposure to poverty, the worse achievement levels become” (p. 6545). The authors bring together two research literatures, neuroscience research and psychological-stress research, to address the income-achievement gap. Their work shows that the chronic stress of childhood poverty and the “working” memory in adults are inversely related. The implication of this relationship is that working memory “is essential to language comprehension, reading, and problem solving, and it is a critical prerequisite for long-term storage of information” (p. 6545). These findings are overwhelmingly significant given the 2007 statistics from the U.S. Department of Commerce, Bureau of the Census that counted approximately 13.3 million poor children of which approximately 25%, or 3,661,343, are African American children (Children’s Defense Fund, 2008, p. 23). The conclusions offered by Evans and Schamberg (2009) are preceded by other research that first described the adverse effects of stress on cognition, such as suppression of neurogenesis and increased glucocorticoid production, both of which have an adverse effect on cognition (e.g., Lupien, Ouellet-Morin, et al., 2006; Lupien, Maheu, Tu, Flocco, & Shrmack, 2007; McEwan, 2000; Sapolsky, 2004). Research like that of Evans and Schamberg (2009) is groundbreaking by virtue of the relationships between poverty, stress, and academic achievement that are being empirically substantiated.

Thus far, the gap between African American students and achievement has been examined from four different perspectives. The next question to explore is where might a consilient
effort towards solving this problem have its greatest impact? One can envision that research from cognitive neuroscience, psychology, and education could be well utilized to lobby against or dramatically improve the very social policies that have resulted in the state of education as described by Jonathan Kozol (2005). Furthermore, striking at the foundation of these social policies that advantage some to the disadvantage others could very well begin on the floor of the U. S. House of Representatives.

**HOUSE COMMITTEE WITNESS TESTIMONY AS ARTIFACT**

Other than contributions of research that address the “achievement gap,” each of the scholarly works mentioned previously have another important factor in common: It is likely that none of these articles has been cited by a witness in a committee or subcommittee hearing before members of the U.S. Congress. Without doubt, the authors whose research is the subject of this essay could effectively participate on a House committee hearing, but their voices are absent. For example, on March 17, 2009, there was a Full Committee Hearing on the importance of early childhood development (U. S. House of Representatives, 2009). This was only one of a series of committee and subcommittee hearings devoted to strengthening early-childhood development in the United States. According to the website, those hearings were intended to “examine the early learning and child care needs of children and families, as well as collaborative state efforts and other initiatives to deliver high quality care and education to children from birth through age five” (“Purpose…”). Credit for calling these hearings must be given to President Barack Obama whose first

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major speech on education emphasized early education as a critical part of his presidential agenda (Wagamen, 2009). The particular hearing in question came only one week after this historic speech. Despite an impressive list of witnesses, exploration of witness testimony as an artifact bears out this argument regarding lack of consilience. As demonstrated in Table 1, the list of witnesses’ areas of expertise based on the committee’s records lacks consilience towards exploring early childhood development. Furthermore, the works cited in the testimonies themselves lack a strong, consilient perspective toward early-childhood development.

As noted above, only half of the panel of “experts” mentioned research in her or his testimony. Given the breadth and depth of research on the topic, this statistic is abysmal. Furthermore, only one of the experts (i.e., Stebbins, 2009) offered bibliographic citations in an attempt to strengthen her argument. In the academy, such a practice typically is considered unacceptable. For example, of the six “experts” called upon, only one witness cited research outside of education-policy research and, of the nine sources Ms. Stebbins supplied, only one source was outside education-policy research. Ms. Stebbins gave, as one of her sources, the National Council on the Developing Child web site (www.developingchild.net, 2009). Although the working papers on this website represent a clear pursuit of a consilient approach to studying early-childhood development as evidenced by sources from education policy, human development, and neurotoxicology, Ms. Stebbins did not take full advantage of this information as a source or as a model for presenting her argument to the chair of the Committee on Early-Childhood Development.

On April 29, 2009, the House Education and Labor Committee held a hearing to examine how states can use internationally benchmarked common standards to improve student preparation for competition in a global society (Meyer, 2009). The documented witnesses clearly hail from the same disciplines across the board, education (i.e., James B. Hunt, Jr. is from the James B. Hunt, Jr. Institute for Educational Leadership and Policy affiliated with University of North Carolina, Chapel Hill; Ken James is Commissioner of Education from the Arkansas Department of Education in Little Rock, Arkansas; Greg Jones is Chair of California Business for Excellence in Education located in Sacramento, California; Dave Levin is co-founder of KIPP: Knowledge Is Power Program in New York, New York; and Randi Weingarten is president of the American Federation of Teachers). As demonstrated in the review above of witnesses to the full committee meeting on early-childhood...
education, not one of the witnesses being called upon for this subsequent committee hearing comes from a psychology, social policy, or cognitive neuroscience background. Moreover, it would be of interest to note if any of the witnesses used current quantitative research in making her or his argument, although this outcome is not likely.

**IMPLICATIONS**

Unless there is a radical shift in how our government approaches the composition of witness panels for committee and subcommittee hearings, it is unlikely that policymaking will change. Perhaps, a discourse meta-analysis of the content of witness testimony as compared to policy derived from the hearing and concurrent outcomes, which would include financial losses and gains, would speak more truth than the currently used witness-panelist procedures. In addition, any problem-solving approach that lacks a truly consilient effort is destined more than likely for failure. Meaning, this society clearly seems to be fated to repeat its mistakes, and the "achievement gap" will be perpetuated as this generation’s legacy as it was the legacy of the previous generation. As Jonathan Kozol offered in *Shame of a Nation* (2005), nothing short of a national political movement like a new civil-rights movement will dissolve the educational inequities that plague our nation. Similarly, as evidenced by the foundation upon which our government makes policy, nothing short of a radical change in our thinking and policy-making procedures will shift the policies that affect the "achievement gap" in this country.

**CONCLUSION AND NEXT STEPS**

This essay could be considered an unwitting foray into discourse analysis, but any knowledge of comparative-literature conventions would betray such an offering. More accurately, from the perspective of a qualitative researcher, the author submits that this monograph chapter has evolved into an investigation more accurately considered applied-policy research with a foundation in textual analysis. According to Walker (1993), “What qualitative research can offer the [educational] policy maker is a theory of social action grounded on the experiences of the worldview of those likely to be affected by a policy decision” (p.19). Unfortunately, however, the worldview described by the so-called early-childhood-development panel of experts discussed here is a myopic worldview as
concluded by even cursory analyses of the textual representations of these witness' testimonies. Consequently, using Wilson's (1998) term, the worldview being presented also lacks consilience.

Based on the lack of cited research found in this cursory examination of one set of congressional testimonies regarding potential changes in education policy, a qualitative investigation (i.e., textual analysis; Walker 1993) of testimonies from hearings on related educational matters may call attention to the problem of inadequate use of research findings and the concomitant paucity of facts in traditional congressional "fact-finding" efforts. Considering the research reviewed previously, then, the following question should not remain ignored: What is the use of doing research if nothing is done with it to increase its utmost utility? If a future more in-depth, meta-analysis of applicable research validates the conclusions of this cursory exploration, the inference could be made that the education and social policies derived from congressional hearings do not represent accurately the interests of people most likely to be affected by those policy decisions.

The benefits of consilience for educational policy makers, especially towards making a high-quality education accessible to all children, is a lofty goal but is attainable, if such information is put into the hands of willing and able members of congress and congressional staff members. Certainly, with regard to the many African American children who are disadvantaged by our system of education and denied the opportunity to reach their potential, the time for change in educational policymaking is now.

REFERENCES


PART 4:
ARNOLD SCHOOL OF PUBLIC HEALTH
HEALTH DISPARITIES IN AFRICAN AMERICAN WOMEN:  
THE EFFECTS OF PCBs and ORGANOCHLORINE 
PESTICIDES ON BREAST CANCER 

Jamelle H. Ellis  
Department of Environmental Health Sciences  

An abundance of research has been conducted on the effects of pesticides and polychlorinated biphenyls (PCBs) on breast cancer in women in the United States; however, research on the effects of pesticides on the rates of breast cancer in African American women appears to be limited. Breast cancer is the second most leading cause of cancer death among African American women, exceeded only by lung cancer [1]. The risk factors for breast cancer can be associated with factors that are inherent to an individual (e.g., age, gender, family history, race, etc.), are related to life-style (e.g., obesity, lack of physical activity, post-menopausal hormone therapy, etc.), and include those that remain uncertain (e.g., high-fat diets, tobacco use, chemicals in the environment, etc.) [2]. One of the ongoing debates and areas of cancer research that can provide many opportunities for discovery is the impact of organochlorine pesticides on the incidence of breast cancer. Of particular interest are the effects of pesticide exposure on breast cancer mortality rates in African American women.

This document will employ research conducted primarily by the Carolina Breast Cancer Study (CBCS) for the purposes of a secondary data analysis. The Carolina Breast Cancer Study began in 1993 and is operated through the Lineberger Comprehensive Cancer Center in North Carolina [2a]. It also is affiliated with the Gillings School of Global Public Health at the University of North Carolina at Chapel Hill, the University Cancer Research Fund, and the National Cancer Institute’s Specialized Program of Research Excellence in breast cancer. The researchers’ primary goal is to understand why some women get certain types of breast cancer and others do not, and this work also is focused on how racial differences in genetics, treatment, and other risk factors can influence breast cancer incidence and survival. In the original study, participants were interviewed in their homes by trained nurses regarding breast cancer risk factors and a DNA sample was taken. Participants were asked also to grant permission for researchers to access their relevant medical
records. The study did not involve treatment of any kind. This secondary analysis of the CBCS study data was completed in the hope that more can be learned about disparities in treatment and access to healthcare, and the general quality of life of the participants [2a]. The results of this analysis and review of the body of related research is offered to determine if substantial evidence exists to support the pursuit of demographic studies in urban and rural minority communities in the U.S. in conjunction with environmental, ecological, and health-risk assessments specific to heavily populated African American communities that would provide for more substantive research on the topic of pesticide exposure and breast cancer in African American women.

Most previous studies do not support the hypothesis that exposure to Dichlorodiphenyltrichloroethane (DDT) is an important risk factor for breast cancer [3]; however, previous studies were limited by the inability to measure exposure in young women during periods of the heaviest DDT use in this country. *DDT and Breast Cancer in Young Women: New Data on the Significance of Age at Exposure* (2007) is the first study to measure blood levels in young adulthood (subjects' mean age of 26 years). In other studies, blood was collected when women were middle age or older [5]. This study is also the first study specifically designed to consider whether age at exposure may modify DDT effects on breast cancer. DDT was first discovered as an insecticide in 1939, but use of the pesticide became widespread in the United States in 1945 [4]. A woman's age in 1945 is therefore a proxy for the youngest possible age at exposure to DDT and for her age when DDT use was at its peak. In the 1945 Child Health and Development Studies (CHDS) research, a variety of ages are represented [5]. These data assist in developing an inimitable proposal that analyzes the associations hypothesized between DDT exposure and increased breast cancer incidence in birth cohorts in which women potentially were exposed to significantly higher levels of DDT in the early stages of life [5].

Pesticides have been of interest in etiologic studies of breast cancer because many pesticides or their breakdown products mimic estrogen, which is known to increase breast cancer risk or otherwise disrupt hormones, and some cause mammary tumors in animals [6]. Still, according to Dr. Suzanne Snedeker of the Institute for Comparative and Environmental Toxicology in Ithaca, NY, there is little evidence that the breakdown product of DDT, called dichlorodiphenyldichloroethene (DDE), is estrogenic [7]. Since DDE is resistant to biodegradation, it stays in the environment and
in human tissues for long periods of time. While earlier studies suggested that White women with higher levels of DDE in their blood or who are fat were at higher risk for breast cancer, the majority of the more recently conducted well-controlled studies of North American and European White women have not supported this association [e.g., 6a, 6b, 6c]. Studies of African American women and women from developing countries appear to have been less consistent. More studies are needed to determine if particular ethnic or racial sub-groups of women exposed to DDT have a higher risk of breast cancer [7].

PCBs and ORGANOCHLORINES IN THE UNITED STATES

Use of PCBs

Polychlorinated biphenyls (PCBs) and organochlorines generally are regarded as ubiquitous components of our environment. PCBs, first synthesized in 1881, are a group of manufactured organic chemicals that contain 209 individual chlorinated chemicals (known as congeners) [7a]. PCBs have been widely used as coolants and lubricants in transformers, capacitors, and other electrical equipment, but they also have been used in a number of common household products such as appliances containing PCB capacitors, hydraulic fluids, inks, adhesives, paints and flame retardants [7b]. The manufacture of PCBs was banned in the United States in 1977 when evidence of their persistence in the environment and harmful health effects was established [7a, 7c]. According to the Agency for Toxic Substances and Disease Registry (ATSDR, 2009), PCBs do not dissolve or evaporate readily, but they may be transported by water and air [7c1]. These compounds also may be released into the environment when wastes that contain PCBs are incinerated or stored in landfills [7d]; thus, breathing air near hazardous waste sites and drinking contaminated well water are potential sources of PCB exposure [7e]. If burned, PCBs can generate by-products called dioxins which are known carcinogens [7f]. From a human health perspective, PCBs may be most harmful because they are highly soluble in adipose tissues [7]. PCBs are found in the fatty tissues of animals living in water or on land, particularly those at the top of the food chain [7c1]. The ATSDR also reports that as PCBs move up the food chain, their compounds bioaccumulate, and ultimately they negatively impact human health. Since the ban of PCBs, significant steps appear to have been taken by government agencies and corporations to reduce the long-term effects of PCBs on the
environment; in spite of this, biodegradation of PCBs in water, bioavailability of PCBs in air, water, and soil, and the dose-response data in animals for acute- and intermediate-duration inhalation and oral exposures remain areas with current research needs [7c1].

**Use of Organochlorines**

Pesticides are well known as another omnipresent class of chemicals that continue to impact the environment oftentimes long after their initial application. According to the Environmental Protection Agency (EPA, 2002), in 1999, over 1 billion pounds of pesticides were applied in the United States and over 5.6 billion pounds were applied worldwide [4]. The active ingredients in pesticides are defined as “the chemical or substance component of a pesticide product intended to kill, repel, attract, mitigate, or control a pest, or that acts as a plant growth regulator, desiccant, or nitrogen stabilizer.” [8, p. 32]. Organochlorine pesticides—DDT, chlordane, aldrin, dieldrin, endrin, dacthal, heptachlor, lindane, methoxychlor, and pentachlorophenol—are documented as being introduced to the United States in the 1940s. The EPA (2002) banned or restricted the use of many of these pesticides during the 1970s and 1980s; DDT was banned in 1972, endrin in 1986, dieldrin and aldrin in 1987, and chlordane in 1988. Although most organochlorines were banned or their use restricted in the 1970s and 1980s in developed countries, it is clear that their chemical properties make them resistant to degradation by water, sun, and microorganisms. Because of their resistance to degradation, organochlorines persist in air, water, and soil, and they bioaccumulate in adipose tissue of animals and humans [7]. Dr. Nancy Nelson reports that the most widespread chemicals in the environment and in human tissues are DDT, DDE, and polychlorinated biphenyl (PCBs) and that people can be exposed to organochlorines by eating fatty foods (e.g. milk, dairy products, or fish) that are contaminated with these pesticides, by eating food imported from countries that still allow the use of persistent pesticides, or by absorbing these pesticides through the skin [9].

**Socioeconomic and Health Disparities in African Americans**

Since 1998, the *Annual Report to the Nation on the Status of Cancer* has documented the undue burden of breast cancer on women of color [9a]. This specific Annual Report to the Nation is a collaboration of the National Cancer Institute, the Centers for Disease Control and Prevention,
the American Cancer Society, and the North America Association of Central Cancer Registries. It is clear that African American women have the highest breast cancer rate of any racial or ethnic group in the United States. Nancy Krieger, Ph.D., with the Department of Health and Social Behavior and the Harvard Center for Society and Health, Harvard School of Public Health, Boston, has observed: "combine relatively high incidence and relatively high mortality, and the net result is that US Black women have among the highest breast cancer mortality rates in the world" [11, p. 612]. More White women are stricken with breast cancer than Black women, yet Black women are 28 percent more likely to die from the disease than White women [12]. This research indicates that breast cancer mortality rates among Black women in the United States are unparalleled and show evidence of a disturbing pattern. Between 1973 and 1990, incidence in Black women below the age of 50 increased by over 16 percent, while the increase for White women in the same age-group rose only by 6 percent [13]. Between 1969 and 1997, the age-adjusted death rate for White women dropped 15 percent, while it increased by 22 percent for African American women [11].

A key factor in developing a strategy to reduce the rates of breast cancer in African American women is first to understand the underlying causes of the disproportional rates between African American and White women. In 2005, The National Black Environmental Justice Network (NBEJN) conveyed that approximately 60% of African Americans in the U.S. reside in neighborhoods near uncontrolled toxic waste sites and that three out of five of the major hazardous waste landfills in the U.S. are located principally in African American or Latino communities [12]. They state that as a consequence of proximity, people of color have a higher incidence of cancer, lead poisoning, respiratory illnesses, and a host of other serious and fatal environmentally-related health problems. Given this evidence, it is reasonable to conclude that many low-income, minority communities are located in close proximity to chemical and industrial settings where toxic waste is generated. These settings include chemical waste disposal sites, fossil-fuel power plants, municipal incinerators, and solid-waste landfills [14]. African Americans and other socio-economically disadvantaged populations are more likely to live in the most hazardous environments and to work in the most hazardous occupations [15]. In addition, Kenneth Olsen's opinion is that inner city African American neighborhoods are overburdened with pollution from diesel buses. Factors contributing to the high incidence of cancer in African Americans appear to be varied. While behavioral and lifestyle factors,
nutrition, and access to health care services are important, environmental exposures (over which these individuals have little control) are likely to play a prominent role in increased morbidity and mortality among socio-economically disadvantaged populations [2].

The Silent Spring Institute's web site states that research shows low-income communities of color across the United States bear the heaviest burdens of health risk, in part, because they are situated disproportionately near polluting facilities and heavily used transit corridors [17]. According to the NBEJN, the medical establishment and the current public health model do not emphasize the association between pollution and disease risks [12].

RELATED STUDIES OF CANCER AND PESTICIDES

Studies have been conducted in North Carolina, Mississippi, and Alabama that attempt to address the discrepancies in breast cancer rates between White women and African American women in the United States who have been exposed to organochlorine pesticides and PCBs. In research conducted by the Carolina Breast Cancer Study (CBCS) coalition, Millikan and associates (2000) examined plasma DDE and total PCB levels in relation to breast cancer in a population-based, case-control study of African American women (292 cases and 270 controls) and White women (456 cases and 389 controls) [18]. The findings reveal that among African American women, the odds ratio (OR) for PCBs was highest for obese African American women. In contrast, the OR for DDE was highest in lean African American women. Incidentally, ORs for DDE were not elevated among women who lived or worked on farms or elevated among farming women who reported exposure to pesticides. This study resulted in findings that seem to suggest the absence of a strong effect for DDE or total PCBs in breast cancer but could lend support for associations between these variables among subgroups of women. In the Millikan study, factors such as income, parity, breastfeeding, race/ethnicity, and body-mass index are reported as influencing the relationship of organochlorines to breast cancer. Differing distributions of such factors may explain some of the inconsistencies across previous studies [18].

Another study also was conducted using the CBCS as the primary-focus group. This research evaluated the breast cancer risks in relation to PCBs and the CYP1A1 polymorphisms M1 (also known as CYP1A1*2A), M2 (CYP1A1*2C), M3 (CYP1A1*3), and M4 (CYP1A1*4) [18a,
The study population consisted of 612 patients (242 African American, 370 White) and 599 controls (242 African American, 357 White). Several mechanisms have been proposed to explain how PCB exposure might increase the risk of breast cancer [19-22]. Due to the lipophilic nature of organochlorine compounds, they undergo lifelong sequestration in animal and human adipose tissues [7c1]. Adipose tissue within the human breast contains measurable levels of PCBs [23]. Cytochrome P450 1A1 (CYP1A1), known also as AHH (aryl hydrocarbon hydroxylase), is a member of the cytochrome P450 superfamily of enzymes [25a]. Oxidative metabolism of exogenous chemicals and drugs is considered to be a primary function of CYP1A1 [25b]. CYP1A1 encodes AHH, an enzyme involved in the production of reactive epoxide intermediates from polycyclic aromatic hydrocarbons (e.g. benzopyrene), steroid hormones, and other aromatic compounds [24]. Several polymorphisms have been identified in CYP1A1, some of which lead to more highly inducible AHH activity. Dr. D. Petersen reports that one CYP1A1 polymorphism is M3 (CYP1A1*3), which is a T→C substitution at nucleotide 3205 in the 3'-non-coding region in which a non-coding RNA (ncRNA) is a functional RNA molecule that is not translated into a protein, and many ncRNAs show abnormal expression patterns in cancerous tissues [24]. CYP1A1 is involved in phase I xenobiotic metabolism and is known to be able to metabolize specific compounds into different forms, which ultimately become carcinogenic [25]. According to Barouki and Morel (2001), metabolism of PCBs within breast tissue can generate reactive intermediates that cause oxidative damage and react with DNA. The proposed mechanism involves cytochrome P450 1A1 (CYP1A1), a gene that is inducible by PCBs [26, 27]. On the basis of this model, individuals with higher CYP1A1 activity would be at increased risk of breast cancer when exposed to high levels of PCBs [28].

The results of the Yu Li and associates (2005) study of North Carolina women showed that there was no evidence of strong joint effects between CYP1A1 M1-containing genotypes and total PCBs in African American or White women [28]. Nevertheless, statistically significant multiplicative interactions were observed between CYP1A1 M2-containing genotypes and elevated plasma total PCBs among White women (p-value for likelihood ratio test = 0.02). Multiplicative interactions also were observed between CYP1A1 M3-containing genotypes and elevated total PCBs among African American women (p-value for likelihood ratio test = 0.10). The results confirm previous reports that CYP1A1 M2-containing genotypes modify the association between PCB exposure and risk of breast cancer [28].
In a separate study conducted in nine Mississippi towns (i.e., Jackson, Greenville, Yazoo, Vicksburg, Corinth, Columbus, Meridian, Hattiesburg, and Biloxi) moderate correlations were found between African American breast-cancer mortality rates and the total acres planted in the town of Corinth ($p=0.667$ and $p<0.049$) and the catfish crops in Greenville ($p=0.648$ and $p<0.031$) [29]. The topology of the state of Mississippi is documented as encompassing high proportions of water bodies, high fish consumption, and concentrated populations of African Americans in the Delta region. Collectively, these traits provided an opportunity to conduct a study with a design that estimates long-term health effects of pesticides and their bioaccumulation. Researchers conducted this study to look specifically at the acreage of catfish crops and of planted rice crops in the respective towns. In this study, evidence of environmental exposure in humans includes increasing levels of pesticides in human tissue with increasing age as a result of accumulation from the environment and historically high levels of exposure. Measured levels have consistently been higher in African Americans than among White residents as a result of exposure. These racial differences in exposure to pesticides and the endogenous hormonal effects believed to be the root cause of breast cancer, merit further study [29].

In the 1998 study of a Triana, Alabama plant, it was revealed that a DDT production plant in the city discharged large quantities of the pesticide into the tributaries of the Tennessee River for several decades before it was discovered in the 1970s [29a]. Researchers surveyed the local community, primarily comprised of African Americans, whose diets included fish from the Indian Creek, a popular fishing location and tributary of the Tennessee River [29b]. This study found that accumulated body burdens of the DDT were orders of magnitude above the general population. As a result of these findings, the National Cancer Institute (NCI), in collaboration with the Triana Area Medical Fund and the College of Nursing at the University of Alabama in Huntsville, is conducting a study currently to investigate the possible effects of environmental exposures, such as DDT and other organochlorine compounds, on the risk of breast cancer. According to the NCI web site, the objective of this current study is to evaluate the risk of breast cancer associated with organochlorine exposures among predominantly African American women. Approximately 350 women, all over age 35, were offered mammograms [30]. As a service to the participants, the investigators provided a standard clinical chemistry on blood samples and made the results available to the subjects and their
physicians. The remainder of the blood samples were processed and sent to NCI for analysis and storage, and serum analyses were conducted by the National Center for Environmental Health at the Center for Disease Control (CDC) [30]. Although analyses are currently underway and the results of this study are ongoing, this case represents a far too frequent scenario of inequitable environmental impacts to underserved, African American communities in the United States.

**DISCUSSION**

Based on this research review, most hypotheses formed in the early to mid 1990s focused on how some naturally occurring and synthetic chemicals in the environment might mimic the effects of one of the body's own natural hormones, estrogen, and thereby contribute to the development of breast cancer. The central focus of these hypotheses was the suggested link between estrogen and the development of breast cancer [30a]. Hormones produced by a woman's ovaries, especially estrogen, have been shown to cause breast cancer cells to proliferate. Clearly, this correlation between estrogen levels and cancer indicates that cancer cells may be sensitive to hormones, but it does not purport with certainty that cancer is caused by the hormone. While the weight of scientific evidence does not support the hypothesis of a strong relationship between chlorinated chemicals and breast cancer, there has been an increase in the incidence of breast cancer, particularly in African American women [e.g., 17, 30b] that is not explained by known risk factors.

According to the National Cancer Institute (NCI) web site, a substantial proportion of breast cancer cases in the U.S. are explained by well-established risk factors. NCI researchers attributed approximately 41 percent of all breast cancer cases in the U.S. to these risk factors. Since known risk factors explain less than half of breast cancer incidences, NCI researchers concluded that additional research on genetic, hormonal, and biological exposures may assist in better understanding unexplained breast cancer cases.

The Kaiser-Krieger study is a large, definitive study led in 1990 by Dr. Nancy Krieger of the Kaiser Foundation Research Institute that focused on the relationship between chlorinated chemicals and breast cancer incidence [29a]. This study's findings did not reveal a relationship between exposure to DDE or PCBs and increased risk of breast cancer. The Kaiser-Krieger study seems to represent an important test for the chlorinated chemical/breast cancer hypothesis type of
research conducted in the 1990s. Researchers analyzed blood samples taken from women during routine examinations in the late 1960s, when DDT use was prevalent. They then compared the DDE levels in their patients' blood with the incidence of breast cancer occurring after nearly two decades. The results of this study are convincing due to the large sample size of 4,664 participants and an average period of 14 years from the time of sampling to development of the disease. Samples for this study were taken prior to the 1972 ban on DDT when women were exposed to much higher residue levels [29a].

Although the Kaiser-Krieger study did not find significant increased risk of breast cancer, some research results indicate support for continued study of relationships between PCBs and organochlorines and breast cancer incidence. In the Mississippi study, an association existed between the high amounts of fish consumption in the Delta region, which is highly populated by African Americans, and the incidence of breast cancer [29]. Additionally, in the North Carolina studies, factors such as race/ethnicity, body-mass index, income, and diet were cited as potentially influencing the relationship between PCBs and organochlorines and breast cancer; however, neither study investigated the demographics of rural/urban human habitats or their socioeconomic status. Also absent from these four studies is an assessment of potential occupational exposures. Although most previous studies do not support the hypothesis that exposure to DDT is an important risk factor for breast cancer, the studies conducted by the CBCS in North Carolina, the studies conducted in nine Mississippi towns, and the Triana, Alabama plant study all provide significant support for continued research into the correlations between PCBs and organochlorines and breast cancer in African American women.

CONCLUSIONS AND RECOMMENDATIONS

A significant amount of research has been conducted in an effort to correlate organochlorine and PCB pesticide exposure to breast cancer. Clearly, results have been conflicting and inconsistent, with most studies resulting in low or no evidence of pesticide or PCBs exposure causing breast cancer. Nevertheless, there is evidence that pesticides may be a contributing factor for African American women in areas impacted by the environmentally hazardous or toxic communities in which they live and by the socioeconomic challenges that many African Americans
face. Future analysis of demographic studies in both urban and rural minority communities in the U.S. in conjunction with environmental, ecological, and health-risk assessments specific to heavily populated African American communities would provide for more substantive research on the topic of pesticide exposure and breast cancer in African American women.

REFERENCE NOTES


As the age old question presents itself, is health care a privilege or right is continuing to swirl through the barrels of the political arena. This author often wonders why a nation with such wealth and resources stonewalls on issues that would improve the capital, human and financial, of our nation. Technically health care is not a right given by the Constitution of the United States, but an amendment can be made to assure citizens of that right. To this author, it seems clear that health care should not only be afforded to prisoners as outlined in the 8th Amendment (U.S. Constitution, http://www.usconstitution.net/const.html), but also that right needs to be extended to every individual as one indicator that would improve the general welfare of the United States. It has been almost 40 years since; any amendments regarding citizens’ rights have been ratified (U.S. Constitution, Amendment 24, 1964). During this time so much has transpired in the United States that it seems reasonable to conclude at least that inspection of the position of health care as a right is warranted.

History has a tendency to repeat itself. History affords one the ability to look at past events to determine if an action is necessary. For example, are new laws needed to address the current governmental or private health care regulations? In order for regulations to be effective, it is necessary to research the past history of services provided to see if they are aligned with the current objectives and needs of the population served (Rothman, 1993). It is clear that the history of health care and its reform initiatives needs to be understood in terms of the context, long range planning, and provision of balance between change and continuity over time. Yet, health policy professionals must not remain complacent and not seek to influence change.

For more than a century, health care reform has attracted the attention of the American public (Rothman, 1993; Starr, 1982). In 2007, there were approximately 46 million people without access to health insurance (U.S. Census, 2007); thus, it is not uncommon for various media outlets to portray a painstaking view on the crisis of the health-care system. As more individuals are forced to pay rapidly-increasing health-insurance premiums and out of pocket expenses, it seems clear that citizens are concerned now more than ever with affordability and access to health care (Jennings,
2010). Over the last sixty years, the debate of universal health care reform has been placed on various policy agendas; however, little has been accomplished nationally to address both access and coverage (Rothman, 1993). In order for health care reform to be implemented, policy makers must have an adequate balance between coverage, cost control, coordinated care and choice (Fuch, 2009). This monograph chapter is addressing the historical and political obstacles surrounding the complexity of universal health care and the previous failures of national reform. After considering more than half a dozen major reform debates, this work is focused on six major movements that occurred over the last century: (a) Theodore Roosevelt and the progressive era, (b) Hoover and the Great Depression, (c) Franklin D. Roosevelt and The New Deal, (d) H.S. Truman and Social Security legislation, (e) Bill Clinton’s Health Security Plan; and (f) the Barack Obama Patient Protection and Affordable Care Act.

ORIGINS OF SOCIAL INSURANCE

The origins of systems of social insurance evolved in Europe during the 19th Century (Starr, 1982). Starr documents that in 1883 Germany established the first national system of compulsory sickness insurance and that these funds initially were available to wage earners in specific industries and trades. Although many of the European countries offered small financial supplements to the transportation and trade workers, by 1912, other countries such as Austria (in 1888), Sweden (in 1891), Denmark (in 1892), and Switzerland (in 1912) distributed funds throughout the country to provide protection against the cost of sickness (Marmor, 2007). This compulsory sickness insurance was designed to protect individuals from the risk that hindered the “continuity of income, such as industrial accidents, old age, and unemployment, through governmental sick pay funds; the notion to compensate for lost wages and medical care was secondary” (Starr, 1982, p. 238). Paul Starr noted governmental programs were not universal as “they were created as a mechanism to maintain income, productive effort, and political allegiance of the working class, whereas the poor received assistance in their own parishes” (p. 238). As nations began to flourish after the Industrial Revolution, the government began to force the able-bodied poor to work by restricting public assistance to the individuals in alms-houses, in turn reducing the government’s role as the guardian of welfare (Rimlinger, 1971).
The Rise of Socialism

It is important to note that one of the main reasons the United States lagged in implementing sickness funds that were similar to its European counterparts was due to the political and demographic climate of the nation (Rimlinger, 1971). Rimlinger explained that during the late nineteenth and early twentieth centuries, the United States government took no action to support voluntary sickness funds or insurance as social welfare was regulated by state and local government. At that time, much of the United States was categorized as liberal, and the Socialist Party lacked political influence until the late 19th century when European immigrants began to establish fraternal societies and offer voluntary funds to their members in the case of sickness or death (Skocpol, 1992). In addition, Skocpol points out that the United States government lacked support from the working class; therefore, the country remained split on the benefits of a compulsory-insurance program.

The Progressive Era (1890-1913)

Progressivism was inspired by the young professionals who hoped to combat the problems of harsh working conditions, unemployment, and poverty that lingered from the effects of World War I (A Contract..., 2007). These individuals used their expertise and power to reform the welfare of the country, through the creation of many voluntary organizations in hopes to "make cities more live-able and improve industrial working conditions" (Farrell, 1967, p. 272). In 1906, the American Association for Labor Legislation (AALL), founded one year earlier, led a campaign for health insurance (Starr, 1982).

Proposals for a national health-insurance system were heard as early as 1912, when President Theodore Roosevelt's Progressive Party platform called for "the protection of home life against the hazards of sickness, irregular employment and old age through the adoption of a system of social insurance adapted to American use" (Skocpol, 1992, p. 178). According to Skocpol, supporters of the platform sought federal regulation of interstate corporations, the conservation of natural resources, graduated inheritance taxes, and women's suffrage. The party also addressed industrial health and safety standards, the prohibition of child labor, a minimum wage for women, compensation for industrial accidents, injuries, and occupational diseases (A contract..., 2007).
In 1912, the AALL created the Social Insurance Committee, which held its first national conference in 1913 and drafted a health policy bill in 1915 (Starr, 1982). The committee recommended a “compulsory plan that limited coverage to the working class and their dependents. The plan included physician services, sick pay, maternity, and death benefits; however, the AALL’s campaign for health insurance gained attention just as the spirit of Progressivism began to recede” (Starr, pp. 243-244).

Upon initial presentation of the model bill, the AALL and the American Medical Association (AMA) goals were “entirely in line” with that of each organization and vowed to assist each other with securing legislation (Numbers, 1978). Numbers, in his history of physicians’ perspectives on health insurance, notes that compulsory insurance certainly was not favored by all; in fact, the American Federation of Labor repeatedly boycotted the plan as they worried the government would weaken the unions’ strength, giving states sovereign control over citizens’ health. Numbers also asserts that the absence of support from the commercial insurance companies was most notable. Since the reformers’ health plan included a death benefit, this legislation was described as delivering a fatalistic blow to the insurance industry because their profits were a direct benefit of policies that covered death and funeral expenses. Consequently, it was not long before the reformers’ and physicians’ ideology began to differ regarding the regulation of income and physician autonomy. As the AMA began to refute their support of the social insurance bill, reformers were forced to fight for compulsory health insurance alone until the late 1920’s (Numbers, 1978).

The Great Depression

Failure of the health insurance proposal during the Progressive era was due to many factors, which included the war, lack of support from special interest groups (i.e., physicians and insurance companies), and the political inexperience of the reformers. J. M. Rubinow, a leading physician and authority on social insurance, asserted that “nothing can be more damaging in a campaign than the failure to appreciate the strength of the enemy, except it be the failure to recognize the allies the enemy might acquire” (Rubinow, June 1931, p. 185).

The Great Depression was the worst economic slump ever in U.S. history, and one which spread throughout the entire industrialized world (Gusmorino, 1996). As documented in Gusmorino,
the Main Causes of the Great Depression, the depression began in late 1929 and lasted for about a decade. Many factors are noted as playing a role in bringing about the depression; however, the main cause for the Great Depression was the combination of the greatly unequal distribution of wealth throughout the 1920's. Moreover, as the effects of The Great Depression began to shape the 1930's, Starr notes many reformers began to change their objective from stabilizing income to financing and expanding access to care. This shift was significant amongst the middle class as they began to feel the impact when medical costs increased by 20 percent, during the decade (Starr, 1982).

The New Deal

As the social devastation of the depression revealed the inadequacies of state relief programs for the aged, unemployed, and the poor, it became apparent that some type of federal response was necessary. In 1934, President Franklin D. Roosevelt created an advisory Committee on Economic Security (Starr, 1982). According to Starr, the committee considered adding a national health insurance component to the bill; however, President Roosevelt worried that this inclusion would jeopardize the Social Security Act. Based on these concerns, he decided to place the need for a national health-insurance plan on hold. As a result, the Social Security Act of 1935 created new programs for the unemployed, the aged, widows, single mothers, and poor children (Quadagno, 1988).

As a result of The Social Security Act, new programs to improve the ambiguity of the economy's downswings were created as well as a board to identify the health needs of the nation. In addition, legislators drafted the Wagner Bill, National Health Act of 1935, in which federal grants would be given to states to support national health insurance, but once again the bill lacked the full support of President Roosevelt and met defeat (Starr, 1982). Starr documents one more attempt being made in 1943, as the Wagner-Murray-Dingell bill was introduced to Congress. This bill actually would have made national health insurance universal and comprehensive. Nonetheless, the issue once again was defeated as President Roosevelt vehemently rejected "going against the state medical societies" (Starr, p. 279). The entry of the United States into World War II further deterred any plan for national health insurance, as the country could not afford to fund the program while in
the midst of a war. Once again President Roosevelt pledged to unveil a proposal for national health insurance, but he died before he was able to fulfill his promise (Quadagno, 2005).

**CHANGES IN POLITICAL SUPPORT**

In 1946, Harry S. Truman showed his commitment to national health insurance as he delivered a plan that proposed "a single egalitarian system that included all classes of society" (Palmer, 1999, p. 4). Truman's health reform was similar to that of President Roosevelt in 1938, but Truman's emphasis was different. Truman's plan emphasized or omitted most of the major barriers to universal health care over the last four decades: (a) the perception that this was "socialized medicine", (b) the "funeral benefit" was dropped from the plan, and (c) physicians were assured they would be able "to choose their method of payment" (Starr, 1982, p. 281). In addition, he wanted an "expansion of hospitals, increased support for public health services, and [to] provide federal aid for medical research and education" (p. 281). Finally, Starr confirms that Truman's plan did not lack in opposition, which emerged from the major players, i.e., the American Medical Association (AMA) and the American Hospital Association (AHA).

The political community during the Truman presidency apparently was influenced and fueled by interest-group politics. Policy was influenced largely by the American Medical Association (Mechanic, 2006). Their opposition and negative position on universal-health insurance coupled with their financial firepower resulted in "a stagnant health policy community" (Mayes, 2004, p. 37). Furthermore, as the Republicans took control of Congress, the interest in enacting a national health insurance policy is documented as becoming non-existent. Over the next couple of years the AMA and its supporters were successful in derailing Truman's plan; instead of a single health insurance plan for the entire nation, America would have a system with "private insurance" for those who could afford it and "public welfare services for the poor" (Starr, p. 284). This shift led to the growth in commercial-insurance providers, namely the Blue Cross and Blue Shield movements.

**Here Come the Blues**

The Blue Cross and Blue Shield corporations (i.e., the Blues) were the vision of health-care success stories of the mid-twentieth century. The first Blue Cross plan originated in 1929 with
1000 enrollees (Anderson, 1975). Anderson documents that, at its inception, the percentage of the U.S. population covered by health insurance was less than 2 percent, but half a century later coverage had risen to 82 percent. The Blues spearheaded this achievement based on the 1927 recommendation of the Committee on the Cost and Medical Care (CCMC) that the nation shift to group practice, group hospital prepayment, and regional health planning as a means to provide health-insurance coverage for the working class (Miller, 1996).

The CCMC was an independent, privately-funded research committee of economists, physicians, public health specialists, and professors committed to address the increasing concern of cost and distribution of medical care (Starr, 1982). The committee’s final report noted that “Ignorance as well as poverty prevented people from receiving as much professional attention as they should. The amount of care which people needed is far greater than that which they are aware of needing, and greater than that for which they are able to pay under present conditions” (CCMC, 1932, p. 35). As discussed in Perkins (1998), Falk, Rorem, and Ring (1993) note that the CCMC recommended insurance be the means to assist with budgeting for larger expenditures as “…more money must be spent for medical care; and this is practical if the expenditures can be budgeted and can be made through fixed periodic payments” (Perkins, 1998, p. 1722).

With the threat of the U.S. implementing a national health insurance plan rejected, Blue Cross solidified its status as the major hospital-insurance carrier (Quadagno, 2005). In 1938, all Blue Cross local member plans were organized into corporations, as each branch joined the national Blue Cross Association, and later received both state and federal tax exemptions (Woodward, 1978; Law, 1976). As a member of the national association, each plan received the benefits of national advertising as well as the lobbying support of the American Hospital Association (AHA) (Law, 1976). These arrangements allowed Blue Cross plans to grow unimpeded by competition from commercial insurance companies; thus, Blue Cross kept the flow of income to hospitals stable and gave the AHA virtually a monopoly over health-care financing. (Quadagno, 2005).

In general, the 1945-1960 period of Blue Cross evolution was one in which these “plans” for the most part refused to consider the ways of the past nor acknowledge the challenges of the future. As Blue Cross rates escalated during the 1950’s, so did the public’s criticism (Miller, 1996). This criticism is noted as leading to individuals becoming more involved in determining their needs of care, especially in the aged.
Medicare

In the late 1950's, the cost of health care "began to double for elders over the age of 65" versus those under the age of 65 (Starr, 1982, p.368). It was at this juncture that the need for healthcare reform appeared again. Starr documents that when John F. Kennedy ran for president in 1960, his platform included a tax-based insurance system that would provide health coverage to the elderly, those over the age of 65. By 1962, public support for Medicare had reached 69 percent, and President Kennedy rallied to get the bill passed; however, he reached opposition from the House Ways and Means Committee, which caused the bill to come to a halt (Corning, 1969). In an effort to increase the viability of the bill, President Kennedy attached the bill to a welfare plan that had passed the house already and submitted the rider to the Senate; however, the measure was still defeated 52 to 48 (Quadagno, 2005).

Unfortunately, the assassination of President Kennedy halted his domestic programs and left the nation overall in a state of shock. As his Vice President, Lyndon B. Johnson, took office, and as President he vowed to combat the issue of health insurance for the elderly and the poor (Corning, 1969). On July 30th, 1965, Medicaid and Medicare bills were signed into law (Kaiser, 2007). Medicaid was designed to provide healthcare services to those individuals receiving welfare benefits, low-income children, the elderly, and individuals with disabilities (Department of Health and Human Service, DHHS, 2007). Medicare initially was a national health-insurance program designed to cover the elderly. In 1972, Medicare eligibility was extended to two other groups that were facing similar problems in obtaining reliable health coverage—people with disabilities and people with end-stage renal disease (DHHS, 2007). It is clear that the enactment of Medicare is considered a turning point for the medical profession. Nevertheless, it resulted in the political loss of key allies, namely the AHA, the Blue Cross Association, and the insurance industry (Quadagno, 2005). Quadango also documents that Medicare further reinforced private insurance by providing coverage for a much needed and costly group of citizens.

In the early to mid-1970's, the nation saw a renewed interest in health reform and national health insurance by three successive presidents i.e., Nixon, Ford, and Carter. Nevertheless, no true action was taken during the tenures of these presidents (Quadagno, 2005). Although Jimmy Carter was elected in 1976 on a campaign platform that included establishment of national-health
insurance, in the midst of increased military expenditures and budgetary constraints, his advisors persuaded him that congressional support was impossible (Navarro, 1992; Ginzberg & Ostow, 1994). Carter's plan called for expanded aid to the aged and poor, responsibility of employers for providing insurance benefits, and the creation of a federal agency to sell insurance (Huefner & Battin, 1992). The reform essentially failed due to the shifting of politicians committed to different proposals (Marmor, 2007). Moreover, with a worsening economy and a troubled reelection campaign, Carter abandoned his national health plan and focused on the hostage situation in Iran (Navarro, 1992). Consequently, another decade with not much effort to provide national health insurance came to an end.

Meanwhile, total national-health expenditures continued to soar. In 1965, the nation's health-care spending was 5.9 percent of the gross national product (GNP); however, in 1978, 1988, 1990, and in 2005 the U.S. spending compared to GNP increased to 8.4%, 11.4%, 12.3% and 16%, respectively (Huefner & Battin, 1992; Catlin, Cowan, Heffler, & Washington, 2007). Consequently, this spending crisis in America spawned another political surge for national health insurance. As Clinton sought the presidency, he was determined to address two major concerns in health care (Eckholm, 1993). Eckholm notes that the first concern was the growing number of Americans who lacked health insurance, and the second was the spiral in health spending that threatened to bankrupt the government.

The Need for Reform

In a 1992 national survey, Americans were asked to choose between two health care reform options: Either (a) to maintain our current system but adopt tougher measures to control costs, or (b) to overhaul our current system and establish a new national health insurance plan (Hart Research Associates & Pepper Foundation, 1992). These authors provide evidence that 60% of the respondents overwhelming chose the latter. In 1993, President Clinton listed several reasons health care reform was needed: (a) millions of Americans were at risk of losing their private health insurance coverage; (b) the cost of financing was twice the rate of the country's gross domestic product (GDP); and (c) the U.S. spends one-third more than other nations and our health outcomes are much less than many other developed nations of the world (Ginzberg & Ostow, 1994).
President Clinton's "American Health Security Act" guaranteed comprehensive health coverage for all Americans regardless of health or employment status (Eckholm, 1993). Under this Act, health plans were described as being obligated to meet national standards on benefits, quality, and access to care, but each state was allowed the option to tailor the system to meet the local needs and conditions of the community. Clinton had three major goals of the Health Security Act i.e., to provide choice, quality, and responsibility (Ginzberg & Ostow, 1994). As proposed, the Act would allow patients to choose the physicians they believed suited their needs. The quality of care would be improved as physicians would be obligated to follow explicit quality and standard goals while promoting primary and preventive care (Ecksholm, 1993). If the legislation had passed, each person in America would share in the responsibility of financing the system as consumers would pay less for low-cost plans and more for high-cost plans, which would create an incentive for individuals to be cost-conscious in their choices (Ginzberg & Ostow, 1994; Ecksholm, 1993).

One may wonder with all aforementioned movements of the past century that include the comprehensive plan of the proposed Health Security Act, what continues to hinder the United States from reforming the health-care system? In essence, this author surmises that the failure of national health insurance could be attributed to the three P's: Politics, people and the press. Universal health coverage lacked the political and public support of the working middle class (Schneider & Ingram, 1993). Clearly, policymaking is not a linear process, as Schneider and Ingram indicate, the opportunity to have the problem and solution overlap yields a small window of opportunity. It seems that agenda building helps issues gain momentum and keeps the attention of the media, public, and policymakers. In order to get an item on the "national" agenda, the objectives must be clear and have measurable indicators of change (Schneider & Ingram, 1993).

In their position paper on The Social Construction of Target Populations, Schneider and Ingram (1993) describe four major target populations: The advantaged, contenders, dependents, and deviants. These authors assert the classifications are important in politics as they have the ability to influence and contribute to policy agendas, legislative behavior, policy formulation, and implementation. This influence seems especially true amongst those labeled as contenders or dependents who usually lack the ability to organize political agendas for themselves. The press also is described by these authors as having a significant influence on domestic issues. Clearly,
the media's view and policy definition/agenda is shaped by those considered advantageous, who usually are unaffected by the social issues that affect the rest of society (Schneider & Ingram, 1993). According to these authors, problem description of social issues typically is determined by the world's view of the nature of the problem, but causation primarily would be based on individual responsibility and influence. As the United States continues to battle with the challenges of financing and increasing access in the current healthcare system, Mechanic (2006) concludes that the public, providers, and policy makers must develop an allied union and continue to advocate for change. A 2006 Heritage Foundation survey showed many Americans are profoundly dissatisfied with the healthcare system and will say that they are in favor of a massive overhaul in the system (Mofit, 2006). Such reform is integral to improving the health and functionality of all and to retiring the United States from the health-system status quo.

“Yes We Did!”

Throughout Barack Obama's presidential campaign, he highlighted several concerns regarding the inadequacies of the United State's health-care system. As discussed throughout this monograph chapter, Cortese and Korsno (2009) conclude these system failures had reached the point in which health care reform was inevitable; therefore, health care became a central part of President Obama's domestic agenda (Oberlander, 2009). Obama's proposal was expected to modernize the current system of employer- and government-provided health care (Cutler, Belong, & Marciairille, 2008). According the Census Bureau, there are more than 46 million Americans, roughly more than one third of the population, lacking health coverage (Brown, 2008). According to Weissett and Weissett (1996), even the working class began to demand better health-care policy in recent years. Many wanted a system-wide reform that provides access based on the resources and infrastructure that matches the resources of the nation (Blendon & Benson, 2009). As elected officials and policymakers are obligated to work on their constituents' behalf; therefore, it is their responsibility to determine the best policy that will ensure that change occurs.

After President Obama's inauguration he was dedicated to enacting a long overdue health-system overhaul (Lake, Crittenden, & Mermin, 2008). Obama's web site, in 2009, asserted

1 At the signing of the bill, Representative Gary L. Ackerman (Democrat of New York) burst out saying: "'Yes we did' — a riff on Mr. Obama's campaign slogan, 'Yes we can.' The crowd, including the president, broke up laughing," The quotation is from S. G. Stoltberg & R. Pear. "Obama signs health care overhaul bill, with a flourish!" New York Times (2010, March 23) online, http://www.nytimes.com/2010/03/24/health/policy/24health.html?_r=1
that health reform will make health care more affordable, health insurers more accountable, expand
health coverage to all Americans, and make the health system sustainable, and that it would stabilize
family budgets, the Federal budget, and the economy. On March 23, 2010, President Barack Obama
signed the Patient Protection and Affordable Care Act into law. "The bill I’m signing will set in motion
reforms that generations of Americans have fought for and marched for and hungered to see," Mr.
Obama said, adding, "Today we are affirming that essential truth, a truth every generation is called
to rediscover for itself, that we are not a nation that scales back its aspirations" (Stoltberg & Pear,
"Obama signs...").

It is clear that there will be challenges in the implementation of Obama’s health care act
as is the case anytime a change in systems occurs; yet, the magnitude of benefits and impact this
plan has on the future and growth of the United States seems invaluable. These benefits include but
are not limited to: (a) ensuring more insurance choices through a competitive market; (b) reducing
premium costs for tens of millions of families and small business owners who are priced out of
coverage today, (c) insuring more American families; and (d) increasing the accountability of health
care insurance providers and companies (Obama, 2009). The Patient Protection and Affordable
Care Act is expected to help 32 million Americans, who do not have it today, to afford health care.
"Under the plan, 95% of Americans will be insured" (Obama, 2009, Health Reform). One of the most
important aspects of the bill is it alleviates our weakening economy "by reducing the deficit by more
than $100 billion over the next ten years — and more than $1 trillion over the second decade — by
cutting government overspending and reining in waste, fraud and abuse" (Obama, 2009, Health
Reform). In this case, this author believes many would agree the benefits outweigh the cost and that
a change is essential. In conclusion, this author says: Do we have the audacity to care? Yes, we
do, can, and did.

Salud': To good health!
REFERENCES


