McNair Research Review

Volume VI Summer 2008

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From the Director

The McNair Program at MTSU is now in its ninth year, having been re-funded for another four years. Of the 318 McNair applications nationwide, 181 of them, or 57 percent, were approved by the U.S. Department of Education, including McNair at MTSU. Our new four-year grant totals $911,616 as before but now, instead of funding 20 students per year, we now fund 25 students. Thus I am grateful for the financial support of the colleges at MTSU for this, our sixth volume of the McNair Research Review. The eight colleges and library on campus listed on page 2 all contributed toward the cost of printing Volume VI. Thanks, too, to the McNair staff – Terri Proctor, graduate assistant, Cindy Howell, secretary, and Steve Saunders, coordinator – for putting this journal together. I would also like to thank the Department of Education for our grant renewal. For helping make the grant award possible, I would like to express appreciation to the university community for its continued support. Sidney A. McPhee, president, and Kaylene Gebert, executive vice president and provost have been particularly strong supporters of McNair at MTSU.

To date, McNair has served 114 students at MTSU, including the 27 scholars currently participating. During the nearly nine-year period McNair at MTSU has been in existence (fiscal year ends September 30), 80 of our past 89 students have graduated, or 89.9 percent (up from last year’s cumulative 84 percent). In addition, 44 students are either enrolled in graduate school or have earned an advanced degree, including 22 who have earned Masters degrees. Two students have completed doctoral degrees (MD and JD) and a third has finished all work for a Ph.D. except an internship, and should be awarded the doctorate in August 2009. Graduate schools that our former scholars have attended or have been accepted to include Vanderbilt University, Brandeis University, North Carolina State, University of California-Davis, New School in New York, The Ohio State University, University of Maryland, and University of Florida, to name a few.

Volume VI of the McNair Research Review contains the research of 14 scholars in the following disciplines: English, political science, geological sciences, biology, psychology, nursing, health and human performance, music performance, and computer information systems. The student scholars and their faculty mentors deserve all the credit for making this issue of the journal one of the best we have published. Counting this issue and all previous issues, 82 articles have been published. With the addition of music for the first time in this issue, we have published work in virtually every field of academics offered at MTSU.

The full, formal name of the program is the Ronald E. McNair Post-Baccalaureate Achievement Program, named after Ronald E. McNair, the NASA astronaut, whose brief biography appears on page 11. To be eligible for the program, a student must meet the following criteria:

• Be a first-generation college student (neither parent or guardian has earned a baccalaureate degree and be financially disadvantaged (according to federal guidelines);
• Or be a member of a group currently underrepresented in graduate education (Black/non-Hispanic, Hispanic, Alaskan native, or American Indian);
• Plan to pursue a doctoral degree;
• Be enrolled in a degree program at MTSU or transferring to MTSU;
• Have completed at least 60 semester credit hours with a CUM GPA of 3.0 or higher;
• Be a U.S. citizen or permanent resident.

If you are an MTSU student and meet the qualifications above, please consider applying for admission to the program. If you are a member of the faculty, administration, or staff at MTSU and know a student who is eligible, please encourage the student to drop by the McNair office in Midgett Building, Room 103. More information and an application are available at www.mtsu.edu/~mcnair.

Sincerely,
L. Diane Miller, Ph.D., Director
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Bethany Adams
Dean Andrews
Jessica Beard
Eterial Burrell
Leonela Carriedo
Anjelica Crawford
Sarafina Croft
Kim Cubit
Sierra Douglas
Sade Dunn
Logan Grant
Dione Johnson
Ryne Joyner
Jeremy Minton
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Jennings A. Jones College of Business

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Born October 21, 1950, in Lake City, South Carolina, Ronald McNair graduated valedictorian of his high school class in 1967. He earned a B.S. degree from North Carolina A&T State University in 1971 and a Ph.D. in physics from the Massachusetts Institute of Technology in 1976. He conducted research on electro-optic laser modulation for Hughes Research Laboratories until chosen by NASA in January 1978 to train as an astronaut. Ronald E. McNair died onboard the space shuttle Challenger when it exploded on January 28, 1986.

Later that year, Congress created the Ronald E. McNair Postbaccalaureate Achievement Program. This was the sixth TRiO program (named after the original three programs: Upward Bound, Talent Search, and Student Support Services). The purpose of the McNair Program is to help disadvantaged students (first-generation college/low-income or under-represented) complete their undergraduate degree, enroll in graduate school and earn a Ph.D.

The McNair Program at Middle Tennessee State University was established in October 1999. It is funded by a grant from the U.S. Department of Education under the Higher Education Act of 1965, Title IV, Part A, Subpart 2, and by MTSU.
The Elite Across America: A Statistical and Geographical Analysis of Track and Field in America

Ryne Joyner
Dr. Charles Apigian
Department of Computer Information Systems

Abstract

The purpose of this study is to statistically prove that there is a scattered distribution of athletic talent within the United States. This study takes a look at male track and field athletes based on performance and geographic location, with other sports to be used in future studies. Data was collected for events that exemplify speed, strength, agility, endurance, and athleticism; such as the 100 and 400 meter dash, shot put, long jump, 3200 meter run, and the 110 meter high hurdles, respectively. The target groups are the top high school outdoor performers of 2007. The goal for this study is to statistically test the age old myth that the best athletes come from the Southern regions of the United States.

Introduction

High school track and field is the largest and fastest growing sport in the United States and there is a high demand for talent at the next level. Colleges search across the U.S. looking for the most talented student athletes. But do some geographic locations of the United States produce faster, stronger, and more athletic recruits? This study examines high school student-athletes in a variety of events to identify hotbeds of talent based on five criteria: speed, endurance, agility, athleticism, and strength. This can be used to locate top talent in the country and also explain why college recruiters favor certain geographic areas when searching for elite athletes across the country.

Various articles on statistics in athletics have analyzed athletic data. For example, Cox and Dunn’s (2002) study concentrated on the multivariate description of decathlon data by using cluster analysis and classical scaling. They also analyzed decathlon data on whether it could be considered fair or unfair to particular athletes (e.g., the track specialist or the field specialists). Chatterje (1982) analyzed winning Olympic times to attempt to estimate the best attainable time for a given event. Yet very few studies have been done to correlate geography, statistics, and athletics. Rooney (1969) analyzed the geographical implications of football in the United States; however, the research is outdated and is subject to change due to the shift in the population of the United States. Today, over 21 million Americans claim to be runners, and one-half million high school students participate on track and field teams annually (Williams 2000). It has become the number one participatory sport in junior high and high schools (USATF 2003). With the rising popularity of track and field in America, college recruiting has become more and more competitive. Since there are an enormous number of athletes competing, it has become more difficult to recruit top talent.
This paper examines athletic performance to indicate any geographical differences and superiority. Events were chosen that exemplify speed, endurance, athleticism, strength, and agility. For speed, both the 100m and 400m dash were chosen because of a recent debate on whether 100m dash runners are faster than 400m dash runners (Tibshirani 1997). In the endurance category, the 3200 meter run was selected because it is the longest race distance in high school track. Athleticism is defined as the use of physical skills or capabilities, such as strength, agility, or stamina. Since the 110m hurdles involve a combination of all three characteristics, this event was used to measure athleticism. Having agility requires the use of quick and coordinated movements. Long jumping is an art that is characterized by a fast takeoff and a well-coordinated leap into a sand pit; thus, the best way to measure agility is the long jump. The shot put was chosen to measure strength. While the shot put appears to measure throwing power and upper body strength only, it actually requires full body strength. For the present study, forty-nine states were divided into five regions based on geographic location: the Northeast, Southeast, Midwest, West, and Southwest (North Dakota did not publish their results; therefore, they were excluded from the study). The results for each region were then averaged and an analysis of variance test (ANOVA) was conducted to test for significant differences between the regions.

**Literature Review and Hypothesis Development**

Sports enthusiasts have long argued over the existence of areas that might be termed “hotbeds” of sporting activity. The Blue Grass Country of Kentucky is associated with the production of thoroughbred horses and the South with stock-car racing; Indiana, Pennsylvania, and California are known leaders in the production of basketball, football, and baseball players, respectively. Even if these claims are genuine, we still have little idea as to the relative producing capacities of these areas in comparison with the rest of the country; nor do we know what accounts for the unequal output of good athletes (Rooney 1969). In Los Angeles alone, the list of national and international caliber athletes at the youth, high school, collegiate, and post-collegiate levels is impressive. This area has produced more track and field Olympians and world record holders than any comparable area on Earth. Compared to other countries, Los Angeles would rank among the top 10 nations in producing track and field athletes. Some of the reasons for the dominance of California athletes are obvious. First is the nearly ideal year-round weather; in much of the state, the idea of a rain delay is a foreign concept (Donnelly 1991). Sunbelt states like Texas already have top-flight sports systems at the high school and university levels. Recent research supports the benefit of high-altitude training, which has become very prevalent in today’s sports world, and which will continue to produce athletes in mountainous states like Colorado and Utah. The higher elevation in western states is the key factor of my hypotheses. Since track and field does not analyze the altitude factor in recording times and distances of a track and field event, the western regions of the United States seem to have an advantage. The higher elevations are conducive to faster running times and further distances because reduced air resistance enables a slightly greater forward speed resulting in slightly faster times and longer jumps (Brearly 1972). Even though the effect is very small, every tenth of a second and every millimeter counts in the sport of track and field. Therefore, it is hypothesized that:

**H1a.** The Western region produces the athletes with the most endurance.

**H1b.** The Western region produces the athletes with the most athleticism.

**H1c.** The Western region produces the athletes with the most agility.
The balance of population is shifting rapidly to the South and West. The Northeast and Midwest have experienced a continuous loss of population to the South and West by migration from other areas of the U.S. These two “sun-belt” regions have also received a higher influx of immigrants. It is predicted that “more athletes, more productivity.” Southwestern athletes come from six states; three of which are marquee collegiate track states: Texas, Louisiana, and Arkansas. Over the past decade, the Southwestern region has been home to seven national men’s outdoor championships. The Southwest region is also the most heavily recruited region in the United States (mainly in the large state of Texas). In the areas of speed and strength, the Southwestern region of the United States appears to be stronger than the rest. Therefore:

**H2a.** The Southwestern region of the United States produces the fastest (speed1 and speed2) athletes.

**H2b.** The Southwestern region of the United States produces the strongest athletes.

**Table 1. Regional Averages and ANOVA Results**

<table>
<thead>
<tr>
<th>Event</th>
<th>North-east</th>
<th>Midwest</th>
<th>South-east</th>
<th>South-west</th>
<th>West</th>
<th>ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>3200m (H1a – Endurance)</td>
<td>9.55</td>
<td>9.45</td>
<td>9.88</td>
<td>10.13</td>
<td>9.62</td>
<td>F = 29.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p = .000*</td>
</tr>
<tr>
<td>110 Hurdles (H1b – Athletics)</td>
<td>15.22</td>
<td>14.90</td>
<td>14.89</td>
<td>14.92</td>
<td>15.13</td>
<td>F = 4.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p = .002*</td>
</tr>
<tr>
<td>Long Jump (H1c – Agility)</td>
<td>21.11</td>
<td>22.01</td>
<td>22.12</td>
<td>21.37</td>
<td>21.81</td>
<td>F = 3.65</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p = .006*</td>
</tr>
<tr>
<td>100m (H2a – Speed1)</td>
<td>11.16</td>
<td>11.04</td>
<td>11.07</td>
<td>10.94</td>
<td>11.08</td>
<td>F = 3.82</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p = .004*</td>
</tr>
<tr>
<td>400m (H2a – Speed2)</td>
<td>49.86</td>
<td>49.38</td>
<td>49.86</td>
<td>49.82</td>
<td>49.41</td>
<td>F = 0.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p = .613</td>
</tr>
<tr>
<td>Shot Put (H2b – Strength)</td>
<td>50.77</td>
<td>53.72</td>
<td>50.11</td>
<td>51.99</td>
<td>52.39</td>
<td>F = 4.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p = .002*</td>
</tr>
</tbody>
</table>

*Note: The averages for the top 5 times and distances are indicated for each region. Also shown are the ANOVA results for each event. If p < .05, then at least one of the regional averages is significantly different from the rest of the data.*

**Results**

Data was collected for events that exemplify speed, strength, agility, endurance, and athleticism; such as the 100 and 400 meter dash, shot put, long jump, 3200 meter run, and the 110 meter high hurdles, respectively. All data were gathered from governing state high school athletic associations from each state across the nation. All times and distances were gathered from each state’s high school outdoor championships, season ending spring 2007.
These recorded times and distances were averaged and given an analysis of variance (ANOVA), and then ranked by state. The state data gathered was then grouped into regions based on geographic location. After that, the results were again averaged and analyzed using ANOVA. After all computations were made, the results were ranked (see Table 2).

Table 2. Rankings Table

<table>
<thead>
<tr>
<th>Regions</th>
<th>Speed (1) 100m</th>
<th>Speed (2) 400m</th>
<th>Endurance 3200m</th>
<th>Athletics 110m Hurdles</th>
<th>Agility Long Jump</th>
<th>Strength Shot Put</th>
<th>Overall Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwest</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Southeast</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>West</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Southwest</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Northeast</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Based on the ANOVA results and rankings, surprisingly only 1 out of 6 of the hypotheses were supported (H2). See Tables 1 and 2.

3.1 Endurance: The hypothesis was not supported (H1a). The Western region ranked third in the 3200 meter run. The Midwestern region produced three of the top five times in this category. California, however, ranked third in this category. In the endurance category, regions with warmer climates fell at the bottom of the rankings. No states in the Southeastern or Southwestern regions ranked in the top five for endurance; however, they did make up the bottom quarter of the rankings.

3.2 Athleticism: The hypothesis (H1b) was not supported. The Western region ranked fourth in the 110 meter hurdles. The Southeastern region proved to produce athletes with the most athleticism. North Carolina and Florida were ranked in the top five state rankings coming in second and fifth, respectively. In the athleticism category, states with larger populations showed to be the most athletic. The states in the top five of the rankings are also in the top ten of the population ranks of the United States (California, North Carolina, Texas, New York, and Florida).

3.3 Agility: The hypothesis (H1c) was not supported. The Western region ranked third in the long jump. Texas and California had the best times, but the Southeastern states proved to be more consistent. California and Colorado were ranked in the top five, but there is a significant gap in the Western region after the top five. There is an enormous difference in the state-by-state rankings with the top five and bottom five being separated by almost two feet.

3.4 Speed (1): The hypothesis (H2a) was supported. The Southwestern region ranked first in the 100 meter dash. In the state-by-state rankings, Texas and Louisiana were ranked first and third, respectively. The Southwestern region had no states in the lower five ranks. The p-value of .004 shows that there is a significant difference among the data. Even though the data appears close, there is a big gap in the eyes of a spectator.
3.5 Speed (2): The hypothesis (H2a) was not supported. The Southwestern region ranked third in the 400 meter dash. Texas was the only state ranked in the top five of the 400 meter rankings. Surprisingly, Arkansas was ranked in the bottom five of the state-by-state rankings; beating only Kentucky and Vermont. In this category all regions were pretty competitive (with the exception of the Northeast). All other regions fell in the 49 second range.

3.6 Strength: The hypothesis was not supported (H2b). The Western region ranked second in the shot put. Even though the Midwest had two in the bottom five of the rankings, they were still consistent enough to rank number one. California was number one in this event with a margin of 1.67 inches from the second place finisher, Ohio. In the state-by-state rankings, the top and bottom finishers are separated by at least 15 feet. Some states proved to be dominant in selected categories.

Discussion

In the state-by-state rankings, California and Texas were ranked in the top three in almost every event in each of the performance categories. The top ranked regions proved to be more consistent rather than recording a top time or top distance in each category. The trend of the data showed a great performance by certain states, but those states’ performances were not strong enough to contribute to their overall regional performance. Most of the Western and Southwestern region hypotheses were based on California and Texas being among the top state performers. If my hypotheses were by state rather than by region, a majority of them would have been supported. The state-by-state data shows a direct correlation with population. Seven of the top ten states are also ranked in the top ten of the United States population.

The data greatly varies in each performance category. For example, the top 100 meter dash regional average is the Southwestern region with a time of 10.94 seconds and the Northeastern region ranks last with the time of 11.16 seconds. The time differentiation of .22 seconds does not seem like much of a time difference, but it does mean a gap in the eyes of spectators. The results are not altered by altitude, and they were taken in the natural climate of each performance region. It was hypothesized that both speed categories would rank the same. It was surprising to see that results from both of the speed categories were not parallel to each other. The Midwest proved to be dominant in the majority of the performance categories. As observed from the state rankings (Appendix A), there weren’t too many Midwestern states in the lower tier. In the events that the Midwestern region achieved second place (which was their “worst” ranking out of the performance rankings), the margins were less than .2 seconds and .2 feet. The Western region showed to be average, almost serving as a median for the averages in the results table and thus proving the hypothesis wrong. The Southeast, which was overlooked in the hypothesis formation, proved to have the most athletic and agile athletes in the nation. The Southeastern regions of the United States tend to be keen on football. Northeastern athletes fared the worst in four out of the six performance categories. The Northeast did have a few individual states that performed exceptionally well. New Jersey, Virginia, and New York were ranked in the top ten; however, this region also had five states ranked in the bottom ten. Overall, certain states had their specialties in select performance categories. It was very interesting to see the variety of data found by this study.
Conclusion

A limitation of this study is that track and field was the only sport being used to measure different performance categories. Future studies include an expansion of analysis to other sports, in particular, a comparative analysis of John F. Rooney Jr.’s 1963 publication, “Up from the Mine and out from the Prairies: Some Geographical Implications of Football in the United States.” Since the article was published 38 years ago, an up-to-date statistical and geographical analysis of the United States football athletes is necessary. An interesting factor would be an examination of the distribution of the athletes of today versus the athletes in the 1960s. As long as there are athletics around, there will always be a debate on who’s faster or who’s stronger. Every region has its own unique sense of pride when it comes to athletics. Athletics will continue to flourish as long as there is a competitive spirit and a will to compete.

Works Cited


### Appendix A

#### Rankings for Each Events Based on States Results

<table>
<thead>
<tr>
<th>Groups</th>
<th>100 M</th>
<th>400 M</th>
<th>3200 M</th>
<th>110M Hurdles</th>
<th>Long Jump</th>
<th>Shot Put</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
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<td>New Jersey</td>
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**Note:**
1 indicates a top five finish in the nation
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Family Expressiveness and Alexithymia in College Students

Jeremy Minton

Dr. Gloria Hamilton
Department of Psychology

Abstract

The current study investigates relationships between family expressiveness, defined as the overall positive and negative ways by which families communicate, and alexithymia, defined as impaired ability to comprehend, process, or elaborate on emotions. This study was designed to add to the literature detailing the impact of family emotional climate on socioemotional development of youth. The Family Expressiveness Questionnaire (FEQ; Halberstadt, 2000) and the 20-item Toronto Alexithymia Scale (TAS-20; Taylor, 1992) were completed by 66 undergraduate students to assess characteristics of family expressiveness and their alexithymic tendencies. Negative family expression, especially when it was dominant, correlated with increased alexithymic tendencies, while positive family expressiveness correlated with healthy emotional development. This study suggests that parents may protect their children from alexithymia by avoiding negative styles of parenting and communication.

Introduction

Although research dealing with the effect of the family’s emotional environment on development of alexithymia has increased, additional studies are needed. The present study was designed to add to existing literature on family expression of emotion and development of alexithymia. First, however, the constructs used in this study will be defined. Alexithymia is defined as lack of ability to process, elaborate on, or comprehend emotions. Levels of alexithymia will be measured by scores on the twenty-item Toronto Alexithymia Scale (TAS-20; Taylor, 1992). Family expressiveness is defined as overall positive or negative communications through which families express emotions to one another and will be measured by student responses to the Family Expressiveness Questionnaire (FEQ; Halberstadt, 2000). Due to the somewhat abstract nature of alexithymia, results of previous studies have often been difficult to interpret; therefore, measures with high validity and reliability were selected for use in this study.

Should negative expressiveness be found to be related to alexithymia, society would benefit greatly from awareness of the effects of negative parenting behavior on children’s emotional development. On a different note, this study is important because of the population selected for study. The majority of alexithymia research has been done on adults, so studying a college population that is in transition into adulthood may have implications for counseling and future research. As background for this research study, a survey of related literature is presented.

Literature Review

Relationships between alexithymia in college students and the environments in which they were reared were studied by Berenbaum and James (1994). In these two studies, completed the TAS-20 (Taylor, 1992) to evaluate their emotion identification and communi-
cation skills. Based on the results, the researchers concluded that alexithymia was statistically related to uncertainty regarding emotional expression. Alexithymia correlated with lack of comfort in understanding, identifying, or communicating negative emotions. Alexithymia was present in a greater number of cases in which emotional expression within the family was discouraged or underutilized. Understandably, alexithymia correlated with family situations that led children to feel unsafe regarding emotional expression. In a subsequent study (1994), Berenbaum and James discovered that alexithymia was more likely to occur if the child experienced dissociative states during childhood. While both alexithymia and dissociation were linked to family expression of emotion, dissociation was greater in family environments where parents communicated in a negatively dominant fashion. Alexithymia was greater if family relationships were characterized by diminished levels of positive interaction between family members.

De Rick and Vanheule (2006) studied interactions between alexithymia and aspects of family environment of alcoholics in treatment. The 101 participants in this study completed the Bermond-Vorst Alexithymia Questionnaire (BVAQ) to assess levels of alexithymia, the Adult Attachment Questionnaire to characterize the nature of their attachment with their parents, and the Parental Bonding Instrument (PBI) to examine their perceptions of relationships with their parents. The researchers found that if attachment with parents was avoidant in nature, participants were more likely to display alexithymic tendencies. Additionally, researchers determined that alexithymic tendencies were more common if participants' interactions with their fathers were characterized by avoidance and decreased emotionality.

Goodvin, Carlo, and Torquati (2006) studied the impact children’s typical patterns of emotional response had on their style of coping when paired with mothers’ negative emotional expressivity and specific circumstances. Participants included 95 six-year-olds, their mothers, and their teachers. Mothers of children in the study informed researchers of their own propensity to express negative emotions and whether their children typically responded with anguish and grief or compassion and concern in difficult situations. Teachers and mothers recalled incidents in which the children responded to emotionally-charged situations with strategies of evasion, violent behavior, or seeking support. The researchers concluded that children’s exhibition of compassion and concern in stressful situations decreased the likelihood of using aggressive behavior and increased the likelihood of seeking support to cope with the situations. When the children responded to stressful situations with anguish and grief, they were more likely to display aggressive behavior and less likely to seek support in dealing with their problems. Negative expressivity in mothers had a definite impact on the research findings, causing some children with adaptive emotional responses like compassion and concern to choose negative coping strategies, such as the display of aggressive behavior.

Baker and Crnic (2005) looked at the impact of degree of expressiveness with which mothers were reared on how they rear their own children to understand and use emotions properly. Participants included 135 three-year-olds and their mothers. Mothers completed the FEQ to determine the emotional environment of their family of origin. In order to assess the degree of expressiveness with which the mothers interacted with their children, researchers observed them at home in typical situations and by having them participate in and complete a set of procedures in a laboratory setting. Baker and Crnic determined that mothers exposed to a negative brand of expressiveness growing up were more likely to rear their children in the same manner. Higher negative expressiveness in a mother’s childhood often led mothers to be more negative in their expressiveness toward sons and to coach sons to use emotions less than daughters. The researchers concluded that degree of expressiveness in the environment in which mothers were socialized, compounded by their child’s gender, impacted how they emotionally socialize their own children.
Halberstadt and Eaton (2003) conducted a meta-analysis of children’s comprehension of emotion and the levels of family emotional expressiveness found within those children’s families. In Halberstadt and Eaton’s analysis, they discovered how general emotional expressiveness and negative parental expressiveness were negatively related to a child’s understanding of emotional expressiveness. The researchers found that as a child gets older, the relationship between negative expressiveness exhibited within the family and a child’s comprehension of those emotions takes on an inverted U shape.

Ward (2002) investigated the relationship between family expressiveness and development of alexithymia in adulthood. Ward examined the impact of both mothers’ and fathers’ expressiveness on children’s emotional growth. He found that inadequate emotional expression from fathers was related to alexithymic tendencies in their sons. Similarly, when maternal expressive communication was absent or negative, daughters were more likely to develop characteristics associated with alexithymia. The influence of gender evidenced in this study adds a perspective on the development of alexithymia that could lead to more effective interventions based on whether sufferers are male or female.

Ramsden and Hubbard (2002) studied relationships among children’s ability to regulate emotions, aggressive behavior in children, the degree to which parents actively socialize emotional behavior in their children, and the nature of emotional expression in families. A group of 120 mothers and their eight-year-old children participated in the study. The parents completed part of a survey known as the Meta-emotion Interview (MEI; Katz, 1986) (designed to determine parent permission, cognizance, and guidance of their children’s expression of negative emotions) along with Halberstadt’s FEQ and the Emotion Regulation Checklist (ERC; Shields and Cicchetti, 1997). To account for children’s contributions to the connections under consideration in this study, their teachers quantified their aggressive behavior in the classroom and completed the ERC for the children in the study. Analysis of the data collected in the study indicated that neither parent permission, cognizance, guidance of their children’s emotion nor the nature of emotional expression within the family demonstrated a direct impact on the aggressive behavior of their children. However, the researchers did find that negative expression of emotions within the family and parental acknowledgement of their children’s negative emotional behavior to be risk factors of aggressive behavior in children.

Kench and Irwin (2000) conducted a study to determine whether the family environment in which children developed played a role in determining their propensity for acquiring alexithymia later in life. In their study, a sample of 92 college students completed the TAS-20 and a survey that assessed aspects of family life in their families of origin. While a number of circumstances in participants’ families of origin were associated with certain aspects of Alexithymia, the nature of family emotional expressiveness was the single factor that was related to trends in all areas of alexithymia.

A study by Yelsma, Hovestadt, Nilsson and Paul (1998) was designed to determine the role of family emotional expression in development of alexithymia. Instead of using a sample of the general population, the researchers attempted to evaluate the nature of the relationship between these two concepts with an urban population who were seeking counseling services. A total of 49 participants completed the TAS-20 and Halberstadt’s Self-expressiveness in the Family Questionnaire (SEFQ). Those whose families’ communications were characterized by negative emotional interaction were found to be at high risk for development and display of alexithymic tendencies. Conversely, those whose families exhibited positive emotional interactions were protected against alexithymia. The influence of family emotional expressiveness on alexithymia was clear in a population of adults seeking to use mental health services.

The purpose of the current study is to examine the relationship between family expressiveness and alexithymia in a sample of college students. This study addresses alexithymia
research utilizing collection of retrospective data, it is assumed that a younger sample’s recollection of their family of origin’s emotional climate may be more accurate. The null hypothesis for this study is that the correlation between family expressiveness and alexithymia will be weak or nonexistent. The first alternative hypothesis is that student report of positive emotional interactions in family of origin, as measured by the FEQ, will negatively correlate with self-rating of alexithymia, as measured by the TAS-20. The second hypothesis of this study is that student reports of negative emotional interactions in their family of origin, as measured by the FEQ, will positively correlate with self-rating of alexithymia, as measured by the TAS-20.

Method

Participants

Sixty-six undergraduate college students, all of whom were volunteers from introductory level courses at a state university in the southeastern United States, took part in the study. The sample was chosen for its convenience and included 18 males and 48 females ranging in age from 18 to 48 (M = 22.61, SD = 4.72). Of those who took part in the study, 47 were white, 15 were black, and four belonged to a different racial category.

Instruments

The 20-item Toronto Alexithymia Scale (TAS-20; Taylor, 1992) is designed to measure levels of difficulty involved in communicating, comprehending, and thinking about emotions. The three subscales of alexithymia within the TAS-20 include the emotional, social, and mental aspects of alexithymia. Participants were asked to rate the degree of difficulty they experienced with the emotional task presented in each item. Each item is related to one of the subscales and the total of items for each subscale is combined to provide a measure of overall alexithymia within individuals.

The Family Expressiveness Questionnaire (FEQ; Halberstadt, 2000) is a forty-item measure designed to measure family expression by assessing the frequency with which expressions of emotion occurred in families. For each item, participants were given a particular scenario and asked to rate how often it occurred in their families. Responses were marked on a scale ranging from one to nine, with one representing the lowest frequency of occurrence and nine representing the highest. Each item was directly related to one of the four subscales of the FEQ: positive-dominant (PD), nonpositive-dominant (ND), positivenondominant (PS), and nonpositive-nondominant (NS).

Procedure

After signing the consent forms, participants completed the Measures of Family Expressiveness (FEQ) and Alexithymic Tendencies (TAS-20). Participants were categorized into groups based on the subscale of the FEQ that best illustrated the nature of expressiveness within their families. Data were analyzed to determine whether levels of alexithymia correlated with the subscales of expressiveness reported within participants’ families.

Results

Data were analyzed using a Pearson Product Moment Correlation analysis. Based on the results of the analysis, the null hypothesis was not supported. Table 1 shows the correlations between alexithymia, as measured by the TAS-20, and the four dimensions of family expressiveness, as measured by the FEQ. As Table 1 makes evident, communicative interactions among family members correlate with self-reports of alexithymia by college students. Hy-
hypothesis one, student report of positive emotional interactions in family of origin (as measured by the FEQ) will negatively correlate with self-rating of alexithymia (as measured by the TAS-20) was supported. As can be seen in Table 1, participants who reported being raised in positive-dominant environments were significantly less likely to report having alexithymic tendencies, $r = -.34$. Participants reporting that they were reared in positive environments that were not dominant in nature were significantly less prone to report high levels of alexithymia, $r = -.32$. These findings suggest that having been reared in a family that exhibited positive expressiveness is beneficial to the development of the understanding and effective communication of emotions.

When referencing Table 1, it is apparent that hypothesis two, student report of negative emotional interactions in family of origin (as measured by the FEQ) will positively correlate with self-rating of alexithymia (as measured by the TAS-20) was in part supported by the results of the study. While participants reporting family expressiveness characterized by nonpositive-nondominance did not report significantly high levels of alexithymia ($r = -.24$), those who reported being part of a nonpositive-dominant expressive family were significantly more likely to report high levels of alexithymic behavior ($r = .25$). These results confirm the hypothesis that negative expressive tendencies within families of origin put children at risk for a decreased understanding and ability to communicate emotions later in life.

Table 1.
Correlations of Alexithymia (TAS-20) and Dimensions of Family Expressiveness

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

Much of the research in the area of interest suggests that family expressiveness is related to levels of alexithymic tendencies within individuals. The null hypothesis, which posits that family expressiveness is not related to the development of alexithymia, was not supported by the data. This suggests that alexithymia may be a result of stressful situations rather than an inborn trait and that it develops from socialization within the family. Although the study yielded promising results, considerations for future research need to be made. Due to the fact that the TAS-20 is used much less often with adolescents and young adults than with the general adult population, the effectiveness of this measure in such a population could be
limited. The connection between family expressiveness and alexithymia found in this study could have major implications for families raising children. Results suggest parents will be able to promote the healthy emotional development of their children by maintaining positive expressive communication. For future studies, it is recommended that more participants be included to form a more representative sample and to increase the validity and representativeness of the study.

References


Preventing Dialect Discrimination through Dialect Awareness Programs

Bethany Adams

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English Department

Abstract

Guided by the work of linguists and teachers such as Walt Wolfram, Donna Christian, Rebecca S. Wheeler, Brock Haussamen, and Constance Weaver, this paper details the dialect awareness program created as part of a research project for Undergraduate Research, Scholarship and Creative Projects (URSCP) and the McNair Program. In meeting with the goals set forth by the National Council of Teachers of English and listed below, this dialect awareness program was designed to increase awareness of language varieties, diversity, and equality and to introduce code-switching to a group of students in the Middle Tennessee area. The paper discusses the methods and results of this research as well as its future uses.

Introduction

The idea for my own dialect awareness program began with an earlier research project, completed through the McNair Program in the summer of 2005, in which I investigated language discrimination. In this research, I found that linguistic discrimination is common in America and that this problem is difficult to escape. While it is true that other dialects are not inferior and that “no one [language] system can be shown to be inherently better” (Wolfram and Christian 12), students must still learn the Standard American English (SAE) taught in schools in order to receive better opportunities in higher education and careers. However, the gap between home dialect and SAE is difficult to bridge. While few fully developed solutions have been suggested for the problems of language discrimination and the effective teaching of SAE, I found the dialect awareness program, as proposed by Wolfram, to be promising.

For this qualitative research project, it is my hypothesis that identifying commonalities between the logical systems of various dialects will improve students’ overall understanding of how grammar works. With this knowledge, it is then possible to teach students code-switching, the act of consciously switching between dialects for different situations. By introducing dialect awareness concepts and code-switching to students, I seek to reinforce the goals set forth by the National Council of Teachers of English (NCTE), as cited by Haussamen, et al.:

Goal A
Every student, from every background, will complete school with the ability to communicate comfortably and effectively in both spoken and written Standard English, with awareness of when use of Standard English is appropriate.

Goal B
Every student will complete school with the ability to analyze the grammatical structure of sentences within English texts, using grammatical terminology correctly and demonstrating knowledge of how sentence-level grammatical structure contributes to the coherence of paragraphs and texts.
Goal C

Every student will complete school with an understanding of, and appreciation for, the natural variation that occurs in language across time, social situation, and social group. While recognizing the need for mastering Standard English, students will also demonstrate an understanding of the equality in the expressive capacity and linguistic structure among a range of language varieties both vernacular and standard, as well as an understanding of language-based prejudice (4).

Focusing on Goal C, this paper details the development and testing of the hypothesis related to the dialect awareness program I designed.

Literature Review

The reasons for conducting a dialect awareness program are many, but my primary goal is to promote the understanding of linguistic diversity and equality by bringing the work of linguists and scientists to public and teacher awareness. In my earlier research, I found that, unlike what I was taught in school, there is no one Standard English that is superior to the dialects spoken by some groups of people. Standards may be defined by the groups who use a certain dialect, but “there is no one correct way to speak English, in the sense that one set of language patterns is somehow inherently better than all the others” (Wolfram and Christian 8). Nicholas Sobin contends “that prestige language may not be the ‘pure’ form of the language that it is so often assumed to be, but rather a form of language that can only be produced with a considerable amount of ‘abnormal’ tinkering and adjustment” (23).

The idea of a Standard English came from the prescriptive, or traditional, grammar formed mainly in the 17th and 18th centuries, when scholars, such as Robert Lowth and Lindley Murray, used the grammar rules of Latin to create grammar rules for English, even when such rules contradicted actual English usage (McWhorter 63). In the same time period, “anyone who desired education and self-improvement and who wanted to distinguish himself as cultivated had to master the best version of English” (Pinker 373), which was thought to be the same form of language used by upper-class scholars, creating a sudden “demand for handbooks and style manuals” (373). To add to the confusion, “as the competition became cutthroat, the manuals tried to outdo one another by including greater numbers of increasingly fastidious rules that no refined person could afford to ignore” (373). Instead of defining a standard, these manuals served as another method of determining social class.

In contrast, most linguists support the view that “standard” English is a created code that is not a natural form of the language since no English speakers consistently and completely follow Standard English rules. This view was likely formed from ideas found in descriptive grammar, which seeks to describe the rules of a language or dialect as they are actually used by speakers. This approach holds that no language or dialect is superior to another because any form of communication is considered valuable if it effectively conveys information. Dialects are an example of natural language change and intrinsic language variation, not a sign of language degeneration (Lippi-Green 10). As confirmed by John McWhorter, “[i]n presuming that language patterns used by millions of people for centuries could somehow be glitches in need of repair, men like Lowth and Murray had the same misimpression of English as compared with Latin that we often have of nonstandard dialects” (71).

If this is the case, then why should tolerance for all dialects not be taught? In a free and equal society, all people should be able to speak without fear of discrimination; however, this is rarely the reality in America. Indications of dialects, most notably accent, vocabulary, and grammatical variability, continue to be used to create unofficial social and economic class barriers. People are often excluded from higher-paying jobs based solely on dialect. For instance, a Southern foreign-language professor interviewing for a position at a North-
east university was first laughed at, then asked several times whether she would “be com-
fortable” at this university, despite having a flawless accent in the other language (Lippi-
Green 210).

While some may argue that traditional English classes are available for all students, these classes often do not work for speakers of more divergent dialects, such as African American Vernacular English (AAVE) or Appalachian English. This is likely because, “[w]here nonstandard language varieties are natural and ‘low-maintenance,’ formal prestige varieties involve unnatural gimmicks for superficially creating constructions . . . which are no longer supportable by the real underlying grammar of the language” (Sobin 23-24). In fact, it is not only lower class or non-traditional students who have difficulty learning this prestige dialect. Labov suggests that “[e]ven the successful middle-class student does not always master the teacher’s grammatical forms” (313).

One of the most prevalent solutions to instantiating linguistic prejudice suggested by linguists is the idea of code-switching, the act of consciously switching between languages or dialects for different situations. This is not an unfamiliar concept, because “[w]e all ad-
just what we say and how we say it to reflect the knowledge and circumstances of the person we’re speaking with. Thus, the way my lawyer-brother talks to me about his work is differ-
ent from the way he discusses cases with his colleagues” (Wheeler 64). However, this re-
mains a mostly-subconscious action by most people, influenced mainly by social situations. As described by Karmela Liebkind, “the social context of the interlocutors, particularly the power and status relationships between the language groups represented by the interlocutors, has a decisive influence on code switching” (147).

This concept is focal to a dialect awareness program. Language speakers of almost all ages understand this concept to some extent. Children already understand that they are sup-
posed to speak more formally to a teacher than to a friend, and this concept is a strong foun-
dation for later interactions when adults learn that they must speak differently in the work-
place than at home. By bringing this knowledge to conscious awareness and building upon it, a dialect awareness program gives the speaker another tool to use when attempting to learn standard English. Labov suggested such a concept in The Study of Nonstandard Eng-
lish, written the 1970s, to help speakers of AAVE learn standard English. The concept was broached in Oakland, where teachers were encouraged to “not demean students who arrived speaking a home language different widely from the standard dialect” (Wheeler 61), as well as in Oakland’s Bridge program, which was designed as a set of readers which transitioned from home speech vernacular to the standard dialect (62).

However, my main inspiration was a chapter written by Walt Wolfram in Language Alive in the Classroom, which highlights dialect awareness exercises. He argues that “the most effective program for teaching Standard English is one that necessarily couples this teaching with dialect awareness” (48) and suggests that an “educational and social system that takes on the responsibility to educate students concerning the truth about racial and so-
cial differences and the effects of this discrimination in other areas certainly should feel obliged to extend this discussion to language as well” (49). Wolfram follows this with sev-
eral examples of dialect awareness activities that have been used successfully in past pro-
grams and that include topics such as vocabulary differences, patterning, and pronunciation. Additional examples can also be found in Dialects in Schools and Communities by Walt Wolfram, Carolyn Temple Adger, and Donna Christian.

Initial Work

Planning for a Dialect Awareness Program in the Middle Tennessee area began shortly after the conclusion of research on language discrimination completed for the McNair Pro-
gram in August of 2005. Before a proposal could be submitted to do this project through Undergraduate Research, Scholarship and Creative Projects (URSCP), it was first necessary
to design the study, detailed below.

The initial plan involved making one classroom visit each to 1st, 3rd, 5th, 7th, 9th, and 11th grades, College Developmental Writing, and College Freshman Composition classrooms, selecting potential participants with the help of Dr. Trixie Smith from the teachers who had participated in the 2005 Middle Tennessee Writing Project. Using observation, worksheets, and a teacher questionnaire, data concerning attitudes toward language and dialect were to be collected. Dialect awareness teaching modules were to be created from this data and presented at a second visit to each classroom. Final conclusions would be presented at the 2006 Middle Tennessee Writing Project.

Upon acceptance of this plan by URSCP, I began work to obtain Institutional Review Board (IRB) approval, which was mandatory since the research would involve children. IRB required information letters and consent forms for parents, teachers, and school principals as well as the teacher questionnaire. After obtaining IRB approval in April of 2006, I was able to contact potential participants.

Initial contact was made through Dr. Trixie Smith, Project Site Co-Director of the Middle Tennessee Writing Project (MTWP), a program designed to help area teachers enhance writing curriculae in their schools. I had attended a presentation during the MTWP the previous summer as part of my McNair research and felt that the teachers from this program would be a good choice for the project because of their eagerness to explore nontraditional methods for teaching writing and SAE. Letters explaining the purpose and design of this research were sent to teachers who had participated in the 2005 MTWP Summer Institute.

The Research

Difficulty Finding Participants

MTWP was chosen because the 20 teachers involved taught a broad range of grade levels and because they had shown an interest in language arts issues. Letters explaining the project and requesting participants were sent to all 20 teachers.

Of the twenty, only one responded. Reasons for the lack of participation can only be supposed. Under pressure to teach both the traditional curriculum and prepare students for standardized tests, the most probable factor was the teachers’ schedules. Another problem was likely the subject itself. In recent years, dialect and language have become major issues in education, most notably the controversies over Ebonics, as African American Vernacular English (AAVE) is known in the popular media, and English as a Second Language (ESL). Some teachers may have feared creating another such controversy. This research project also required approval from parents, the school principal, and in public schools, the Board of Education. It is likely that many teachers were hesitant to broach this topic with such people in fear of harming their reputation or of jeopardizing their career.

At this point it appeared that I would not be able to complete the project; however, many of the above blocks to participation did not apply to the one teacher who responded. She taught at a private school that encouraged research and was open to such a study. Because of this, parents were accustomed to the idea of research involving their children and the principal was comfortable having a researcher in the school. There was also no Board of Education involvement, removing another step in the process. The type of classes taught by the responding teacher made it possible to reconfigure the study.

Who Participated?

The one responding teacher taught literature to 60 sixth graders in the Middle Tennessee area, divided into four separate classes of 15 students each. Perhaps because the students were in a private school, almost all of the students were middle to upper class. Out of these
60 students, 39 received parental permission to participate in the research. Since this sample size was smaller and not as diverse, the research plan needed to be changed. The most striking difficulty was the near uniformity of dialect, which had occurred mainly because most of the students had been in classrooms together in this school since kindergarten. Through non-participant observation, I determined that the students did not speak standard English, but it was also difficult to decide just what dialect they did speak. For instance, the students would have some features of Southern English pronunciation such as saying the words “pen” and “pin” with the same vowel sound, but they did not use gliding vowels, or diphthongization, when saying “pen” or “pin.” Without the diphthongization, the sound feature responsible for the Southern Drawl, these speech patterns are not popularly considered Southern, but because of my knowledge of the dialect from growing up in the area, I was able to identify that the students had an upper-class, urban Southern dialect, with accent and syntax closer to standard English than rural Southern dialects. In addition to this, the students used many slang terms found in popular media, the nonstandard use of “like” the most prominent, such as in the phrase “It was, like, so weird.”

In the initial plan, my verbal presentation to the students was supposed to feature lessons from a couple of the dialects most prevalent in the classroom. Since there was only one uniform dialect, this portion had to be reevaluated. I decided to use one set of examples from standard grammar usage, one set from Southern English language patterns, and another set of examples based on the slang most prevalent. For the latter, as detailed in the next section, I eventually decided to do an exercise examining the grammatical usages of “like,” one of the most corrected and contested nonstandard usages present in the classroom.

The other difficulty I encountered was the limited amount of time allotted. Because of the teacher’s busy schedule, I was only allowed twenty minutes of each class period to make my presentation. I had not anticipated such a short time span, so I was forced to shorten my examples to fit. Instead of using three sets of examples as previously described, I chose to go with the standard usage and slang examples, eliminating the section using Southern English. Another result of the limited time allowed was the format of the presentation, which became much less interactive because I was not certain if I would have time to do more inclusive exercises in that amount of time.

**Presenting the Teaching Module**

The verbal presentation consisted mainly of two posters that were to be completed with the students. The first poster contained the following six sentences, in which the students were asked to choose between using “some” or “any”:

- I don’t want ________ dessert.
- I’d like ________ ice cream, please.
- I’d appreciate it if ________ one could help.
- The weather forecaster doubts that we’ll have ________ rain today.
- I just thought of ________ thing else.
- I can’t think of ________ thing else, can you?

For this poster, the examples were drawn directly from Constance Weaver’s book *Teaching Grammar in Context*.

I created the second set of examples rather than using another source, as I had not seen a model for this set of examples elsewhere. This poster examined “like” as used in slang rather than in simile, and used the following seven sentences:

- I was ________ bothered by the noise.
- She said that ________ I was too loud.
- I was ________ so mad at my friend.
- When she walked by, she asked ________ “What are you doing here?”
- He was ________ “Go away!”
I didn’t believe _______ it.
Did you see the _______ movie?
Instead of choosing between two options, students were asked to decide whether “like” would fit in the blank or if the phrase should be left as is.

For both posters, answers were selected by vote for each individual sentence. After each vote, I asked the students why they picked the answer that they did, explaining that they did not need to use a formal grammar rule or any grammar terms. Initially, the students were hesitant to answer. They seemed unaccustomed to being asked why an answer is correct, but they soon found that they were able to answer. It did not take long for hands to rise and even for some debate between the students themselves.

Without using any technical “rules,” the students were able to give some very intuitive answers. The most striking example from the first poster was the dialogue concerning the difference between “some rain” and “any rain.” Several students made a strong argument for the viability of the sentence “The weather forecaster doubts that we’ll have some rain today” even though this is typically not considered correct usage. When asked, one student stated that “some rain” meant that you could have either a small amount of rain or a lot of rain, but you must have some while “any rain” meant that you could have either no rain at all or a lot of rain. When using “some rain” in the above sentence, it could be saying that the weather forecaster thinks that there is absolutely no chance of rain, since “some” requires at least a little rain, or it could be a sarcastic statement, where an emphasis on “some” shows that the weather forecaster believes that there will likely be a downpour. While this usage was not the most commonly selected among the students, the resulting dialogue highlighted the students’ abilities to intuit language choices without being able to recite a rule, fulfilling NCTE’s Goal B.

In the second poster, students were surprised to learn that they could identify a pattern in the slang usage of “like.” The most noted feature of “like” was its use as either a pause or exclamation word. Students also agreed that it occurred more frequently in speech but found that it fit in some written phrases with proper punctuation. For instance, “like” only fits in the first sentence if commas are used, as in: “I was, like, bothered by the noise.” The students also noticed that “like” was more commonly found following verbs such as “was” or “is.” One of the other frequent uses of “like” was when quoting what someone else had said, and this usage has its own format, such as the phrase: “He was like “Go away!”” It was noted that the previous sentence would not make sense without the word “like.” In the final two sentences, the students knew that “like” could not be used in either of the blanks but had difficulty explaining why. While the first exercise proved that the students could discuss grammar without knowing the rules, this exercise proved to them that all language, even language that is not considered standard, has a grammar.

The final portion of the presentation was a brief discussion of code-switching. I reminded the students of their abilities to identify their own grammar and suggested that, using this innate knowledge with conscious awareness, they could learn to switch between their own dialect’s grammar and that of standard English. I used examples of the types of code-switching that they already use, such as the difference between talking to their friends and their teachers. I also mentioned using code-switching to help change their informal spoken language into what would be required for written projects.

The responses of both the teacher and the students were positive. The students stated that they believed that the presentation would be beneficial to them in the future, especially with regard to school work. They were surprised at their abilities to examine language and dialect and even discussed the topic with each other later without being prompted. The teacher expressed the belief that she had learned as much as the students and was most surprised by the section about the grammar of “like.” Along with the students, she began to consider the grammar of other non-standard dialect features.
The Worksheet

Guided by the series of exercises featured in Walt Wolfram’s work, I created my own worksheet (Appendix A), consisting of three exercises, for the students to complete. The first exercise concerned the use of double negatives and encouraged students to underline the negative words in the following examples, taken in part from Language Essentials: Grammar and Writing, by Laurie Skiba, et al.:

1. There wasn’t (no, never, not, hardly, nothing, nobody) early warning system in ancient days for volcanic eruptions.
2. Hardly (no, never, not, hardly, nothing, nobody) in Pompeii survived the eruption of Mt. Vesuvius nearly 2,000 years ago.
3. Scientists can’t find (no, never, not, hardly, nothing, nobody) way to prevent a volcano from erupting again in the future.
4. People living in Sicily near Mt. Etna can’t (no, never, not, hardly, nothing, nobody) ignore that volcano.
5. In Tennessee, volcanoes don’t (no, never, not, hardly, nothing, nobody) erupt.

The primary goal was to determine whether or not the students could find a pattern in the use of double negatives.

The second exercise was taken from Walt Wolfram’s article “Dialect Awareness Programs in the School and Community” and had the students examine the use of the verb *be* in AAVE. In the following examples, the students were asked to guess which sentences should use *be*:

1. ___ a. They usually *be* tired when they come home.  
___ b. They *be* tired right now.
2. ___ a. When we play basketball, *she be* on my team.  
___ b. The girl in the picture *be* my sister.
3. ___ a. James *be* coming to school right now.  
___ b. James always *be* coming to school.
4. ___ a. Wanda don’t *usually be* in school.  
___ b. Wanda don’t *be* in school today.
5. ___ a. My ankle *be* broken from the fall.  
___ b. Sometimes my ears *be* itching.

After the students chose their answers, they were told that “speakers of AAVE use *be* when an action or event is habitual or is repeated over an extended period of time. Look again at the sentences you picked. Did you pick the sentences which used *be* as a habitual or repeated action?” The students could then go back and change answers if they desired.

The final exercise concerned code-switching. The students were given the following examples and asked to switch them to what they considered standard English:

1. She was a-hollerin’ at that there dog all night, but it didn’t never shut up.  
(Appalachian English)
2. That girl don’t never be on time.  
(African American Vernacular English)
3. I saw y’all’s car in the driveway and figured I’d stop by.  
(Southern English)
4. I done told you, he ain’t got no money.  
(African American Vernacular English)
5. I was like, “There’s no way you’re gonna get me to go to that movie.”  
(Modern slang)
These were designed to see how capable the students were at code-switching from a variety of different dialects to the type of English expected in more formal situations. Instead of selecting from options I had given them, the answers were to be in the students’ own words.

Out of the 39 participants, 31 students completed the worksheet. The main purpose of the worksheet was to help the students begin to analyze and talk about dialect and language rather than to achieve a grade; however, examining the percentage of correct answers in the first two exercises provides some insights on what the students already knew about dialect. For example, on the first exercise, the students averaged a total of 1.06 out of 5 answers wrong, or 21.2 percent, where a wrong answer consisted of selecting a negative word that would be grammatically incorrect in a double negative. While none of the students selected every possible correct variation, the percentage of correct answers shows a high understanding of when double negatives could be used.

In the second set of examples, the students missed an average of 2.19 out of 4 answers, or 54.7 percent, where a wrong answer consisted of selecting the phrase that would not be grammatically correct in the AAVE dialect. There are several possible reasons for the higher percentage of missed answers in this category. The students had less dialect diversity in their environment, and I heard no speakers of AAVE in the classroom. A lack of familiarity with the dialect may have made it more difficult for the students to identify these dialect features. Another possibility is that I did not adequately describe what I wanted in the directions, since one student wrote “What?” at the end of the directions in the AAVE section. Not trained as a teacher, I found creating age-appropriate directions was the most difficult portion of creating the worksheet.

The final set of exercises could not be graded in the same way as the previous two because there were too many possible answers. The most noticeable difficulty seemed to be with word choice, especially in the examples closer to their own dialect. Words such as “hollerin,” “y’all,” and “figured” were the most frequently kept in the students’ own examples, but most teachers would correct these as inappropriate word choice. Some students changed “y’all’s” to “you all’s” or in one case, “I saw you guys.” Also, the students usually kept the contractions in place, although contractions are discouraged in Standard American Written English (SAWE).

In the example “I done told you, he ain’t got no money,” all of the students were able to eliminate the double negative, but most translated “I done told you” directly to “I told you.” Only four students were able to identify that “done” in this case is closer to “already,” and three of the students used “I have told you.” However, none of the students used “I have already told you,” which would be the most accurate in SAWE. The students also had difficulty with code-switching “I was like” into standard English, with many of them leaving it the same.

The worksheets were designed to encourage discussion, and based on the students’ enthusiasm while completing the worksheets, they did serve to help the students consider the rules of other dialects and the methods they could use to code-switch a variety of phrases into SAE. For this reason, the worksheets worked well for furthering NCTE’s Goal C of encouraging “an understanding of, and appreciation for, the natural variation that occurs in language” (Haussamen 4).

Teacher Interview

Since the sample size was smaller than initially intended, I decided to do an extensive teacher interview. This method of gathering data is also frequently used in linguistics and dialect studies, which are generally qualitative in nature because language patterns and opinions about language are difficult to acquire naturally by quantitative research methods. The following sections describe both the interview itself and the reasons behind the questions.
Question 1

1. How long have you been teaching Language Arts classes?

This question was meant to establish my knowledge of the teacher’s experience with a subject where students would have the greatest difficulty acquiring standard spoken and written English. It was important for me to understand this for future questions about the teacher’s personal accounts. The teacher interviewed had taught various levels of elementary school for more than 30 years and had taught Language Arts classes for five years in Los Angeles prior to her work at the school where I conducted the research.

Question 3

3. Have you noticed any conflicts between students concerning speech? Are any students ridiculed because of their accent?

Because almost all of the students in the study spoke the same dialect, I was unable to observe this for myself and wanted to get the teacher’s opinion on the matter. While I had remembered having such issues in my own school experiences, I had hoped for something more solid in the course of my research. Most of the sources I consulted focused more on the students’ difficulties in learning standard English rather than problems between peers, although Rosina Lippi-Green does discuss this in her book, *English with an Accent: Language, Ideology, and Discrimination in the United States*.

In this case, the teacher stated that she had seen some conflicts between students because of different accents, but not to a large extent. She found that many problems were related more to differences in speech, such as word choice and slang usage, or to speech impediments. She felt that the students at her current school were a little more tolerant, possibly because they had grown up together. She had encountered a few more problems of this type while teaching public school.

Questions 2 and 4

2. Have you had students who speak a markedly different dialect from the majority of the class? If so, do you think that these students seem to have more difficulty learning standard English?
4. Can you remember any events in which students have expressed having difficulty with standard English because of a difference in dialect?

During my research, I found much discussion on how dialect affected the learning of standard English, but I wanted to ask a teacher who did not have a background in studying linguistics. While linguists generally conduct short and focused studies, the teacher had spent many years attempting to teach standard English to a broad range of children. I wanted to know if her experience was congruent with the research I had read.

To question number two, the teacher stated that she had noticed the most difficulty for students who spoke the African American Vernacular dialect. In one area, she had taught children from different parts of the world, and while some of these students had trouble learning standard English, the biggest problem likely came from learning English as a second language. The teacher interviewed had not taught ESL classes and stated that since she
did not have experience teaching in areas with large Hispanic populations, she did not know about the difficulties experienced by students with Spanish as their home language.

In answer to question number four, the teacher said that she felt all students have some difficulty learning standard English, mostly because “it’s not a good fit with our spoken words.” She could not recall any specific instance of a student expressing frustration to her as related to dialect, but she did feel that the students wanted to write the same way they spoke and would express frustration when such writing was corrected to standard English.

**Questions 5 and 6**

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<td>5. In general, what are the most common reactions, such as complaints or anticipation, that you receive from students or parents toward standard English lessons?</td>
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<td>6. How do you incorporate writing with standard English lessons?</td>
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As with the previous questions, I wanted to hear the average teacher’s perspective on this issue. While a researcher might ask parents and students, the teacher would have dealt with such problems on a regular basis.

In answer to question five, the teacher said that most parents wanted their children to learn standard English in order to succeed in later life. She found that most complaints centered around the intensity of vocabulary lessons rather than grammar. In her experience, parents in earlier grades than the one she currently taught would like to have more direct grammar and language instruction for their children rather than less. She did not specify how the students had reacted to this.

For question six, the teacher stated that attending the Middle Tennessee Writing Project the previous summer had helped her learn better methods for integrating writing and standard English. She felt that after students became comfortable using and writing words, then they could better “begin to learn the structure.” However, this teaching method is more difficult to use because of the amount of time involved, and she was concerned that the students learn standard English skills because they would be held accountable in the future.

**Question 7**

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<td>7. Have you noticed differences between the stories or story-telling styles of students based on their respective dialects? Do you encourage students to incorporate these differences?</td>
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Noting studies, such as the Oakland Bridge program mentioned earlier and the work done by Constance Weaver in *Teaching Grammar in Context*, I wanted to see how this teacher had experienced story-telling in regards to dialect and if she had encouraged the use of dialect in these stories. How did the average teacher approach this topic, and what would they have learned?

The teacher I interviewed encouraged the students to use their own language when telling stories. She mentioned activities in which the students were asked to create their own non-fiction stories, on a variety of topics, and were allowed to use whatever dialect they felt necessary. Over her years of teaching, she had noticed difficulties for some students in telling stories. She could not give a name to the problems that they had but said that some students with nonstandard dialects seemed to have trouble expressing themselves in a way that others could easily understand.
**Question 8**

8. Have you ever tried to include lessons about dialect differences or dialect awareness in your classroom? Have you ever tried to introduce code-switching to your students? If so, how?

Having read several articles, such as Wolfram’s in *Language Alive in the Classroom*, and reviewed books, such as Cleary and Linn’s *Linguistics for Teachers*, that were directed at school teachers rather than researchers, I was curious to see if linguistic attitudes on dialect made any impact. While the National Council of Teachers of English list of expected standards expresses the expectation that “students develop an understanding of and respect for diversity in language use, patterns, and dialects across cultures, ethnic groups, geographic regions, and social roles” (“The Standard”), many teachers seem unaware of this goal.

This teacher had tried to include lessons about dialect as relevant, mainly when dialect occurred in stories. Conversations between the teacher and students often occurred when the students did not understand a certain dialect as used in a story. The teacher would help the students understand in their own words what was meant in the text. As for code-switching, the teacher stated that she had not been familiar with the term itself, but that, once I defined the word for her, she could recall discussing the concept itself with the students. The topic came up more frequently when talking about writing for or speaking to a specific audience.

**Questions 9 and 10**

9. Have you encountered resistance with students, parents, other teachers, or the school administration when trying to incorporate new methods of teaching writing?
10. Are there any other observations or opinions that you would like to share concerning how dialect affects the classroom?

With question nine, I wanted to address one of the underlying reasons why it is so difficult for some teachers to bring in new methods of teaching writing. After encountering so many promising ideas while doing my research, I began to wonder why more of them had not been used in actual classroom settings. The final question was included in case the teacher had ideas on the issue that had not fit into the other categories.

The teacher interviewed here stated that most resistance came from other teachers. She felt that the Middle Tennessee Writing Project had helped her change some of her methods, such as the use of writing prompts, and that other teachers might also be receptive to such ideas but were held back by time constraints. Some teachers were resistant to incorporate new methods because of the time it would take to learn and implement a new system amidst their already hectic schedules.

To the final question, the teacher responded that she thought dialect becomes “a bigger picture” later in life. She felt that the biggest problem is maneuvering through different dialects to “get to the meaning of what another person is saying.” She did not see this as a negative phenomenon but as a way to maintain diversity and individuality. She stated that she enjoyed the richness found in reading and hearing other dialects. In the end, she said that she thought we should have more tolerance for other dialects.
Conclusion

The dialect awareness program introduced to the students had a real benefit. Students, as well as the teacher, expressed greater confidence in their own abilities to identify the grammar in their own dialect and greater appreciation for dialect diversity. Active dialogue about language features was started among the students, and the idea of code-switching was brought from unconscious to conscious awareness. However, the greatest benefit for the students was giving them a personal understanding of language and grammar analysis. As stated in Haussamen, et al., “[p]erhaps the purpose of introducing students to grammar . . . is to help them discover that all language has grammar. For it is not obvious that all languages share a few basic patterns” (10). This study was very effective for meeting these goals.

Despite the difficulty finding participants, this dialect awareness program shows promise for future use. If I personally decide to conduct this program again, I would like to make the exercises more interactive, possibly using the Bottom Up Building (BUBing) exercise used by my advisor Dr. Allison Smith, where the students create their own sentences to analyze rather than filling in the phrases that I created. Since doing a short, one-sentence BUBing exercise would be quick and fun to do, it provides a viable option for busy teachers to use themselves. Other good options are the language-oriented mini-lessons, designed to “take no more than five to ten minutes” (Weaver 150), as demonstrated by Constance Weaver in Teaching Grammar in Context, and the short, “linguistic detective work” exercises suggested by Jeannine M. Donna in “Linguistics Is for Kids” (77).

With the inclusion of these shorter exercises, a future dialect awareness program would be even more beneficial to teachers. Expanding the program to include a variety of exercises would make it more likely for teachers to have the time to use what they learn and would provide more choices when designing a dialect awareness program for different age groups. Ease and flexibility of use are essential to making the program’s ideas viable for use in classrooms, and these ideas have proved to be useful in meeting the goals set by NCTE. Beyond these goals, in an area where most people speak a variety of the socially unfavorable Southern dialect, students and teachers can benefit from a dialect awareness program that focuses on increased language awareness and code-switching.

Resources

Works Cited

Works Consulted

Appendix A: Dialect Awareness Worksheet

NAME: _______________________________

EXERCISE 1
Double Negatives

Some dialects use double negatives. Do you think that these dialects have rules for how double negatives can be used? In the sentences below, underline only the words that could be used as part of a double negative. Do you see a pattern?

1. There wasn’t (no, never, not, hardly, nothing, nobody) early warning system in ancient days for volcanic eruptions.
2. Hardly (no, never, not, hardly, nothing, nobody) in Pompeii survived the eruption of Mt. Vesuvius nearly 2,000 years ago.
3. Scientists can’t find (no, never, not, hardly, nothing, nobody) way to prevent a volcano from erupting again in the future.
4. People living in Sicily near Mt. Etna can’t (no, never, not, hardly, nothing, nobody) ignore that volcano.
5. In Tennessee, volcanoes don’t (no, never, not, hardly, nothing, nobody) erupt.

EXERCISE 2

Verbs with *be*

Some African Americans speak a dialect called African American Vernacular English (AAVE). One of the differences between this dialect and Standard English is that AAVE speakers use the verb *be* instead of *am, is,* or *are.* In the following sentences, see if you can guess which of each pair uses *be* in AAVE.

1. ___ a. They usually be tired when they come home.
   ___ b. They be tired right now.

2. ___ a. When we play basketball, she be on my team.
   ___ b. The girl in the picture be my sister.

3. ___ a. James be coming to school right now.
   ___ b. James always be coming to school.

4. ___ a. Wanda don’t usually be in school.
   ___ b. Wanda don’t be in school today.

5. ___ a. My ankle be broken from the fall.
   ___ b. Sometimes my ears be itching.

Speakers of AAVE use *be* when an action or event is habitual or is repeated over an extended period of time. Look again at the sentences you picked. Did you pick the sentences which used *be* as a habitual or repeated action? A speaker of this dialect knows this rule without having to think about it!

EXERCISE 3

Learning Standard English

Some students have difficulty learning how to write in school because they were raised speaking a very different dialect than Standard English. Look at the following sentences, written in a variety of dialects, and see if you can write them in Standard English.

1. She was a-hollerin’ at that there dog all night, but it didn’t never shut up. (Appalachian English)

2. That girl don’t never be on time. (African American Vernacular English)

3. I saw y’all’s car in the driveway and figured I’d stop by. (Southern English)

4. I done told you, he ain’t got no money. (African American Vernacular English)

5. I was like, “There’s no way you’re gonna get me to go to that movie.” (Modern slang)
Rights of the Accused and the President’s Military Tribunal System

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It is undeniable that the terror attacks of 9/11 exposed the grave threat that Islamic Radicalism poses to the security of America and the rest of the world, a threat which has the potential to disrupt the precarious balance of power between prominent Middle Eastern nation-states and the West. In the first major attack from foreign entities on the U.S. mainland since 1812, the total number of casualties incurred on September 11, 2001, surpassed the number of Americans killed in all other domestic and international terrorist incidents from the previous four decades combined. Such an act of aggression necessitated a swift response in order to punish al Qaeda, its affiliates, and co-conspirators for actions which constituted both federal and international crimes. President George W. Bush responded by declaring a “War on Terror,” which he explained would be a global effort employing every resource of military, law enforcement, intelligence, and diplomacy, which would not only dismantle Al Qaeda, but also capture and hold suspected terrorists indefinitely until they no longer pose a threat to national security.

Despite the strong rhetoric and ambitious goals of the president’s declaration of war, the objective benefits of his administration’s counterterrorism efforts, including the detention program have been received with much criticism and consternation from both enemies and allies. Not only has the number of annual incidents of terrorism skyrocketed over the past six years, but the lethality of such attacks has risen as shown by chart 1. While several “top operatives” of the Al Qaeda organization have reportedly been either captured or killed, the Anti-American Jihad has become a full-fledged movement that has evolved away from the need of hierarchical control and has become even more dangerous through the use of propaganda on the internet. Al Qaeda and other loosely affiliated actors are continuously threatening the West, as recent attacks and foiled attempts in the UK and elsewhere attest.

The president’s response to September 11 has been marked by an unprecedented foregrounding of the military as the primary tool and vehicle for preventing terrorist attacks. What sets this current struggle apart is that while the United States deploys the military abroad to deal with terrorists as has been done in a traditional war context, there are a great number of persons who are being captured both domestically and internationally, treated as “unlawful combatants” (a new and so far undeveloped category), and then detained within a newly formed, Military Commission structure. This is completely outside the familiar, well known Civil Criminal Justice system and Military Tribunals established by the Uniform Code of Military Justice (UCMJ). While this seminal role for the military would be expected when it came to disrupting terrorist cells in special forces operations or engaging terrorists within their foreign safe havens and on the battlefield, the president’s choice of creating untested Military Tribunals or Commissions to prosecute those captured and accused of violating a wide range of terror-related offenses instead of using better known courts-martial or the civilian courts has generated much controversy. The new Military Commissions have been criticized for their failure to provide protections for the accused that are available in the civil system and under the UCMJ system, and some have called for the administration to instead refer terrorism cases to the civilian court system.
The Military Commission Act (MCA) of 2006 was an attempt by Congress to address a preponderence of expert criticism and Supreme Court rulings which go against the unilateral nature of the President’s Military Order of November 2001 which initially created the Commissions to adjudicate those classified as unlawful enemy combatants (UECs). Although the short bill does not delve into the substantive processes of the rules of the Commissions, it does address certain general principles that Congress felt should be included within the Department of Defense’s subsequent regulations for the Commission System. Other statutes and official statements from the President and the Department of Justice have made clear that the prosecution of the War on Terror is not legally covered by the Geneva Conventions relating to Prisoners of War. Nonetheless, Section 948b(f) of the MCA invokes Common Article 3 of the Geneva Conventions to assure the public that the new Commissions would be — in the words of the Geneva Convention — “regularly constituted court[s], affording all the necessary ‘judicial guarantees which are recognized as indispensable by civilized peoples’” for purposes of common Article 3 of the Geneva Conventions.9

This paper will examine what judicial guarantees can be called “indispensable” by looking at the judicial frameworks of both the Military (UCMJ) and Article III (judicial branch) of the U.S. Constitution in light of the general requirements invoked by congressional statute and executive branch statements regarding the Geneva Convention’s judicial guarantees for prisoners of war and other peoples captured during wartime. Unlike the current Military Commission System (MCS) under the auspices of the president and the Defense Department, traditional fields of the American judiciary have been tested comprehensively through their use over the centuries. Although supposedly being the model for the current MCS, UCMJ and civilian courts differ in several key ways from the MCS. First, we need to examine the two traditional systems in order to see how the new MCS system is different and unprecedented.

Legal Paradigm Shift

Traditionally, terrorism has been considered a criminal problem for the courts of most Western democracies including the United States. For example, the perpetrators behind both the World Trade Center bombings of 1993 and the Oklahoma City bombings were detained and given sentences within U.S. courts.10 For decades, scholars and politicians alike considered that, although terrorism was unlike traditional crimes due to its focus on political concerns rather than material gain, the non-state status of those that carry out terrorist violence meant that it would be easier to use existing criminal agencies to seek justice under existing laws rather than resort to ad hoc military means.11

After America’s entry into the “post-9/11 world” this view was revised in large measure by the Bush Administration, contrary to many other nations. For example, in November 2006, a British man, 34-year-old Dhiren Barot, was convicted by a British court of plotting to blow up the New York Stock Exchange and was sentenced within the civilian courts to life in prison. As of November 2006, one hundred criminal convictions have been achieved by Indian prosecutors against alleged terrorists. In June 2006, an Australian court convicted a 36-year-old Australian, Faheem Khalid Lodhi, of planning to blow up the national electricity grid or a Sydney defense site and faces the maximum penalty of life in jail. In January 2007, a German court convicted a Moroccan, Mounir el Motassadeq, as an accessory to murder in the September 11, 2001 tragedy, sentencing him to the maximum 15 years in prison.12 In February 2007, a Spanish special tribunal began a mass trial of 29 people suspected of the terror bombings of commuter trains in March 2004 that killed 191 people. On April 30, 2007, a court in England found five men guilty of conspiring to use fertilizer bombs in November 2003 to blow up targets in the UK after a year-long trial and a month-long jury deliberation. On July 11, 2007, four men were sentenced by a British court to life imprisonment for conspiring to bomb the London transportation system on July 21, 2005.13
The Bush Administration and other politically conservative analysts and pundits viewed the civilian Criminal Justice System (CJS) as a hindrance when it came to the prosecution of terrorists for several reasons. First, many of the civil procedures of due process and protections for the accused were seen as too cumbersome and restrictive because they had the effect of hindering swift action. Many of the prohibitions against hearsay evidence, unreasonable search warrants, interrogations of detainees without being assisted by counsel, and the right to subpoena favorable witnesses and confront unfavorable ones, ran counter to the sort of expedited justice that the administration felt was needed in light of the terrorist threat. Although many of these protections were put in place to ensure the uniformity of the criminal justice process in order to avoid lapses of judgment and protect justice from the excesses of governmental enforcement, these concerns understandably took a back seat during the aftermath of the 9/11 crisis. Another concern over the use of traditional legal systems to adjudicate alleged terrorists is the classified nature of the operations that involved the detainee’s capture. Administration officials have argued that it would be detrimental to the country’s national security and would compromise ongoing operations with government officials if it were forced to present classified information to prove some of the charges that they want to raise against these detainees.

While it was generally acknowledged that the traditional criminal system was inadequate, it was clear that some sort of adjudicatory body needed to exist in order to prosecute alleged terrorists that were captured during ongoing operations. For this reason the president created new informal military commissions because of their flexible structural and procedural nature. The president justified this action by pointing to the precedents of unilateral use of military commissions/tribunals by presidents during every major military conflict since America’s founding, especially Franklin Delano Roosevelt’s creation of temporary Tribunals to prosecute seven Nazi saboteurs who entered Long Island during WWII.14

Unlike in American criminal justice or military justice (courts-martial), President Bush’s Military Commission System is under total executive discretion outside of a very limited appeals process available within the United States.15 Initially created under a military order shortly after September 11th, the first version of enemy combatant military tribunals existed for four years without having any realistic input from Congress or even the judiciary.16 There was no recourse initially available for the detainees outside of the executive branch, with the tribunal’s transcript being referred directly to the secretary of defense and then to the president for final review. It was not until the administration’s commission system was faced with a series of adverse Supreme Court decisions in 200417 that the Commission System was reviewed and amended by Congress and the Department of Defense. The military order stated that in view of the grave threat that terrorism posed to the continuity of “the operations of the United States Government,” the armed forces would be needed in order to disrupt and capture alleged terrorists, and that given the danger and nature of international terrorism “it is not practicable to apply in military commissions under this order the principles of law and the rules of evidence generally recognized in the trial of criminal cases in the United States district courts.”18

This meant that many rules and prohibitions universally acknowledged within the legal systems of the United States and the international community would be relaxed in order to ensure the safety of the American people. In response to criticism of his decision to foreground military force and justice, the president said, “After the chaos and carnage of September the 11th, it is not enough to serve our enemies with legal papers. The terrorists and their supporters declared war on the United States, and war is what they got.”19 The order goes on to delegate to the secretary of defense the responsibility of constructing the structure of the commissions – including the number of judges, rules of conduct for prosecution and defense counsel, jury procedures, rules of evidence and the appeals process. Although the commissions were created two months after the 9/11 attacks, there was no provision within the president’s military order that made availability of these commissions for detainees
obligatory; rather it is under the discretion of the executive branch as to who would be eligible for trial. It was not until the middle of 2005 that any detainees, two British citizens and an Australian, utilized the military commissions. Since then, only 10 detainees out of the thousands acknowledged to be held by the U.S. government in military prisons such as Guantanamo Bay and Abu Ghraib have been brought before a Military Commission to be charged with a violation of the terror-related crimes or the laws of war. While creating a cursory legal procedure which is constructed in favor of the government’s interest to continually detain those who it asserts it must, its lack of obligatory or automatic jurisdiction over the status of detainees has the dual effect of creating a smoke screen because the administration is able to say that procedures have been put in place while not actually using these procedures!

All members of the commission process (except for the current possibility for the accused to obtain civilian counsel) are ranked members of the armed forces, pledging their allegiance to the commander-in-chief. In contrast, the civilian courts are completely independent from the executive branch, yet as can be seen in district court proceedings involving national security issues or the FISA court, independent tribunals are also able to provide the same level of protection for classified information that Military Commissions purport to provide. This calls into question the extent that the accused can receive a fair and unbiased trial when most every official within the court is engaged in the same military operations meant to capture the people that they are adjudicating. Subsequent to heavy pressure from the public, the media, and the Supreme Court in its decision of _Hamdan v. Rumsfeld_ which established that the president’s unilateral action was unconstitutional, the Congress passed the Military Commission Act of 2006. The Department of Defense, as required by the Military Commissions Act, has finally issued a comprehensive manual for the military commissions, which attempts to closely spell out valid regulations for the procedures of the tribunals. This Manual for the Military Commissions addresses many of the issues of the rights of the “unlawful enemy combatants,” which were primarily left out of the president’s initial order to create commissions. Nonetheless, there are still questions of the validity and independence of such a military commission system and the fact of its virtually nonexistent use, which will be addressed within this paper.

The Civilian Courts

As James Madison famously put it, “We are a nation of laws, not of men.” This can clearly be seen when looking at the Bill of Rights and observing how these safeguards are used within the federal court system as checks against governmental power in favor of protecting the rights of the accused. All the safeguards for the criminally accused are in place to stem against the arbitrariness of government. While only 10 percent of all criminal cases ever utilize the entire gamut of all the stages available due to various factors such as plea agreements and acquittals, the fact that such recourses are available to everyone ensures that the system is generally viewed as both legitimate and effective among the population.

Article III of the U.S. Constitution, dealing with the courts, has foundations deeply rooted within the separation of powers doctrine. Enforcement of the laws is separated from their legislation as well as their interpretation and adjudication. Montesquieu, the purported muse of James Madison on the issue of separation of powers, has said that “there can be no liberty where the legislative and executive powers are united in the same person … or if the power of judging be not separated from the legislative and executive powers.” Thus, this is the very life-blood of the juridical processes within the civilian courts. While the people’s representatives may pass statutes on an almost infinite range, the judicial branch has the ability of judicial review to assess the constitutionality of such statutes. Once a law is created, it is then up to the law enforcement agencies of the executive branches of the federal and state governments to enforce the law. It is up to the prosecutorial wing of the executive
government to compile evidence proving the guilt of the accused in front of an unbiased judge or panel of jurors. Then within the courts both the government and the accused are given a fair chance to present their cases, and it is ultimately up to the courts to ascertain questions of fact, law and culpability.

This three-step process of legislation, enforcement and adjudication is a measured approach which tries to rationalize the law enforcement function in a way which is emotionally neutral and primarily logical and systematic. The separation of tasks ensures that decisions are made, balancing the interests of the state to protect “life, liberty and property” and the maintenance of law and order against the individual’s interest in preserving his/her liberty and property rights.

Take for example the anti-terror law which makes it a federal offense to give material support to terrorists, punishable by a maximum of life in prison or deportation proceedings. The law defines “terrorist” and “material support.” It is up to the federal and state law enforcement entities to constitutionally find those individuals that fall within the statute’s parameters. The enforcement agencies know that they cannot violate the constitutional prohibitions against unreasonable search and seizure, cruel and unusual punishment or other revocations of an individual’s rights within the territory of the United States no matter how guilty or heinous the individual they are pursuing may be because when such treatment is brought up during trial these executive violations of individual rights may compromise the government’s ability to prosecute the offender.

The jury, with the aid of a judge informs them of the technical aspects of the case, weighs the arguments of both sides and then comes to a conclusion based on the logic of reasonable people. If the government succeeds in proving the accused guilty, it is based solely on the evidence. Guilt within the civilian court is not grounded on any other calculations outside of the information provided. (Courts are not pressured by political exegesis from the executive branch.)

The Constitution covers all persons: namely, citizens, immigrants, and all other aliens within the territory of the United States. This blanket coverage ensures not only that every person (outside the immunity granted to certain foreign dignitaries) can be tried in a court for violating American laws, but that they are also extended certain civil rights, including rights of the accused. All entrants within the American criminal courts are entitled to protections against self-incrimination and the right to an attorney which are available immediately after contact with the police. Once in custody, within a reasonable frame of time a detainee is formally charged with the violation of a crime and is scheduled for a trial before a jury of peers. The defendant can choose any lawyer(s) qualified to practice in the relevant district or have one provided at the expense of the government.

Defendants are presumed innocent until proven guilty. This presumption of innocence can also be seen from the emphasis on swiftly bringing the case to trial and allowing for the posting of bail until the date of the trial, instead of prolonged detention, which could be seen as an a priori punishment before a sentence of guilt. At any point during the accused’s detention, a writ of habeas corpus can be filed in order to compel the government to justify its treatment of the accused. The ‘Great Writ’ whose origins date back hundreds of years to the time of King Edward I, can be utilized to compel the government to show the evidence it has against the detainee.

Both the prosecution and the defense has the ability to ask the members of jury several questions to ascertain their ability to hear the case without bias. Both the prosecution and defense have a number of preemptory challenges which they can utilize to remove members of the jury which they feel may not be able to fairly try the case. Also judges are obligated to recuse themselves from cases that may involve a conflict of interest. If judges fail to recuse themselves and it is later found that they held a bias that might have informed their judgment, such a revelation would be grounds for a re-trial and the judges may be impeached or punished accordingly. All these safeguards emphasize the premium that the
Founding Fathers and legislatures up until the present day have put on ensuring that judicial proceedings are tried impartially, giving equal weight to the testimony of both the defense and prosecution.

Although the Constitution lacks an enumeration of specific rules of procedure and evidence which are required during judicial proceedings, the Supreme Court has adopted extensive rules to regulate how counsel can present cases and what motions can be called for objection. The Federal Rules of Evidence proscribes the inclusion of hearsay evidence. It would not be enough for the prosecution to use a witness who said she knew the accused had materially supported a terrorist. The prosecution would have to show why the testimony should be admitted, whether through documentary evidence corroborating her testimony or other factors such as physical proximity to the alleged crime or her expertise in that field. Prohibition of hearsay evidence is not just a safeguard for the accused, it is a tool to help the decisionmaker ferret out truth from untruth. Without evidentiary procedures, the validity of a ruling would be called into question.

Finally, once a fair trial is carried out and a sentence is issued, either party to the suit may appeal. The appellate brief must assert what area of law the judge or jury erred on, and the appellate court rests on a narrower set of facts or law which the appellant will try to prove in order to reverse the decision. The appellate court has a set of judges who have not heard the case before, with the same rules for the recusation of judges still applying. Unlike trial courts, appellate courts do not have a jury, and focus exclusively on the transcript of the trial proceedings and the opening statements and questions and rebuttal statements of both the prosecution and the defense. During the appeal, the judges assume that all issues of fact ascertained within the trial are correct, and if ruled otherwise, they may call for a new trial. Appellate courts protect both parties of the original suit from perceived biases that might have affected the trial proceedings, and ensure that procedural violations or legal mistakes are re-examined by a new group of people. If the case originates out of a state court, then the case may be appealed to the state appellate court, and then possibly to the State’s Supreme Court before it is picked up by a federal district or appellate court. On the federal level, all cases are entitled to one appeal, and then the Supreme Court may choose through a writ of certiorari to hear the case. Once a case has been heard and a final ruling is made, the defendant can never again be prosecuted for the same crime.

Military Courts-Martial

Modeled after the civilian court system, the court-martial is a special tribunal which is used primarily to prosecute American military personnel and their co-dependents. While held completely within the military, these courts are governed by congressional statutes called the Uniform Code of Military Justice (UCMJ). After a round of military appeals, the UCMJ allows for recourse within the civilian courts. The UCMJ spells out the parameters of the courts – from the composition of the judges, jury and appellate process – as well as the crimes which can be adjudicated within its bounds and the rules of evidence and procedures during trial.

Efforts to codify a concise law of war (rules and laws for soldiers and those captured during battle) date back as far as the 17th century, when in 1621 King Gustavus Adolphus of Sweden released a comprehensive Articles of War, “explaining the proper conduct for soldiers and the punishment for violations.” These codes proscribed death for soldiers that aided the enemy, and outlined other prohibitions such as attacks on hospitals, churches, schools, and innocent civilians. The American court-martial system is modeled after British precedents which evolved out of early articles of the war tribunals of the 17th century. While many of these precedents and the modern UCMJ deal with the conduct of allied forces, the code also extends to “prisoners of war in custody of the armed forces, and persons serving with or accompanying an armed force in the field [during time of war].”
The procedures available for the accused under the UCMJ are as substantial and robust as the protections provided by the Constitution and statutes in the civilian system. The UCMJ has provisions which prohibit those subject to the articles to be detained without probable cause, and then once in custody the detention authorities must make “immediate steps … to inform him of the specific wrong of which he is accused and to try him or to dismiss the charges and release him.” The court-martial attempts to ensure the impartiality of the members of the court by prohibiting any judge or juror from attending if they had a direct hand in detaining the individual. These tribunals also provide for a presumption of innocence, right to counsel (whether that be a judge advocate, or civilian counsel), and various other protections as seen on chart 2.

While courts-martial are quite similar in character to the civilian courts, they have many benefits which are optimal in war-time. The fact that all proceedings are governed from within the military ensures that classified information can be protected and if needed to prove points, expounded upon during closed session. Another advantage of the court-martial (CM) is its compact size: a military judge and a panel of five officers. Special CMs have only a military judge and three officers. CMs can be convened anywhere, and are generally open to the public, but can be easily held in more controlled circumstances without extreme media attention and scrutiny. CMs can be held quickly, but not without affording ample time for the accused to cross-examine witnesses and make his/her case. They are allotted two levels of review and possible review by the Supreme Court.

Courts-martial, however, differ from civilian courts in terms of separation of powers. While there is an objective disconnection between the UCMJ and the trial of an alleged offender, the military proceeding both prosecutes the accused and conducts the trial. This is especially critical when CMs are used to adjudicate persons who are not members of the American military, such as POWs or enemy combatants. This problem is ostensibly mitigated by the UCMJ provisions mentioned above which prevent officers who are involved in the capture or detention of the individual from being part of the CM. But the hierarchal rank system of the armed forces and the psychological nature of being at war may somehow skew the results of the members of the courts who are supposed to be objective participants.

The court-martial system seems to lie in the middle ground between civilian courts and the Bush tribunal system. Courts-martial could be easily extended to the class of individuals now being processed under the Bush commissions by an amendment under the UCMJ. Such an amendment may create a slightly different procedure for those classified as enemy combatants due to issues of national security without compromising the necessary judicial guarantees recognized by all civilized nations.

Three-Pronged Military Tribunal System

The president’s military tribunal system has three components, Combatant Status Review Tribunals (CSRTs), Administrative Review Boards (ARBs), and Military Commissions (MCs). The first two bodies are guaranteed administrative procedures, whose sole purpose is to ascertain whether the detainee is an unlawful enemy combatant through an initial CSRT hearing, and then whether there is still a continued justification to detain the individual through annual ARB proceedings. Both of these administrative procedures were codified by Congress through the Detainee Treatment Act of 2005, which ordered the Department of Defense to issue rules of procedure for both processes, providing for a “periodic review of any new evidence that may become available relating to the enemy combatant status of a detainee... [and] the requirement that the conclusion of the Tribunal be supported by a preponderance of the evidence and allowing a rebuttal presumption in favor of the Government’s evidence.” The Military Commissions are much closer in style and judicial procedure to the traditional criminal justice apparatus, but MCs are only available to enemy combatants, and only then upon a determination by a “Designated Civilian Official.”
This tiered approach to dealing with the adjudication of detainees is quite informal and discretionary, with results invariably favoring the detention authority over the detainee. The existence of the CSRTs and ARBs has superseded the use of the Military Commission – which all detainees are not entitled to. Rather, subsequent to an enemy combatant determination, detainees are subjected to ongoing interrogations.

Upon entering into the custody of the Department of Defense, this class of detainees must be determined to be enemy combatants in order to justify their continued detention. The “enemy combatant” designation, as defined by the DoD order establishing Combatant Status Review Tribunals, refers to “individual[s] who was part of or supporting Taliban or al Qaeda forces, or associated forces that are engaged in hostilities against the United States or its coalition partners. This includes any person who has committed a belligerent act or has directly supported hostilities in aid of enemy armed forces.” This definition is broad enough to cover many groups outside of the Taliban and al Qaeda by using qualifying statements such as “associated forces” as well as “coalition partners” within the designation. By doing so, any group may be pegged under the Unlawful Enemy Combatant classification regardless of whether these groups pose a direct threat to America or have any connection to the September 11th attacks. These groups range from the national separatist groups of Spain (ETA) and Palestine (Hamas) to splinter groups opposed to the communist regime in western China.

Those captured by the military or transferred to the military under the auspices of the War on Terror, will have been previously designated as enemy combatants prior to the CSRT. The purpose of this tribunal is for the detainee to rebut his enemy combatant status. Under the DoD order codifying CSRTs, all detainees are assigned a military officer who shall act as their personal representative during the procedure. The detainee has no opportunity to choose counsel, but is assigned one, and the officer must have “proper security clearance” in order to be eligible for assignment to a detainee. It is unclear how many officers are available for the CSRT process and subsequently whether such personal representatives end up representing large numbers of detainees. Once a detainee is assigned counsel, the personal representative (PR) is “afforded the opportunity to review any reasonably available information in the possession of the DoD that may be relevant to a determination of the detainee’s designation as an enemy combatant.”

The use of classified information may be pervasive within these proceedings, and when used during the trial only the detainee’s counsel would be permitted to be present. Detainees only receive unclassified summaries of the charges and evidence against them, while the PR is privy to all the DoD’s information. One problem with the evidentiary part of the CSRT system is that the PR is limited only to information provided by the DoD, and given the nature of detainee’s capture, there may not be any opportunity for outside sources of information to be used. It may be reasonably inferred that if the DoD had made the initial determination to capture an individual, it may only document the information justifying the decision.

Thirty days after a detainee is assigned a representative, the members of the CSRTs are appointed by the designated “Convening Authority” consisting of three commissioned officers of the U.S. Armed Forces. There is no provision to ensure that the judges have any legal qualifications. Being a commissioned officer is qualification enough. The Tribunal comprises a senior officer, who acts as president of the tribunal, and a judge-advocate who acts as the recorder.

The CSRT’s rules of procedure allow for the detainee to testify on his behalf and cross-examine witnesses, but for the accused to call a witness in his defense, the tribunal must assess the “reasonable availability” of such a witness. This provision goes on to say that if witnesses are held by the U.S. Armed Forces, “they shall not be considered reasonably available if, as determined by their commanders, their presence at a hearing would affect combat or support operations.” There is no provision for the detainee to contend such a determination; it is merely an asymmetrical determination by the detaining authority. The rules state
that the CSRT is “not bound by the rules of evidence such as would apply in a court of law. Instead, the Tribunal shall be free to consider any information it deems relevant and helpful. … At the discretion of the Tribunal, for example, it may consider hearsay evidence.”

During the deliberation stage of the tribunal, the three judges’ legal standard is defined as a “preponderance of evidence.” This is an extraordinarily low level of review in view of the anticipated ramifications of a ruling against the detainee. If found to be an enemy combatant, the detainee may face an indefinite period of detention within an atmosphere of pervasive interrogation and isolation from the outside world, friends and family. It has been one of the universally acknowledged pillars of criminal justice adhered to by all Western democracies, and especially championed by American jurisprudence over the centuries, that the legal standard required for an adjudicatory body to find a person guilty of criminal charges is the “beyond a reasonable doubt” standard. Within the standard of “preponderance of evidence,” the tribunal’s panel could even possibly entertain reasonable doubts as to the enemy combatant status of the detainee and still rule against him.

There is no internal appeals process for the CSRT. Once the CSRT makes a ruling, it is termed a “recommendation” which is then forwarded to a staff judge to be checked for legal validity. Finally, the recommendation of the tribunal is referred to the “convening authority” for a final decision, and he has the sole authority to implement the tribunal’s decision, order a re-trial or to order some other action. This flies in the face of the separation of powers doctrine, and is a pale comparison to even the appeals process afforded military courts-martial which are conducted almost entirely within the control of the armed forces. Although the order requires that the detainee be informed of his right to file a writ of habeas corpus within the courts of the United States, Congress has attempted to supersede this provision.

The Military Commissions Act amended the Habeas Corpus Statute in order to prevent any court from hearing any motion pertaining to the detention “filed by or on behalf of an alien detained by the United States who has been determined by the United States to have been properly detained as an enemy combatant or is awaiting such determination.” A habeas corpus appeal allows the accused to challenge the validity of their treatment, even while they are in the middle of a pending suit, but the Military Commission Act allows appeal only after the final determination of the Convening Authority has been filed. This limits the court’s scope of review to only the question of whether the CSRT’s decision was “consistent with the standards and procedures specified by the Secretary of Defense for Combatant Status Review Tribunals,” which as shown above are incredibly lax.

The question of whether a detainee is classified as an enemy combatant is the paramount concern of all subsequent treatment. Once termed an enemy combatant, the detainee may not ever have another chance to refute his classification. Recently the DoD has implemented an annual Administrative Review, in order to assess detainee status over time, but ARBs are just as cursory and limited as CSRT, and by no means constitute a trial.

Although the Administrative Review Boards allow for the release of detainees, after hundreds of ARBs for over three years only 13 decisions of release were made by 2005. At least 200 hundred detainees were transferred to foreign prisons. Most detainees are still being held. ARBs hinge assessment of the appropriate action to take against detainees classified as enemy combatants on an analysis of whether the detainees “represent a continued threat to the U.S. or its allies in the ongoing armed conflict against al Qaida and its affiliates and supporters, and whether there are other factors that could form the basis for continued detention (e.g. the enemy combatant’s intelligence value and any law enforcement interest in the detainee).” Thus, according to the ARB’s own procedural memorandum, the annual reviews are not reviewing whether the CSRTs were right in designating whether the detainee is an enemy combatant and thus “properly detained” but what value the detainee has for ongoing operations. Clearly, ARBs are not a real opportunity for the detainee to prove his innocence because the CSRT’s ruling is deemed to be a conclusive determination, and from that point forward it is taken for granted that the detainee is an enemy combatant.
The CSRT’s purpose is merely to “review” whether the detainee was properly classified and therefore no sentence with a clear prison term is assigned because there is no formal charge. Only the DoD’s classification is being reviewed. While there is a Military Commission system, which is a much more robust replica of a trial, it has been used very seldom and there is no obligation that enemy combatants must have recourse to them. Military Commissions only have jurisdiction when they have (1) been convened by an official empowered to do so (i.e., the president or secretary of defense), and (2) when a person is referred to a commission through specific charges laid against them. It is irrelevant whether the MCs provide substantive procedures to ensure the presumption of innocence, cross-examination of witnesses, and so on, because they are not being used. It may be advisable to analyze Military Commissions for their validity in view of “the necessary judicial guarantees” referred to by the MCA and Geneva Conventions, but the point is moot so long as the existence of MCs is merely a safeguard against criticism. The president does not need to charge detainees because it is easier to utilize the CSRT and ARB process and proclaim that a semblance of legality has been preserved.

Thus after a CSRT determination, the enemy combatant has only the ARBs to fall back on. It is nowhere acknowledged within the circles of jurisprudence that a person should be found guilty without ever being sentenced, and then be held indefinitely pending his provision of terrorist information that may have questionable value. Some may argue that people who qualify as an enemy combatant do not deserve due process, with full judicial protections, and this may be true if there were no doubt that the person is in fact an enemy combatant. It is logically contradictory that detainees would not be afforded full judicial trials until after they were deemed to be enemy combatants and charged with violating the Laws of War and U.S. anti-terror laws, but not during the proceeding (CSRT) which qualifies them as enemy combatants. By excluding the question of the detainee’s status from the Military Commission process, the administration has created a system which allows it the choice of either holding people indefinitely in order to milk them of their intelligence knowledge or prosecuting the alleged terrorist for violating crimes. It is possible that detainees could be held after the CSRT for years, and then be charged and brought before a Military Commission, but it is equally possible that they would never be released by ARB, or merely transferred to the custody of a regime which gave even less guarantees to the accused.

Presumably, the safeguard provisions of the civil criminal justice system and even the military system under the UCMJ exist because they are recognized as indispensable by civilized peoples. It follows that since the military tribunal system lacks these safeguards, it does not afford the necessary judicial procedures required by either the U.S. Constitution or the Geneva Conventions. The Bush administration has decided to fight the war on terror, by every means, including the military, using all deliberate force to kill alleged terrorists. But when they are brought into military custody the president refuses to treat them as prisoners of war or as criminals. The Military Tribunal legal complex is an overly complicated and convoluted system, which skews its rules and procedures to favor the government’s agenda instead of the establishment of truth and justice. It is unclear whether the proper recourse for these maladies, is referral of alleged “unlawful enemy combatants” into Article III courts, courts-martial, or some revised form of the Military Commissions, but the current use of administrative hearings to justify pre-emptive punishment is clearly an unnecessarily arbitrary and punitive use of executive power.
## Chart 1: Terrorist Incidents: 1968-9/10/2001 vs. Post-9/11 to Present

**1/1/1968 - 9/10/2001**

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<thead>
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<td>950</td>
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<td>December</td>
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Chart 2: Judicial Guarantees and Their Relation to Article III Courts and the Tribunal Systems

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<th>Courts-Martial</th>
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<tr>
<td>1. Right to notice of charges</td>
<td>√ Amendment VI</td>
<td>√ 832. ART. 32(b); 835. ART. 35 UCMJ</td>
</tr>
<tr>
<td>2. Right to habeas corpus</td>
<td>√ Writ of habeas corpus if not alleged enemy combatant</td>
<td>√ Writ of habeas corpus; 833. ART. 33 UCMJ</td>
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<tr>
<td>3. Right to counsel</td>
<td>√ Amendment VI</td>
<td>√ 832. ART. 32(b); 838. ART. 38(b) UCMJ</td>
</tr>
<tr>
<td>4. Presumption of innocence</td>
<td>√ Amendment V</td>
<td>√ 851. ART. 51.(c)(1) UCMJ</td>
</tr>
<tr>
<td>5. Right to an impartial decision-maker</td>
<td>√ Amendment V</td>
<td>√ 806. ART. 6.(c); 826. ART. 26 842. ART. 42 UCMJ</td>
</tr>
<tr>
<td>6. Right to a speedy, public trial</td>
<td>√ Amendment V</td>
<td>√ 833. ART. 33. UCMJ</td>
</tr>
<tr>
<td>7. Right to a trial by jury of one's peers</td>
<td>√ Amendment VII</td>
<td>√ 825. ART. 25 UCMJ</td>
</tr>
<tr>
<td>8. Cross-examine witnesses and call witnesses</td>
<td>√ Amendment VI</td>
<td>√ 832 ART. 32(b)(c); 846. ART. 46 UCMJ</td>
</tr>
<tr>
<td>9. Right to appeal</td>
<td>√ Amendment V</td>
<td>√ 860. ART. 60; 862. ART. 62; 864. ART. 64; 866. ART. 66; 867. ART. 67; 867a. ART. 67a UCMJ</td>
</tr>
<tr>
<td>10. No unreasonable search and seizure</td>
<td>√ Amendment IV</td>
<td>X No applicable procedure</td>
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<tr>
<td>11. No cruel and unusual punishment</td>
<td>√ Amendment VIII</td>
<td>√ 855. ART. 55; 856. ART. 56. UCMJ</td>
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<tr>
<td>12. No double jeopardy</td>
<td>√ Amendment V</td>
<td>√ 844. ART. 44 UCMJ</td>
</tr>
<tr>
<td>13. Separation of powers</td>
<td>High</td>
<td>Moderate</td>
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<tr>
<td>14. Legal standard for proving guilt of the accused</td>
<td>Beyond a reasonable doubt</td>
<td>Beyond a reasonable doubt</td>
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</tbody>
</table>
References


7. Colin Powell’s remarks on NBC’s Meet the Press: “Guantanamo has become a major, major problem for America’s perception — as it’s seen, the way the world perceives America. And if it was up to me, I would close Guantanamo — not tomorrow, this afternoon. I’d close it. And I’d not let any of those people. I would simply move them to the United States and put them into our federal legal system.” Online video archives 10 June 2007 at http://thinkprogress.org/2007/06/10/powell-gitmo.

8. Geneva Conventions, Common Article III.


18§1©, (d), (f). President’s Military Order of November 13, 2001.


20David Hicks, Ali Hamza, Ahmed Sulayman al Bahlul, and Ibrahim Ahmed Mahmoud al Qosi. See also Fisher, Louis op cit, 76.


25The due process requirements of the 5th and 14th amendments are addressed to the benefit of persons, not solely citizens.

26While most of this discussion is focused on the rights and procedures afforded to individuals within a criminal context, many of the assertions can also apply to civil courts, such as chancery and equity courts.


286th amendment.

29Actual number varies from state to state. Federal cases allow for preemptory challenges. Challenges must not be based solely on race, religion, ethnicity or gender.

30“The Supreme Court shall have the power to prescribe general rules of practice and procedure and rules of evidence for cases in the United States district courts (including proceedings before magistrates thereof) and courts of appeals. The Supreme Court shall transmit to the Congress not later than May 1 of the year in which a rule is to become effective. Congress has the right to amend or otherwise change the rules as submitted.” 28 U.S.C. §2072 et seq.


33§802(9) & (10) UCMJ.

34§809(d) UCMJ.

35§810 UCMJ.

36§825(d)(1) & (2), e; §826(d) & (e) UCMJ.

37§851©(1) UCMJ.

38§832(b); §838(b) UCMJ.

39McCabe, Clark. (2004). “Psychological Issues in Understanding Terrorism and the Response to Terrorism.” In *Psychology of Terrorism: Coping with the Continuing*

Due in part to the DoD’s issuance of Manual for Military Commissions as required by the Military Commissions Act of 2006.

Deputy Secretary of Defense Gordon R. England is the current Designated Civilian Authority assigned to oversee detainees in Guantanamo Bay during CSRTs, ARBs and Military Commissions. This authority works concurrently with the Office for the Administrative Review of the Detention of Enemy Combatants, headed by Rear Adm. James M. McGarrah.


The Convening Authority of Combatant Status Review Tribunals is currently Rear Adm. James M. McGarrah.

See footnote 45.

Due process clauses of both amendments 5 and 14.


Based on two releases of information from DoD on 6 February 2006, between the dates 4 December and 23 December 2004, the DCO acted on 463 recommendations of Administrative Review Boards, leading to the 14 releases (3%), 120 transfers (26%), and 329 continued detentions (71%). DoD release 124-06 accessed at www.defenselink.mil/releases/release.aspx?releaseid=9302. On 6 March 2007, DoD released a report on the second year of ARBs for detainees reported on in 2006. The DCO acted on the recommendations of 328 ARBs held between January and December 2006, which resulted in the decision to transfer 55 detainees (17%) and to continue to hold 273 (83%). DoD release 253-07 accessed at www.defenselink.mil/releases/release.aspx?releaseid=10582. This newest report only deals with second-year ARBs so the total number of detainees is approximately 383, with 80 awaiting transfer to foreign custody.


Neptunium (V) Incorporation into Cation Sites of Common Rock-Forming Minerals

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Dr. Peter Burns
Civil Engineering and Geological Sciences
Notre Dame University

Abstract

At present, there are approximately 30 known inorganic structures that contain Neptunium (V). An investigation is being undertaken to determine if Neptunium in the pentavalent oxidation state will substitute into cation sites of common rock-forming minerals. A suite of minerals – calcite, gypsum, celestine, and cerussite – are synthesized and analyzed for purity before being doped with a Neptunium (V) solution. At time of publication, crystals of neptunium-doped gypsum and celestine had been grown, but had not been analyzed for neptunium incorporation. Further experimental trials are necessary to determine the conditions that inhibited the growth of neptunium-doped calcite.

Introduction

As the United States looks increasingly toward nuclear power as a viable, cleaner source of energy [1], it is imperative that researchers gain more insight into the way that radioactive elements interact within likely environments. The ability to predict the behaviors of radioactive elements – such as uranium and neptunium – in the solid state is contingent upon a comprehensive knowledge of their crystal chemistries [2].

Neptunium (Np), atomic number 93, occurs naturally in trace amounts in uranium ores and as a decay product in nuclear reactors. Due to its half-life of 2.14 million years, the behavior of neptunium in geologic settings such as the proposed nuclear waste repository at Yucca Mountain, Nevada, is becoming increasingly more important. Neptunium occurs in three oxidation states – tetravalent, pentavalent, and hexavalent – with the pentavalent oxidation state being most important environmentally due to its high solubility in oxidizing conditions and thus potential mobility in groundwater [3].

This study attempts to determine if neptunium in the pentavalent oxidation state will substitute into the cation sites, Ca$^{2+}$, Sr$^{2+}$, and Pb$^{2+}$ of calcite (CaCO$_3$), gypsum (CaSO$_4$ · 2H$_2$O), celestine (SrSO$_4$), and cerrusite (PbCO$_3$).

Methods

Several methods of single crystal synthesis were attempted before gel synthesis was determined to be the most effective method for growing large, well-formed crystals in a timely manner. Gel synthesis was recognized as necessary in order to slow the nucleation rates of the reacting nutrient solutions. The experimental set-up consists of four 25 mL U-tubes each containing 7.5 mL 10% tetramethyloxysilane gel through which two nutrient solutions can slowly diffuse to form single crystals. The gel was allowed to set for a period of at least 12 hours before nutrient solutions were added.

Prior to any syntheses incorporating neptunium (V), single crystals of calcite, gypsum, cerussite, and celestine were grown and verified by single-crystal x-ray diffraction (XRD).
Mineral Synthesis
The nutrient solutions in the following syntheses were added on opposing U-tube sides to a gel solution consisting of one part tetramethyloxysilane and nine parts de-ionized water.

Calcite
Calcite crystals were formed by the reaction of five mL .16M calcium chloride [CaCl\(_2\)] and five mL .16M ammonium carbonate [(NH\(_4\))\(_2\)CO\(_3\)]. The solutions were left to diffuse for 24 hours. The crystals synthesized showed excellent rhombohedral form and were as large as 200 microns across.

Gypsum
Gypsum crystals were formed by the reaction of five mL .6M calcium chloride [CaCl\(_2\)] and five mL .6M sodium sulfate [Na\(_2\)SO\(_4\)]. The solutions were left to diffuse for 24 hours. Many fibrous gypsum crystals were formed, as well as, an abundance of bladed single crystals, some as large as 600 microns across.

Cerussite
Cerussite crystals were formed by the reaction of five mL .1M lead nitrate [Pb(NO\(_3\))\(_2\)] and five mL .5M sodium carbonate [Na\(_2\)CO\(_3\)]. The solutions were left to diffuse for 24 hours. Low-quality fibrous crystals were formed.

Celestine
Celestine crystals were formed by the reaction of five mL .1M strontium chloride [SrCl\(_2\)] and five mL .1M sodium sulfate [NaSO\(_4\)]. The solutions were left to diffuse for 24 hours. The crystals synthesized showed excellent growth along primary axes and were as large as 100 microns across.

Neptunium (V) Incorporation
Following the successful synthesis of single crystals of calcite, gypsum, and celestine, a second experiment was conducted in which a solution of neptunium (V) dissolved in 1M nitric acid was mixed with each of the metal chlorides in place of de-ionized water. Cerussite was omitted due to the poor quality of crystals grown. In this trial, the solutions were allowed to diffuse for about two weeks. After this period, crystals of gypsum and celestine similar in size to those grown in the original syntheses were present in the bends of the U-tubes. The neptunium-doped calcite solution failed to produce crystals.

Analysis
Single Crystal X-Ray Diffraction: The crystals formed in the pre-neptunium syntheses were verified using a Bruker APEX single crystal diffractometer. The structural data for each crystal along with the standard data from the International Centre for Diffraction Data can be seen in Table 1 in the Results section below.

Inductively Coupled Plasma Mass Spectrometry: The crystals formed in the neptunium (V) syntheses were analyzed for neptunium (V) incorporation by ICP-MS laser ablation. This method uses a laser to remove an area on the surface of the crystal in order to determine if neptunium (V) is present within its structure. Preliminary ICP-MS analyses were conducted just prior to publication, and the results are pending.

Results
Data collected in pre-neptunium syntheses regarding the identity of the crystals grown can be seen in Table 1 below. The identities of single crystals were verified by way of single crystal diffractometer and subsequent comparison to standard data from the International Centre for Diffraction Data.
Centre for Diffraction Data. Cerussite was omitted from analysis due to the poor quality of crystals grown.

Crystals of gypsum and celestine underwent preliminary analysis by way of ICP-MS laser ablation. At time of publication, the results of these analyses were not yet known.

## Conclusions

Because results are not yet known from the ICP-MS analyses, determination is pending of whether neptunium in the pentavalent oxidation state is incorporated into the cation sites of gypsum and/or celestine. The synthesis of both of these minerals with neptunium-doped solutions can be viewed, however, as a success. It has been considered that the growth of calcite crystals may have been inhibited by a strong variance in pH introduced to the reaction by the neptunium solution.

## Future Research

Following the preliminary results of this trial, further investigation into neptunium (V) incorporation into cation sites of common rock forming minerals is necessary to determine the reproducibility of this experiment. It will also be necessary to determine the cause of the calcite crystal growth failure. It is probable that maintaining a pH consistent with the pre-neptunium synthesis would correct any crystal growth issues. Further investigations may also be conducted on other main group element minerals such as barite, strontianite, and witherite.

## Acknowledgments

Many thanks to researchers Dr. Peter C. Burns and Amanda L. Klingensmith, and mentor Dr. Warner Cribb. This research was funded through the Department of Civil Engineering and Geological Sciences at the University of Notre Dame and the Middle Tennessee State University McNair Program.

## References


### Table 1. Verification of Mineral Identification by X-Ray Diffraction and ICDD Standards

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Toxicity and Degradation of Sevin-10 Insecticide

Eterial Burrell
Dr. John M. Zamora
Biology Department

Abstract

The increase in agricultural demand has directly affected the number of insecticides on the market. Unfortunately, not all insecticides have been studied as thoroughly as they should be despite the fact that they could possibly be detrimental to plants and soil microbes. The insecticide, Sevin-10, is among this group. Tryptic Soy Agar plates containing Sevin-10 was inoculated with a variety of laboratory strain microorganisms. The media was tested initially to determine if it was inhibitory at higher concentrations, which it was not. The same laboratory microorganisms were plated on Minimal Salts Agar containing Sevin-10. The growth of the microorganisms was stunted. Finally 0.1 mL dilutions were made from three soil samples: Chelsea Place Pond, a personal garden, and Woods at Greenland apartments. These dilutions were plated on Minimal Salts Agar containing Sevin-10, and the wild type microorganisms grew slowly. It was determined that Sevin-10 insecticide is not toxic but it is not easily degradable by microorganisms.

Introduction

As the population of the world increases so does agricultural need. This demand on crops has caused farmers to resort to artificial means to preserve as many crops as possible to accommodate the global populace. Insecticides have been a resourceful and inexpensive means to save many agricultural products. Unfortunately, some insecticides on the market have not been thoroughly tested and could be affecting the environment and its organisms. Pesticides have had the most adverse effect on the environment compared to fungicides and herbicides. Insecticide products can possibly be toxic to soil microorganisms, plants, and even humans, depending on the effects of the active ingredients. Previous studies have determined that some microbes simply do not possess the necessary enzymes to degrade insecticides (Bünemann et al.).

Though Sevin-10 insecticide has not been completely studied, there are conjectures that this insecticide could have potential harmful effects on the nervous system. Carbaryl, a member of the carbamate family, is the active ingredient in Sevin-10 insecticide. Carbaryl has been said to reduce acetylcholinesterase in earthworms and lower the levels of phosphatase (Bünemann et al.). Problems due to lack of acetylcholinesterase can disturb neuro-muscular conduction in many organisms. Though similar to organophosphate compounds, the carbamate family has a less dangerous effect on the central nervous system. The negative outcome of carbaryl is reversible due to the ability of carbamyl and acetylcholinesterase to disassociate.

When testing insecticide degradation, there are several concepts to consider when comparing laboratory findings to the actual effects on the environment. For one, the constant temperature and controlled moisture of laboratory environments can directly affect the rate of growth of microorganisms compared to environmental extremes. Another factor to consider is the influence of soil particles in the natural environment on the adsorption of chemi-
cals into the soil (Beulke et al.). Environmental dynamics, such as the presence of plants and other entities, could influence the absorption of the insecticide. In this study there are no other elements, only the presence of the microorganism and the insecticide. The purpose of this study is to determine the toxicity of Sevin-10 insecticide on laboratory strains of microorganisms, the ability of laboratory microorganisms to degrade the insecticide, and the overall impact that Sevin-10 insecticide has on environmental microorganisms.

Materials and Methods

Agar Preparation

Tryptic Soy Agar (TSA) was prepared with 20 grams of dehydrated Tryptic Soy Agar from Difco Laboratories (Detroit, MI) to 500 mL deionized water. The solution was mixed and heated in a 1000 mL glass Erlenmeyer flask until the powder had completely dissolved and the solution had become clear. The top of the flask was covered with aluminum foil and autoclaved at 121°C for 15 minutes. After removal from the autoclave, the agar was allowed to cool to approximately 46°C before it was poured into plastic petri dishes. Each dish received enough agar to cover the bottom of the plate. This amount was enough to produce 20 plates, and this process was done six times to make a total of 120 TSA plates.

Sevin-10 Soy Agar plates were prepared by the following method: 1) In a 1000 mL Erlenmeyer flask containing 450 mL of deionized water, 20 g of TSA from Difco Laboratories and 0.003 g of phenol red indicator were added. This mixture was then autoclaved at 121°C and 15 psi for 15 minutes. After removal from the autoclave, the agar was allowed to cool to approximately 46°C. 2) Fifty mL of Sevin™ concentrate (Sevin-10) from Garden Tech (Lexington, KY) was placed in two separate 50 mL centrifuge tubes, which were capped and placed in a 200 mL beaker containing 100 mL of deionized water. This was placed over medium high heat on a hot plate until the water came to a boil. It was then boiled for 10 minutes. 3) Sevin-10 Soy Agar plates were prepared by mixing the TSA with 50 mL of Sevin-10 Insecticide. This process resulted in 20 plates and this procedure was carried out twice to make a total of 40 Sevin-10 Soy Agar plates.

Minimal Salts Sevin-10 Agar plates were prepared by the following method: 1) In a 1000 mL Erlenmeyer flask containing 450 mL of deionized water, 5.30 g of minimal broth, Davis without dextrose from Difco Laboratories, 7.50 g of Bacto™ agar from Difco Laboratories, five mL of glycerol, and 0.003 g of phenol red indicator were added. This mixture was then autoclaved at 121°C and 15 psi for 15 minutes. After removal from the autoclave, the agar was allowed to cool to approximately 46°C. 2) Fifty mL of Sevin™ concentrate (Sevin-10) from Garden Tech was placed in two separate 50 mL centrifuge tubes, which were capped and placed in a 200 mL beaker containing 100 mL of deionized water. This was placed over medium high heat on a hot plate until the water came to a boil. It was then boiled for 10 minutes. 3) Minimal Salts Sevin-10 Agar plates were prepared by adding 50 mL of Sevin-10 insecticide to the minimal salts glycerol agar mixture. The Minimal Salts Sevin-10 Agar was then poured into plates and left over night to solidify. This process resulted in 20 plates.

Microbial Strains

The following bacteria were obtained from the Middle Tennessee State University Microbiology Lab: Alcaligenes faecalis, Bacillus pumilus, B. sphaericus, B. subtilis, B. subtilis strain R, B. subtilis strain S, B. thuringiensis, Enterobacter aerogenes, Enterococcus faecalis, Escherichia coli, E. coli strain B, Klebsiella pneumoniae, Listeria seeligeri, Micrococcus luteus, Morganella morganii, Mycobacterium smegmatis, Proteus mirabilis, Providencia rettgeri, Pseudomonas aeruginosa, Pseudomonas fluorescens, Pseudomonas putida, Salmo-
nella enteritidis, Serratia marcescens, Shigella sonnei, Staphylococcus aureus, S. aureus antibiotic-resistant strain, S. epidermidis, S. simulans and Streptomyces griseus.

The following fungi were obtained from the Middle Tennessee State University Microbiology Lab: Aspergillus niger, Dipodoscopsis sp., Penicillium notatum, Rhizopus sp., Rhodotorula sp., and Saccharomyces sp.

Plating of Microorganisms

Laboratory strain microorganisms were plated on the TSA plates and then on the Sevin-10 soy agar plates, and all the plates were shelved and incubated at room temperature (25°C). The microorganisms were given five days to grow. Laboratory strain microorganisms were then plated on the TSA and on the minimal salts Sevin-10 agar plates, and all the plates were shelved and incubated at room temperature (25°C). The microorganisms were given five days to grow.

Dilution of Soil Samples

Three soil samples were taken from Chelsea Place Pond, Woods at Greenland Apartments, and a private home garden all located in Murfreesboro, Tennessee. Ten g of soil was added to 90 mL of deionized water. Seven tubes containing 9 mL of sterile deionized water were labeled from $10^{-2}$ to $10^{-9}$ and then set aside. One mL of diluted soil was added to the first tube labeled $10^{-2}$ and a serial dilution was conducted by taking 1 mL from the first tube ($10^{-2}$) and adding this to the second ($10^{-3}$), mixing the tube thoroughly, then taking the same amount from the second tube ($10^{-3}$) and adding it to the third ($10^{-4}$) until a final viral concentration of $10^{-9}$ was reached. Each tube was plated on a Tryptic Soy Agar plate and a Minimal Salts Sevin-10 Agar plate (total of 16 plates). The plates were inoculated with 0.1 mL of the diluted soil. All plates were given a five-day period to grow.

Results

Sevin-10 Soy Agar

For the first assessment of 20 bacterial laboratory strain microorganisms there was a substantial amount of growth on both TSA and Sevin-10 Soy Agar (SSA), and this was observed after the five-day incubation period. There were both gram-negative and gram-positive microorganisms that could grow in the presence of Sevin-10 insecticide (Table 1). Four laboratory strains of microorganisms, Mycobacterium smegmatis, Pseudomonas fluorescens, Bacillus thuringiensis, and Staphylococcus epidermis, exhibited no growth after the allotted five-day growth period. After two more days of incubation the Pseudomonas fluorescens and the Bacillus thuringiensis did show growth but this was not within the time frame given for experimental value. Twelve of the 20 microorganisms tested during the first run displayed either an alkaline or acidic breakdown of the products on the SSA plates.
Table 1. The Growth of Microorganisms on Sevin-10 Soy Agar.

<table>
<thead>
<tr>
<th>Bacteria</th>
<th>Growth of Bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SSA</td>
</tr>
<tr>
<td><em>Proteus mirabilis</em></td>
<td>G*</td>
</tr>
<tr>
<td><em>Shigella sonnei</em></td>
<td>G*</td>
</tr>
<tr>
<td><em>Providencia rettgeri</em></td>
<td>G*</td>
</tr>
<tr>
<td><em>Bacillus subtilis</em></td>
<td>G†</td>
</tr>
<tr>
<td><em>Mycobacterium smegmatis</em></td>
<td>NG</td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em></td>
<td>G*</td>
</tr>
<tr>
<td><em>Pseudomonas fluorescens</em></td>
<td>NG</td>
</tr>
<tr>
<td><em>Micrococcus luteus</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Morganella morganii</em></td>
<td>G*</td>
</tr>
<tr>
<td><em>Escherichia coli wt</em></td>
<td>G*</td>
</tr>
<tr>
<td><em>Salmonella enteritidis</em></td>
<td>G*</td>
</tr>
<tr>
<td><em>Bacillus thuringiensis</em></td>
<td>NG</td>
</tr>
<tr>
<td><em>Escherichia coli B</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Enterococcus faecalis</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Bacillus pumilus</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Pseudomonas putida</em></td>
<td>G*</td>
</tr>
<tr>
<td><em>Klebsiella pneumoniae</em></td>
<td>G*</td>
</tr>
<tr>
<td><em>Alcaligenes faecalis</em></td>
<td>G*</td>
</tr>
<tr>
<td><em>Staphylococcus epidermis</em></td>
<td>NG</td>
</tr>
<tr>
<td><em>Staphylococcus simulans</em></td>
<td>G</td>
</tr>
</tbody>
</table>

SSA = Sevin-10 Soy Agar  
TSA = Tryptic Soy Agar  
G = Growth  
NG = No Growth  
* = Alkaline pH  
† = Acidic pH

The second plating of microorganisms contained both bacterial and fungal organisms, including *Staphylococcus epidermis* and *Mycobacterium smegmatis* from the previous trial. Every microorganism grew on SSA with the exception of *Rhizopus sp*. *Rhizopus sp.* also did not grow on the Tryptic Soy Agar plates (Table 2).
Table 2. The Growth of Microorganisms on Sevin-10 Soy Agar (Fungi included).

<table>
<thead>
<tr>
<th>Bacteria/Fungi</th>
<th>Growth of Bacteria or Fungi</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SSA</td>
</tr>
<tr>
<td><em>Streptomyces griseus</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Bacillus sphaericus</em></td>
<td>G*</td>
</tr>
<tr>
<td><em>Serratia marcescens</em></td>
<td>G*</td>
</tr>
<tr>
<td><em>Pseudomonas aeruginosa</em></td>
<td>G*</td>
</tr>
<tr>
<td>Methicillin Resistant</td>
<td>G</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>G</td>
</tr>
<tr>
<td><em>Bacillus subtilis str. R</em></td>
<td>G†</td>
</tr>
<tr>
<td><em>Bacillus subtilis str. S</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Staphylococcus epidermis</em></td>
<td>G</td>
</tr>
<tr>
<td>Enterobacter aerogenes</td>
<td>G*</td>
</tr>
<tr>
<td>Listeria seeliger</td>
<td>G†</td>
</tr>
<tr>
<td>Mycobacterium smegmatis</td>
<td>G</td>
</tr>
<tr>
<td>Saccharomyces sp.</td>
<td>G</td>
</tr>
<tr>
<td>Rhodotorula sp.</td>
<td>G</td>
</tr>
<tr>
<td>Penicillium notatum</td>
<td>G</td>
</tr>
<tr>
<td>Rhizopus sp.</td>
<td>NG</td>
</tr>
<tr>
<td><em>Dipodoscopsis sp.</em></td>
<td>G</td>
</tr>
<tr>
<td>Aspergillus niger</td>
<td>G†</td>
</tr>
</tbody>
</table>

SSA = Sevin-10 Soy Agar
TSA = Tryptic Soy Agar
G = Growth
NG = No Growth
* = Alkaline pH
† = Acidic pH

Minimal Salts Sevin-10 Agar

In the case of Minimal Salts Sevin-10 Agar (MSSA), the laboratory strain microorganisms had to use the Sevin-10 insecticide as the main carbon source for energy. Many microorganisms could not grow in this medium. Out of 37 microorganisms only 19 of them grew (Table 3 and Table 4). That leaves almost 50 percent of the organisms as null in growth. There were even fewer organisms that displayed alkaline or acidic breakdown of the Sevin-10 insecticide. *Staphylococcus epidermis* did not grow on the MSSA or the TSA.
<table>
<thead>
<tr>
<th>Bacteria</th>
<th>Growth of Bacteria at 50 mL</th>
<th>MSSA</th>
<th>TSA</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Proteus mirabilis</em></td>
<td>NG</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Shigella sonnei</em></td>
<td>NG</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Providencia rettgeri</em></td>
<td>NG</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Bacillus subtilis</em></td>
<td>G†</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Mycobacterium smegmatis</em></td>
<td>G</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em></td>
<td>NG</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Pseudomonas fluorescens</em></td>
<td>G†</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Micrococcus luteus</em></td>
<td>NG</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Morganella morgani</em></td>
<td>NG</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Escherichia coli wt</em></td>
<td>NG</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Salmonella enteritidis</em></td>
<td>G†</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Bacillus thuringiensis</em></td>
<td>NG</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Escherichia coli B</em></td>
<td>G†</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Enterococcus faecalis</em></td>
<td>NG</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Bacillus pumilus</em></td>
<td>G</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Pseudomonas putida</em></td>
<td>G</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Klebsiella pneumoniae</em></td>
<td>G†</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Alkaligenes faecalis</em></td>
<td>NG</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td><em>Staphylococcus epidermis</em></td>
<td>NG</td>
<td>NG</td>
<td></td>
</tr>
<tr>
<td><em>Staphylococcus simulans</em></td>
<td>NG</td>
<td>G</td>
<td></td>
</tr>
</tbody>
</table>

**MSSA** = Minimal Salts Sevin-10 Agar  
**TSA** = Tryptic Soy Agar  
**G** = Growth  
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* = Alkaline pH  
† = Acidic pH
Table 4. The Growth of Microorganisms on Minimal Salts Sevin Agar (Fungi included).

<table>
<thead>
<tr>
<th>Bacteria/Fungi</th>
<th>Growth of Bacteria or Fungi at 50 mL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MSSA</td>
</tr>
<tr>
<td><em>Streptococcus griseus</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Bacillus sphaericus</em></td>
<td>NG</td>
</tr>
<tr>
<td><em>Serratia marcescens</em></td>
<td>G†</td>
</tr>
<tr>
<td><em>Pseudomonas aeruginosa</em></td>
<td>G†</td>
</tr>
<tr>
<td><em>ARS</em></td>
<td>NG</td>
</tr>
<tr>
<td><em>Bacillus subtilis str. R</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Bacillus subtilis str. S</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Staphylococcus epidermis</em></td>
<td>NG</td>
</tr>
<tr>
<td><em>Enterobacter aerogenes</em></td>
<td>NG†</td>
</tr>
<tr>
<td><em>Listeria seeligeri</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Mycobacterium smegmatis</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Saccharomyces sp.</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Rhodotorula sp.</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Penicillium notatum</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Rhizopus sp.</em></td>
<td>NG</td>
</tr>
<tr>
<td><em>Dipodoscopsis sp.</em></td>
<td>G</td>
</tr>
<tr>
<td><em>Aspergillus niger</em></td>
<td>NG</td>
</tr>
</tbody>
</table>

MSSA = Minimal Salts Sevin-10 Agar  
TSA = Tryptic Soy Agar  
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Soil dilutions

Environmental microorganisms were able to grow on MSSA, and there was evidence of acidic and alkaline breakdown on most of the plates. About one percent of the environmental microorganisms were able to degrade Sevin-10 insecticide despite the location from where the soil sample was taken (Table 5).
Table 5. Colony Count of Environmental Soil Dilutions.

<table>
<thead>
<tr>
<th>Location</th>
<th>Tryptic Soy Agar (TSA)</th>
<th>Minimal Salts Agar with Sevin-10 (MSSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chelsea Place Pond</td>
<td>$3.70 \times 10^6$ cfu/g</td>
<td>$5.70 \times 10^4$ cfu/g</td>
</tr>
<tr>
<td>Private Home Garden</td>
<td>$4.60 \times 10^9$ cfu/g</td>
<td>$1.27 \times 10^6$ cfu/g</td>
</tr>
<tr>
<td>Woods at Greenland Apts.</td>
<td>$1.02 \times 10^7$ cfu/g</td>
<td>$1.34 \times 10^6$ cfu/g</td>
</tr>
</tbody>
</table>

cfu/g = colony-forming units per gram

Discussion

The first objective was to determine whether the microorganisms could grow in the presence of Sevin-10 insecticide. To do this, two agars were prepared: the first being TSA and the second being SSA. Sevin-10 insecticide overall is not inhibitory to laboratory strains of microorganisms. Many of the microorganisms grew without any problem and at a rapid rate (Tables 1 and 2). As with any outside carbon source there were some microorganisms that simply could not grow in the presence of Sevin-10 insecticide or found it difficult to degrade the product. The agars were able to sustain both gram-negative and gram-positive organisms and there was little to no differentiation. Fungal organisms tended to have more difficulty growing on SSA plates but ultimately the fungal organisms grew with the exception of *Rhizopus sp*. Sevin-10 insecticide could merely be inhibitory for this fungi or it could be a shortcoming in the experimental procedure.

The second objective was to determine whether the microorganisms could break down the Sevin-10 insecticide. To do this, two agars were prepared: the first being TSA and the second being MSSA. Minimal Salts Sevin-10 Agar was more inhibitory than SSA (Tables 3 and 4). Many of the microorganisms were able to grow despite having to use Sevin-10 as their main carbon source, but many struggled to grow. There was hardly any acidic or alkaline breakdown on the MSSA plates. The number of laboratory strain microorganisms that could degrade Sevin-10 insecticide did drop dramatically compared to the SSA plates.

The results of the environmental soil dilutions were intriguing. The most interesting point is that Sevin-10 insecticide had a more deleterious effect on environmental species compared to those cultured in the laboratory. About one percent of the environmental microorganisms were able to degrade Sevin-10 insecticide (Table 5), but that one percent is still a significant number. Sevin-10 insecticide is degradable by some microorganisms, but not all.

Literature Cited

The Invasive Growth Characteristics of Kudzu *(Pueraria Lobata)*

Leonela Carriedo

Dr. Sandra Johnson
Biology Department

The introduction of plant species for agricultural and horticultural purposes into a new ecosystem has had long-term effects on the American landscape. One such plant is kudzu *(Pueraria lobata)* which was introduced into the United States at the Japanese garden exhibit at the Centennial Exposition in Philadelphia in 1876. Kudzu caught the attention of many American gardeners because of its attractive palmate leaves and eye-catching purple flower. Kudzu became very popular within the southeast region of the United States, not only as an ornamental plant, but because it effectively shaded patios from the hot summer sun (Forseth and Innis 2004).

In the 1930s, the American agricultural South experienced serious problems with soil erosion due to the overuse of land (Wikamp, Frank and Shoopman 1966). In 1955, the Tennessee Copper Company controlled soil erosion in Tennessee by planting kudzu after many failed restoration attempts using grasses and pine trees (Wikamp, Frank and Shoopman 1966). Kudzu was a favorable plant to use to curb soil erosion because of its extensive root system that easily “holds onto the soil.” Anecdotal information regarding its invasive characteristics indicate that kudzu roots readily at the nodes, has fast elongation rates 3-19 cm/day and has high photosynthetic rates (Forseth and Innis 2004; Witcamp and Shoopman 1966).

By 1997, 121 years after its initial introduction, kudzu had spread over 30 million kilometers, and was designated a federally recognized noxious weed (Forseth and Innis 2004). Although kudzu has been recognized as a pest, little research has been done to gather quantitative data regarding its invasiveness (Drake et. al. 2003).

Kudzu, like other plants classed as invasive exotic plants, has supplanted resident species by decreasing the biodiversity of native plants, therefore causing local extinctions (Davis et. al. 2000; Lonsdale 1999; Rosen et. al.). The ecological issue of decreasing biodiversity is important because of the role exotic species play within their environment. Exotic plant species alter the integrity of their newly inhabited environment by competing for light, nutrients and space (Tilman 1997). Kudzu easily out-competes other plants with its large leaf area, rapidly elongating vines, and thick tuberous roots.
Since not all introduced plants become invasive, the characteristics which enhance invasiveness are an important focus for invasion ecologists. Though plant invasiveness is not well understood, studies have shown that propagule pressure, seedling survival into maturity, and seedling establishment are three important biological attributes that make invasive exotic species great competitors (Lonsdale 1999; Miller, et. al. 2002; Davis et. al. 2000; Tilman 1997). Through the mass government planting of kudzu in the 1930s, a large propagule pressure was constituted, therefore enabling kudzu as an invader (Witcamp, Frank and Shoopman 1966; Forseth and Innis 2004). Kudzu has a great ability to grow vegetatively and reproduce by fragmentation (Forseth and Innis 2004). Past studies suggest that the kudzu population is maintained asexually through fragmentation versus through seed production. Kudzu’s sexual effort, measured on the basis of biomass, ranged from 0.02% to 2.1% in the kudzu population found in Maryland, which is low in comparison to other herbaceous perennials (Abramovitz 1983). Although kudzu is a highly prolific invader, without enough sun exposure, its growth rate is thought to decrease, causing reduced branching, delay in leaf emergence, decrease in flowering and a reduction of root growth (Forseth and Innis 2004).

My investigation will analyze the growth rate of kudzu under increasingly shaded conditions. I predict that the growth rate of kudzu will decrease with a decrease of sun exposure.

**Materials and Methods**

In this study, 19 kudzu plants were grown outside the Middle Tennessee State University greenhouse. The area where the treatment boxes were placed was not shaded.

**Treatments**

Plants were grown in full sun (100%), or shade (40% or 20% sun). Each sun treatment was composed of two replicate treatments. Plants were housed in sun treatment boxes measuring 1.5m x 1.5m with 1.25m wooden uprights to support the shade cloth above the plants. Prior to building the treatment boxes, 15m of double folded weed blocking sheeting was laid over the soil where the boxes would be placed. This was done to prevent the roots penetrating the soil. After the boxes were built, the boxes were lined with a second layer of weed blocker. The boxes were then filled with a mixture of approximately 36 kg of soil and mulch. For the 40% and 20% sun treatment boxes shade cloth panels, of appropriate density, were draped over the treatment frames and secured with plastic zip-ties.

**Root Crowns**

Thirty-five kudzu root crowns were purchased in April, 2007 from Kudzu Konnection, in Ashland, North Carolina. It is not known whether the individuals are ramets. A topsoil and mulch mix was prepared to pot the root crowns. Because the root crowns were of varying size, each of 24 small crowns were planted in 11.4L pots and six root crowns were placed in 57L pots. The remaining five root crowns were potted but not used in the experiment. The root crowns were given three weeks to overcome transplant shock before being placed in the sun treatments. Each treatment box contained one large pot and four small pots. At the time the plants were placed within the treatments, 20 potted root crowns had herbaceous growth. The plants were watered every third day for the first three weeks while the plants overcame the transplant shock, and then watered every fifth day. By the end of the fourth week, eleven plants had died.
Identification of Plants and Vines

The plants in each treatment box were identified first by a roman numeral to represent each treatment (I and II for 100% full sun, III and IV for 20% sun and V and VI for 40% sun), given by their position within the box, the plants where identified by letters (where A-D were in small pots and all plants given the letter E were in the large pots). Finally, the vines on each plant were numbered sequentially as new vines emerged. An example of the identification system is: IIA1 (Treatment 1: 100% sun, replicate 2, plant A, vine 1). This method of identification was helpful when locating a long twining or rooted vine to measure the leaf area.

Growth Markings

Plant growth was marked biweekly starting in May and ending in October using Goody’s colored elastic hair bands. A different colored band was assigned to each growth marking period. The band was placed over the apical meristem, and past the first fully expanded leaf.

Leaf Area Measurements

Leaf area was measured monthly using a portable leaf area meter (Li-Cor model 3000A). The area of the first fully expanded leaf on each vine was measured three times and averaged.

Harvesting

Each plant was taken out of its treatment box. Every vine was cut at the base, wrapped with wet paper towels and placed in a large plastic bag and transported to the laboratory to be measured. Once the entire vine had been measured, the vine was placed into aluminum pie tins with proper identification and dried.

Analysis

Two-way ANOVAs is used to analyze the effects of time and treatment on leaf area and growth rate. One-way ANOVAs are used to analyze total shoot length and dry weight per treatment. SPSS statistical software is used to analyze the data.

Early Results

When the June leaf area measurements were compared to those measured in July, the June leaf area measurements were significantly larger ($P < 0.04$). However the sun treatments did not have a significant effect on the leaf area. The two-way ANOVA shows that there is a significant interaction between time and treatment on leaf area in the month of June ($F_{(2,82)} = 3.77; P<0.03$).

The Post-Hoc test was carried out again to analyze which treatment differed from the others. In June, the 40% sun treatment is significant in comparison to the 100% sun treatment ($F_{(2,41)}= 4.04$ with $P<.03$). For the month of July, the ANOVA test shows that there is no significant difference among treatments. When analyzing time and treatments together, only treatment 3 showed a significant difference ($P<0.03$).
Discussion

These early results suggest that kudzu leaf area does not differ greatly over time; leaf area is more variable in the 40% sun treatments, and leaf area is decreased in the 20% sun treatments. Further analysis of the August leaf area data will need to be incorporated to get a better understanding of the phenomenon that is observed.

![Mean Leaf Area (cm²) Comparison June & July 2007 per Treatment](image)

**Fig. 2.** June and July Comparison of Leaf Area

Works Cited


The Problem Solving Differences between Expert and Novice School Psychologists

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Abstract

There has been relatively little research done about the problem-solving processes of school psychologists. The purpose of this study is to expand on that research. This study provides guidance for improving the school psychology problem-solving model, accuracy of diagnoses, efficiency of data gathering and use, and improving school psychology training. Five expert and five novice psychologists are interviewed. Each psychologist is presented with three different cases, one cognitive disorder, one behavioral disorder, and one a health disorder case. Psychologists use a think aloud technique, meaning they say whatever comes to mind in relation to the case. They diagnose each case and provide reasoning for their diagnoses. After all the psychologists are interviewed, the data is coded and analyzed to determine whether or not there are differences in the problem-solving techniques of expert and novice school psychologists and, if so, what those differences are. The hypotheses are that expert school psychologists will provide more in terms of a response than the novice school psychologists will, and that the health case will evoke less of a response for both novice and expert school psychologists because it is less common in the field of school psychology.

Literature Review

Research in cognitive psychology has established the importance of content knowledge in the development and application of expertise (Glaser, 1984; Greeno, 1977; Hinsley, Hayes, and Simons, 1977; Kintsch and Greeno, 1985). This research has shown that general problem-solving strategies are used by novices, but not by experts within their area of expertise. The cognitive psychology literature suggests that, although such strategies are important in approaching problems, experts use content-specific strategies to solve problems. This research has found that general, weak problem-solving strategies applied across problem content are slow and inefficient methods of dealing with information.

Expert performance can be defined as having mastered challenges that become more and more difficult. Expertise has been examined by observing characteristics of chess players. Expert chess players are different than novice chess players by having a better internal representation of various moves on the board. Characteristics of typists also have been studied. It was found that expert typists have the ability to look ahead (as do expert chess players). Studies also question how much influence experience has on expertise. Experience does have influence, as does the ability to react to situations that are unlike any encountered before (Ericsson, 2003). Williams (2007) conducts an experiment wherein participants ranging in experience are asked to solve three problems and finds that experienced participants take less time and use fewer moves to solve the problem than do novice participants.

Research on expertise also has been conducted on psychologist practitioners. In an interesting study of differences in problem-solving strategies and clinical judgments between novice and expert psychologists, Ganzach (1997) asks 29 clinicians, 13 staff psychologists, and 16 trainees to judge 861 MMPI profiles and rate them on a scale from least psychotic to...
most psychotic and finds that expert psychologists are more likely to assign a heavier weight to pathological information for a diagnosis than novice psychologists.

Over the last two decades, a general problem-solving model has been applied to most areas of school psychology practice, including supervision, psychoeducational reports (Pryzwansky and Hanania, 1986), preparation of school psychologist training (Martens and Keller, 1987), general practice (Davidow, 1994), and consultation (Piersel, 1987). Historically, much of the problem-solving literature in school psychology has been based on Os-good’s seminal work on behavior modification. Subsequently, attention focused on problem-solving consultation (Piersel, 1985; Reynolds, Gutkin, Elliott, and Witt, 1984). Gutkin and Piersel have formulated the consultation process as a seven-stage sequence: (1) define and clarify the problem, (2) analyze the forces impinging on the problem, (3) brainstorm alternative strategies, (4) evaluate and choose among alternatives, (5) specify consultee and consultant responsibilities, (6) implement the chosen strategy, and (7) evaluate the effectiveness of the action and recycle if necessary. These steps also have been applied to general school psychological practice (Davidow, 1994).

More recently, school psychology writers and researchers have applied cognitive psychology research to problem-solving in school psychology. DeMesquita and his colleagues (deMesquita, 1988; deMesquita, 1992; deMesquita, Hickman, and Qualls, 1988) find few differences between doctoral and non-doctoral experienced and inexperienced school psychologist consultants in diagnostic problem-solving. Pryzwansky and his colleagues (deMesquita and Pryzwansky, 1990; Pryzwansky and Vatz, 1988) also report few differences in expert and novice school psychologist in problem-solving. However, both sets of researchers generally rely on general problem-solving strategies rather than content-based problem-solving strategies in their analyses.

General problem-solving strategies of the type most often mentioned in the school psychology literature may not be used often by experts in solving real-life problems within their domain of expertise. General problem-solving strategies are commonly used by novices or by experts dealing with problem outside their knowledge base. An important point here is that novices are not deficient in general problem-solving heuristics, but in an organized knowledge base, its application, and its efficient use.

Problem-solving among professionals such as teachers and physicians has been researched at length, but to date there has been relatively little study of problem-solving among school psychologists. In particular, relatively little research has been conducted to investigate the relative problem-solving characteristics of expert and novice school psychologist practitioners. Research of this type is important in determining the nature and merits of general problem-solving strategies versus content-based strategies of expert and novice school psychologists and possibly for defining important relationships in consultation and service delivery.

The purpose of this study is to investigate the problem-solving characteristics of expert and novice school psychologists using the Gutkin and Curtis problem-solving model. It is hypothesized that psychologists will apply general problem-solving strategies more extensively than novice practitioners. Also, expert practitioners should apply content-specific strategies to problems within their area of expertise, but should behave more like novices in dealing with problems outside their expertise.
Research Methodology

Participants

Participants were chosen within their expertise group. There were five expert school psychologists and five novice psychologists. The requirements for the expert school psychologists were an advanced degree and 10 years of experience. The novice school psychologists were chosen from a pool of graduate students in a school psychology program.

Materials

The materials needed included three case vignettes and an audio cassette recorder. The audio cassette recorder was used to record the responses of the participants so they could later be transcribed. The three case vignettes were presented to the participants to evoke responses that could be transcribed. The case vignettes were three completely different types of cases, one being a learning disorder case, one being a conduct disorder case, and the other being a health case. The cases (verbatim) used for the experiment are as follows:

CASE 1
John is a nine-year-old male in the third grade. John appears to have average intellectual ability, but has great difficulty in school. He can write his name and recognize all letters except “q” and “z.” He has a sight vocabulary of about 15 words, and often reverses letters in spelling. John performs adequately in other areas. Although he gets along well with his peers, he occasionally gets in trouble for being the class clown.

CASE 2
Robert is an eight-year-old male in the second grade. Robert exhibits below-average academic performance and disruptive behavior in the classroom. He has been destructive of school property and is reportedly disobedient in his home. He teases and bosses peers and is characterized by the teacher as being dishonest, a liar. Overall, he is not very popular with his peers. He stutters and throws temper tantrums when he doesn’t get his way.

CASE 3
James is a nine-year-old male in the fourth grade. James has enrolled in public school for the first time following a heart transplant. He is on grade level. He is described as being outgoing and independent, yet demanding and assertive. He has experienced only limited interactions with peers and frequently ignores them, typically preferring to interact with adults. He throws temper tantrums when he doesn’t get his own way.

Coding

A coding system developed by Rick Short branches off of the Henshaw scoring techniques, which use 11 categories. The categories include behavior verbalization, behavior setting verbalization, assessment verbalization, reviewing the problem, stating a new strategy, developing or working on a solution, attention control, positive evaluation, negative evaluation, irrelevant ideas, and silence (Henshaw, 1979). Instead of 11 coding categories, the coding system developed by Short has eight categories, as follows:
P-Problem Statements (describing the problem, or “setting the stage” before taking action)
A-Analyses (directly or indirectly assessing the problem)
S-Strategies (ideas, actions, or approaches for solving the problem)
E-Elaborations (details about a strategy or situation)
R-Reasons (explanations for a strategy or situation)
F-Evaluations of a strategy or situation (judging the feasibility or desirability of a strategy or situation)
J-Evaluations of self (problem solver judges self with the problem situation)
Em-Feelings (how the problem solver feels about the problem, strategy, or outcome)

The amount of response given was also taken into account in order to determine whether or not the level of expertise correlated with the amount of response given, and if the familiarity of the case correlated with the amount of response given. For example, does the health case evoke less of a response because that particular type of case is less often seen in the field of school psychology?

Procedure

Each case vignette was read to the participants as they followed along with their copy. Each case was presented one at a time. After the case had been reviewed a participant’s copy was removed. The participants were asked to think aloud in regards to the case and to recall as much as they could. During this time the researcher was allowed to prompt the participant. For example, if the participant had forgotten that the child was disruptive in class the researcher could say, “Is there anything that should be noted about the child’s behavior?” After the participant recalled as much as he or she could they were asked the following questions for each case:

What is (are) the major problem(s) that should be addressed in the case? (If more than one is presented, participants were asked, “Which should be worked on first? Why?”)
Specifically, what led you to that decision?
What additional information would you like to have about the case? Why?
How would you intervene in this case?

The responses were recorded and then transcribed. The responses were broken up into segments. The segments were determined by a change in direction or idea by the participant. Each segment was then coded with one of the eight codes. Segments that did not seem to fall into any particular code were dropped to prevent inaccurate analysis. The codes were then analyzed to determine the differences in the responses between the experts and novices. The specific differences that were sought included the amount of response for each case and the types of responses (determined by the code given.)

Results

Tables 1-3 provide the number of responses and their categories given by each individual expert and novice school psychologist. The codes given to the responses of the psychologists are listed across the top. Table 4 provides the average number of responses for the expert and novice school psychologists for each case. For the health disorder case (Table 1), M=22.2 and SD=8.93 for the experts. M=20.2 and SD=9.01 for the novices.
Table 1: Responses for expert and novice school psychologist for the health case. (Participants 1-5 are expert school psychologists. Participants 6-10 are novice school psychologists.)

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For the conduct disorder case (Table 2), M=23.6 and SD=10.71 for the experts and M=22.6 and SD=5.68 for the novices.

Table 2: Responses for expert and novice school psychologist for the conduct disorder case. (Participants 1-5 are expert school psychologists. Participants 6-10 are novice school psychologists.)

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For the learning disorder case (Table 3), M=23.6 and SD=11.08 for the experts and M=16.6 and SD=5.37 for the novices.
Table 3: Responses for expert and novice school psychologist for the learning disorder case. (Participants 1-5 are expert school psychologists. Participants 6-10 are novice school psychologists.)

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In this study, experts did not differ significantly from novices in problem-solving categories for the health-impaired case or the conduct problem case. However, significant differences were found between experts and novices in their use of problem solving categories in the learning disorder case (F (7, 2) = 24.42, p < .05).

Table 4: Responses for the expert school psychologist and novice school psychologists averaged across the code.

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Multivariate Tests(b)

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Discussion

As expected, expert school psychologists consistently gave more of a response in terms of overall volume than the novice school psychologists. Experts’ greater response implies that they have a better knowledge of how to look for key items and clues in cases, analyze cases with more detail, and provide a greater number of strategies and/or solutions to the cases. A higher level of experience, which can lead to an increase in knowledge, may be responsible for experts’ ability to provide more responses than novices.

Experts did, on average, respond less to the health case than they did to the conduct and learning disorder cases, which supports the hypothesis that the health case will elicit less of a response because it is less common than conduct and learning disorder cases in the field of
school psychology. Novices, on the other hand, gave the lesser response for the learning disorder case. The fact that experts are able to give more of a response suggests that their experience and knowledge is more beneficial in learning disorder cases. This is also reflected in the fact that the greatest difference in the amount of response given between the expert and novice school psychologist was in the learning disorder case. Learning disorder cases are the most frequent in the area of school psychology, and therefore experts would have much more experience with these types of cases, which could explain results approaching significance between experts and novices on this type of case and not the conduct or health cases. Experts give more responses in the health case 63 percent of the time. In the conduct disorder case, experts provide more of a response 56 percent of the time. In the learning disorder case, however, experts provide more of a response 84 percent of the time.

During the execution of this experiment there may have been a source of error. Some of the participants may have begun to feel fatigued or their responses may have been affected by the length of the experiment. Another source of error could have been experimenter bias in the area of coding because it was solely up to the experimenter to decide what code would fit best for a given response, and another experimenter might code a response differently. The sample size could have also affected the outcome of the results. Because of the extremely small sample size there was only one area that was found to be approaching a level of significance. If sample size is increased we may have greater significance for all areas.

Works Cited


Motivation and Language Transfer in L2 English of Spanish-speaking Adult Learners

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Abstract

Second language acquisition is a “conscious or subconscious process by which a language other than the mother tongue is learnt in a natural or tutored setting” (Ellis, 1986). Among the influential factors of this process are language transfer and motivation. Language transfer is the potential influence of L1 (first language) on L2 (second language) where L1 functions as a constraint on the learner’s hypothesis testing process (Schacter, 1993). Motivation is the internal drive of the learner, whether integrative or instrumental, to acquire L2 (Larsen-Freeman & Long 1999). These two complementary perspectives constitute the framework of this study, which has two objectives. First, it examines the potential influence of the phenomenon of negative transfer in writing samples of nine Spanish-speaking learners of English along two dimensions: syntax and lexicon. The writings of these learners are analyzed to identify and classify learners’ errors that could possibly be attributable to negative transfer. Second, it explores the learners’ self-reflection paying particular attention to motivational orientation in their experiences with learning English as a second language.

1. Introduction

It is a well established fact that second language acquisition (SLA) is a function of various factors, two of which are salient to this discussion. There are, for example, factors that are internal to the learner such as L1 knowledge as well as the learner’s motivation for learning a particular language. The structural distance between L1 and L2 can be viewed as external factors that also influence SLA (Ellis, 1986). The aim of this research is twofold. First, it examines the potential influence of the phenomenon of negative transfer in writing samples of nine Spanish-speaking learners of English along two dimensions: syntax and lexicon. Their writings are analyzed to identify and classify learners’ errors that could possibly be attributable to negative transfer. Secondly, it explores the learners’ self-reflection, paying particular attention to motivational orientation in their experiences with learning English as a second language.

2. Literature Review

2.1 Language transfer

The term “language transfer” can generally be defined as an occurrence found in the speech or writing of non-native speakers of L2s or (L3s, or L4s etc.).1 It is marked by the appearance of some deep or superficial structural features of the learner’s L1 being routinely used for a particular L2 form with the result usually being, but not always, some non-native production. The term language transfer has its roots in the behaviorist approach to SLA, an ap-

1L1 refers to a persons’ first language. L2, L3, L4 refer to the second, third, fourth language.
approach that lost favor among researchers in the 1970s (Ellis, 1997). The resulting void in SLA gave rise to controversial debates among researchers about the nature of language transfer as well as the development of new modes of articulating this elusive concept. Discussion among researchers has yielded conflicting definitions of the term; however, it is safe to say that the definition previously mentioned entails many components of the generally accepted definition of the term. A more detailed discussion of the various theories that inform these definitions will follow.

Learner language is at the heart of the discussion in SLA, particularly as it relates to language transfer. A more appropriate and technical term for learner language is interlanguage (IL). Selinker was the first to use the expression to refer to the phenomenon of learner language in all second language contexts. According to Selinker (1972), all second language settings include the presence of a native language (NL), a target language (TL) and the learner’s burgeoning second language or IL. One of the difficulties of nomenclature in SLA is that identification and definition is subject to variation as is the case with Corder’s description of learner language as an “idosyncratic dialect” and Nesmer’s use of the term “approximative system” to perform the same function (Larsen-Freeman and Long, 1999). Selinker’s IL, however, became the term of choice because of its neutrality.

A learner’s IL entails a creative process that is unique to the learner (Cook, 1988, 15). Nesmer’s (1971) work summarizes IL as entailing some assumptions about the SLA process: 1) Learners are actively involved in constructing an abstract system of grammar that is distinct from L1 and L2, which informs the acquisition and formation of their L2. 2) Learner grammar is open to internal influences such as L1 knowledge as well as to external factors such as TL input. 3) Learner grammar is transient and is constructed by a system of addition, deletion and reconstruction as he or she learns new more complex rules and their application in the L2. 4) Learner language is a function of the learning environment, which accounts for variance in proficiency. Therefore, IL can be conceptualized as the continuum of abstract grammar system that is actively created by the learner through interaction between internal cognitive processes and external input.

Since its inception, discussions about SLA have been dominated by the need to understand and explain the process that it entails and the significance of the language learning formation process as a source of information for understanding SLA. The result of this dialogue is a variety of approaches to SLA. Here we will examine three broad camps that represent different modes of dealing with learner language. There is the archaic behaviorist standpoint, which mainly focuses on external input as stimuli for forming the habit of language acquisition (Skinner, 1957). The second approach focuses on the learner’s internal mental mechanism as the locus of understanding learner language. The third perspective describes an interaction of the external input and internal cognitive processes (Ellis, 1997).

2.1.1 Behaviorist Approach

In most SLA literature, behaviorism is only mentioned to point out that it is outdated. Here it is mentioned because of its connection to language transfer (Schacter, 1993, 32). Ellis (1986) also alludes to behaviorism being an outdated view of language acquisition. Traditional behaviorists believed that language skills came about as a result of a learner “imitating, practice, feedback on success, and habit formation” (Lightbrown & Spada, 2002, 9). In this approach, the quality, quantity and degree to which positive feedback is consistent, determines the learners’ ability to succeed in learning a language. Behaviorism fell out of favor because it did not account for novel learner utterances. Contrary to learner parroting

2I will use the definition of SLA provided by Ellis (1986). He defines second language acquisition as a “subconscous or conscious process by which a language other than the mother tongue is learnt in a natural or tutored setting” and it includes the acquisition of grammar, lexis, phonology and pragmatic knowledge.
linguistic behavior, researchers found that learners seem to identify relevant patterns from input and make generalizations that they apply to new language contexts. From the behaviorist perspective, the goal of SLA was to achieve native-like language with few or no errors. Thus, this perspective had a rather negative attitude toward the errors or interference caused by the learners’ mother tongue (Corder, 1993, 18).

The classic behaviorist definition of language transfer is that L1 knowledge will interfere with L2 acquisition where L1 and L2 are different. Conversely where L1 and L2 are similar, the learner will acquire L2 with greater ease. The interaction between language difference and similarity was held to account for language transfer, the first being negative transfer and the latter being positive transfer (Ellis, 1986, 22). In an effort to identify problem areas for learners or points of difference between the L1 and L2, research was conducted with a model of contrasting analysis hypothesis (CAH). Dulay and Burt (1973, 1974) cited in Ellis (1986) presented a serious challenge to this methodology. Put to empirical testing, the CAH approach was called into question and ultimately discredited mainly because its predictions did not bear out under empirical examination. Larson-Freeman & Long (1999, 56) suggest that some of those dismal results may have been a function of methodology, but nevertheless, they also agree that it was evident that CAH did not account for many of the errors that learners committed. They point out one major reason for CAH’s failure was that it focused exclusively on language production without considering the mental mechanisms involved in language production, such as the psycholinguistic process of second language learning.

2.1.2 Mentalist Approach

The starting point for the mental approach is in L1 acquisition. Chomsky’s critical analysis of Skinner’s work facilitated a renewed interest in the mental process of learning in language acquisition, which led to its eventual application in SLA. Key to Chomsky’s model is the notion that the ability to learn language is innate, and furthermore, that FLA is systematic (Lightbrown & Spada, 2002, 15). The important contribution of the mentalist camp is the idea that the apparatus responsible for language acquisition is a mental one, the language acquisition device (LAD), which is governed by a biological predisposition and largely independent of external influences (Cook, 1988, 56-57). External input in this model is only viewed as a trigger of language production. The basic components of the mentalist view are reflected in Ellis’ (1986) summarization of McNeill’s (1966) main points: 1) Language faculty is unique to humans. 2) Language faculty occupies a discrete aspect of total cognition, which is different from the cognition involved in problem solving. 3) The “acquisition device” is genetically endowed and is the primary determinant of L1 acquisition. 4) The acquisition device deteriorates with age. 5) Humans acquire language through a process of formulation and testing of hypotheses and it is the means by which the learner’s L1 “is related to the principles of universal grammar” (44). The mentalist approach reflects a shift from purely external explanations of SLA to a largely internal one.

It is from the mentalist camp that IL theory evolves. An important development in SLA is Corder’s work with the fifth point of the mentalist theory that relates to hypothesis testing. According the Corder, hypothesis testing explains how the L2 learner traverses the IL continuum in a manner very similar to the FLA continuum (Cook, 1998). For Corder, a mentalist view of SLA does not preclude or take a negative stance toward learner errors, but rather relies on them as a source that informs a better understanding of the strategies that learner’s employ when learning L2, especially when they lack adequate L2 knowledge. Errors, in Corder’s assessment, are an indication of the learner’s mental mechanism at work in constructing grammar.

3B. F. Skinner’s (1957) book Verbal Behavior provides one of the better discussions on behaviorist theory.
2.1.3 Interactionist Approach

An alternative approach to SLA is to view it within a theoretical model where IL is seen as a process through which the learner uses internal mental mechanisms to formulate strategies for learning L2 by making use of external input. This approach makes different assumptions about learner language and consequently yields different outcomes. Ellis (1997, 44) writes, “The interactionist theories of L2 acquisition acknowledge the importance of both input and internal language processing.” Input in the interactionist model takes the form of “ungrammatical” and/or “grammatical" foreign talk, which is the language used by interlocutors when addressing L2 learners. Ungrammatical input is characterized by stereotypical use of learner language and is usually socially marked. It can be perceived as disrespectful to the learner. It may be characterized by omission of certain grammatical features such as copula, be, and modal verbs, and speaking only in the present tense. On the other hand, grammatical foreign talk can be characterized as simplified talk and is typically more commonly used by interlocutors. It is characterized by the presence of various forms of variation in interlocutor speech such as: a slower rate, simplified grammar, regular grammar and elaborated use such as avoidance of contractions. The interaction takes place as the L2 learner and his/her interlocutor negotiate meaning through discourse. Along the continuum of the SLA discussion, motivation among other factors would be used in the interactionist approach to elucidate the process of SLA. MacIntyre, Dörnyei, Clément, and Noels (1998) discuss motivation and various other factors such as cognition (i.e., language aptitude), contextual factors (classroom/naturalistic), intergroup relations (majority/minority situations) and social group in their comprehensive model of SLA. Due to the limited scope of this work, these factors are only mentioned to highlight the breadth of the interactionist approach to SLA. Suffice it to say that this approach to SLA is rather complex. A more detailed discussion of this branch of SLA will be presented in the discussion of motivation.

2.2 Motivation

Among the many variables that account for differential success in SLA, one that has been subject to significant investigation is motivation. Gardner (1982) states that “motivation itself is seen to be a complex of three aspects: effort (Motivational Intensity), desire, and affect (Attitudes toward Learning [the target language])” (144). Dörnyei expounds on Gardner’s definition of the term prefacing it with a caveat about the controversial nature of defining the term. According to Dörnyei (2001), motivation as it relates to SLA deals with the “direction and magnitude of human behavior” and it subsumes three main components: choosing to learn a particular language, persistence in learning that language, and the effort an individual expends to learn the language (8). In practical terms, this definition of motivation can be understood in the following way: Motivation accounts for why a learner decides to learn a particular language, how long the learner is willing to continue pursuit of that task, and how hard he or she will pursue it.

Gardner’s and Lambert’s investigation of motivation has enjoyed much acceptance and elaboration (Crookes & Schmidt, 1991; Larsen-Freeman & Long, 1999). In their critical analyses of Gardner’s and Lambert’s (1959) motivation study, Crookes & Schmidt (1991) identify the two types of motivational orientation: integrative and instrumental (471). Motivation in this model is primarily concerned with the learner’s motivational orientation toward the goal of learning L2 (471). The person who has an integrative orientation has a greater interest in interacting with the TL group and to greater or lesser extent is willing to take on some “behavioral patterns” of that community (Gardner, 1982, 144). In contrast, the person who has an instrumental orientation desires to learn L2 for utilitarian purposes such as getting a job, career advancement or passing an exam.

Larsen-Freeman and Long (1999), in their discussion of Gardner’s and Lambert’s
integrative and instrumental orientations, point out that a person who is instrumentally motivated can demonstrate the same level of motivation as the person who has integrative motivation, but that integrative motivation accounts for persistence in learning L2 and ultimately achievement of L2 proficiency (173). Gardner (1982) later takes the approach that attitude is one of many factors that account for SLA success. More specifically, he suggests that “attitudinal/motivational variables facilitate or influence” SLA but do not determine it (137). A summary of Gardner’s social-educational model is as follows: 1) Cultural beliefs determine attitudes toward SLA. 2) The learner’s attitude toward the learning situation and integrative orientation affects motivation for learning L2. 3) Language aptitude affects SLA, but works independently of motivation. 4) The language context affects SLA achievement (144). Despite some of the challenges to the social-educational model, it remains the current model in motivational research.

More recent approaches such as MacIntyre et al. (1998) draw on research from Gardner’s work to articulate a more comprehensive model for SLA. Their heuristic model of variables that influence willingness to communicate (WTC) has two broad categories, “situational influences” and “enduring influences” (546). The latter includes the “affective-cognitive context” subcategory, which draws on Gardner’s social-educational model, particularly as it relates to “integrativeness” or additive bilingualism and “fear of assimilation” or subtractive bilingualism. Dörnyei’s (2001) more recent discussion of motivation also draws heavily on Gardner’s work, clearly endorsing it as the preferred model for discussing motivation in SLA.

3. Methodology

The data for the current study was collected from nine Spanish-speaking learners of English. Seven of the subjects are college students. The task entailed answering a 13-question survey to gauge their motivational orientation as well as a written response to a three-part essay question about their experience with learning English as a second language (see appendix). Their responses to the essay question provided the writing samples used in this investigation.

The two complementary perspectives of language transfer and motivation constitute the framework of this study which has two objectives. First, it examines the potential influence of the phenomenon of negative transfer in writing samples of the nine Spanish-speaking learners of English along two dimensions: syntax and lexicon. The writings of these learners are analyzed to identify and classify learners’ errors that could possibly be attributed to negative transfer. Secondly, it explores the learners’ self-reflection paying particular attention to motivational orientation in their experiences with learning English as a second language. The approach is empirical in that it is based on analysis of language features in actual texts, but it combines both quantitative and qualitative techniques: quantitative in so far as the frequencies of certain linguistic errors are counted and compared across the written samples and qualitative in that detailed analyses are used to interpret the distributional patterns in functional terms.

Footnotes:

4MacIntyre et al. (1998) define enduring influences as being “stable, long-term properties of the environment or person that would apply to almost any situation.” Situational influences are seen as more temporary and context dependent. (546).

5The extent to which learning L2 is viewed as valuable and beneficial to the learner is considered additive bilingualism. If L2 is perceived as threatening to the learner’s ethnic identity, learning L2 becomes subtractive bilingualism. This notion is present in majority/minority linguistic situations.
4. Results

4.1 Language transfer

Analyzing the corpus of written responses reveals a wide range of errors, but not all of them can be attributed to language transfer from Spanish. Error analysis of the corpus reveals that about 70 percent of the errors are typical of the interlanguage of beginner and intermediate second language learners regardless of their first language background. In fact, some of these non-transfer errors can also be frequently found in the language of native, English-speaking beginner writers. Only approximately 30 percent of the writing errors in the collected learner corpus can be ascribed to the potential cognitive influence of Spanish L1. Figure 1 illustrates this pattern.

![Figure 1](image_url)

**Figure 1.** Occurrence of types of errors in learner corpus.

Furthermore, among transfer errors, the majority are grammatical where 90 percent of transfer errors are concentrated in the area of grammar and the other 10 percent is due to lexical or word choice problems as shown in Figure 2.

![Figure 2](image_url)

**Figure 2.** Percentage of L1 to L2 transfer errors.

Some of the non-transfer errors include: spelling problems especially with omission of vowels, starting sentences with coordinating conjunctions (e.g., and, or, but), punctuation especially the use of comma and semi-colon, use of informal contractions and certain other conversational features (e.g., unspecific noun phrases such as ‘thing’ and ‘stuff’ or run-on sentences and sentence fragments). Here is an example of a spelling error: ‘I remember walking into an office inside a gigantic [sic] building that would be my school for the re-
maining spring of 1997.” Run-on sentences and sentence fragments are perhaps the most serious since they have the potential to impede comprehensibility. Here is an example of a run-on sentence: “I felt very happy for myself and my family because learning the English language was a big step for us it was the only way we can succeed in the country [sic].”

The findings, however, confirm the assertion of Ellis (1986) that language transfer is useful as one of the important factors in the cognitive process responsible for SLA (48). Prominent among negative language transfer errors are the use of the verb phrase (e.g. infinitive markers, tense, and aspect), word choice, misuse of conditionals, prepositions, relative pronouns, and finally omission of the subject pronouns. Almost all of these types of errors score high on the scale of error gravity because of their potential to confuse the reader or render the meaning ambiguous.

Here are some examples of transfer error: “Another thing that helped me to become more familiar with talking English [was] listen the radio and watch television in English [sic].” “On the other hand [it] was not helpful in speaking because most of the students were Hispanic people [sic].” “Another fact that discourage me a lot was having problems to asked for my food, got directions to go to a place, bought movie tickets be seen others [sic].”

There are some transfer errors that seem to be more common in the corpus. Among them is the likely occurrence of the word “talking” where a native speaker is more likely to use “speaking.” This error can be attributed to transfer from L1 to L2 where there are two different lexical choices in L2 (The Spanish word, hablar, has two English equivalents, to talk and to speak). Another example of common transfer error is the omission of a subject pronoun due to the fact that the subject pronoun in Spanish is frequently implied and not explicitly mentioned (Dozier & Iguina, 2003, 61). In Spanish, reference to the subject is included in the verb ending, and the context provides sufficient clarification so that there is usually no need for a subject pronoun.

Some SLA researchers reject the conception of language transfer as a process, and instead view it in terms of psychologist Levine’s (1975) “hypothesis theory,” which he formulated to explain adult concept learning. Schacter (1993), for instance, suggests that language transfer should be viewed as a constraint on the learner’s hypotheses formulating and testing mechanism which draws on prior domain knowledge from L1. The notion of domains within a learner’s linguistic “universe involves the idea that hypotheses will fall into natural groupings, that is, that groups of hypotheses will share certain characteristics, which in Hypothesis theory are called domains” (37). The argument is that the learner draws on prior L1 knowledge about various domains within his L1 linguistic universe and applies this to the current L2 problem. Transfer in this model, then, is not viewed as a discrete process, but rather as the set of constraints that prior L1 knowledge places on the domains from which a learner may choose hypotheses about the new TL task at hand (38-39).

The following example and explanation illustrates in some detail the application of this model to actual occurrences of negative language transfer: “He made sure someone explained to me that since I could not do what everyone else would work on during class that I brought a book with me everyday [sic].”

In this awkward sentence, the writer is using the conditional following Spanish grammar rules for the simple conditional. In Spanish, the simple conditional tense is used in several scenarios. One of its uses is to express a “future-in-the-past” in an indirect statement. In indirect statements, the simple conditional refers to an action that “takes place in the past after another action in the past” (Spinelli, 2003, 100). In this particular example, “He made sure someone explained to me that since I could not do what everyone else would work on during class that I brought a book with me everyday.” The first indication of the conditional is with the use of the conditional word “could,” which is podria in Spanish, followed by the compound conditional statement “would work,” which follows the English conception of the conditional. The conditional becomes evident, when time in the past is taken into considera-
tion. That is to say, the writer is making an indirect statement about what his instructor said in the past regarding the future act of daily classroom activity. The conditional in English is a compound statement; in Spanish, the conditional is a simple tense.

<table>
<thead>
<tr>
<th>English Conditional</th>
<th>Spanish Conditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would speak</td>
<td>Hablaría</td>
</tr>
<tr>
<td>I would cook</td>
<td>Cocinaría</td>
</tr>
<tr>
<td>I would live</td>
<td>Viviría</td>
</tr>
</tbody>
</table>

In other words, and in keeping with Schacter’s previously mentioned domains, the writer makes use of the conditional domain in his native language which happens to exist in English. One possible reason for this awkward construction where the writer uses “would work on” in lieu of “would do” may be that the writer has not fully mastered the conditional in English or use of the auxiliary verb to do. Still, this sentence demonstrates that the writer understands the concept of the conditional based on his L1 knowledge of the conditional, but is unclear about how to apply it in English. Use of the word “brought” in the final dependent clause instead of continuing with use of the conditional brings this to light. A rephrasing of the sentence might be “He made sure someone explained to me that since I could not do what everyone else [would do] during class that I [should bring] a book with me everyday.”

Finally, it should also be noted that the younger the age of the subjects when they arrived in the U.S. and the longer their length of residence (LOR), the fewer transfer errors they make in their writing. Analysis of results indicates that the fewest transfer errors are found in the writing samples of those learners that arrived in the U.S. before puberty. In other words, the findings suggest that as far as the L2 acquisition aspect is concerned, the age of arrival might be more important than the number of years of English study in the native country (see appendix).

![Figure 3. Percentage of language transfer errors based on age of arrival.](image)

4.2 Motivational orientation

In thinking about motivational orientation, one must take into consideration Gardner’s assertion that motivation is among several factors that influence SLA. It is by no means the determinant. Although Gardner’s (1982) social-educational model suggests that an overall integrative “attitudinal orientation” is superior to an instrumental one, he does concede that the more important question in the motivation debate should be which orientation “is more related to the individual’s level of motivation because it will be the orientation that will relate more consistently with the individual’s success” in learning L2 (144).

The subjects in this study chose from nine items composed of integrative and instrumental sources of motivation. They were then asked to rank order the items according to which were the most important. For the purpose of this discussion, the focus will be on the
The top two types of items that were selected. The primary ranking of motivational orientation for 67 percent of the subjects reflects integrativeness while 33 percent was instrumental (Figure 4). Secondary motivational orientation ranking reflects the opposite: 33 percent chose integrative items while 67 percent chose instrumental items (Figure 5).

**Figure 4. Primary motivational orientation.**

**Figure 5. Secondary motivational orientation.**

In other words, 67 percent of the respondents chose integrative items as the primary motivating reason for learning English, and 67 percent of the respondents chose instrumental items as their secondary motivation for learning English. The respondents seemingly conflicting answers to the question about what motivates them to learn English reflects the dichotomy in which learners often find themselves when learning a new language in a majority/minority context. Taken in isolation, the top two items are not telling until we consider the responses on the survey which deal with whether the subject plans to live in the United States temporarily or permanently (Figure 6). Sixty-seven percent plan to live in the United States permanently, 23 percent temporarily, and 10 percent were unsure about future residence. This answer solidifies the fact that the majority of the subjects desire to adopt behavioral patterns of the larger ethnonlinguistic society (integrative orientation), which is reflected in the top answer of motivation for learning English as being “To improve my social life in the USA” (see appendix). The secondary answer reflects an overall understanding of the
need for English proficiency not only for the social aspects, which are by and large the most important to this group, but also for utilitarian purposes such as education and employment which ultimately will allow them to more easily integrate into the larger society.

Figure 6. Future residential plans in the U.S.

The nature of this survey is such that no scientific correlation can be made between motivational orientation and language transfer. Still, taken together as part of a social approach for studying motivation, there is evidence to suggest that social distance or lack of integrative desires can account for learners who fail to become proficient in L2, largely due in part to perceived social or psychological distance between themselves and the TL community among other ethonlinguistic vitality considerations (Dörnyei, 2001, 69-72). Lack of proficiency would be in part measured by using some of the methods applied in studying language transfer. Giles & Byrne (1982) talk about the ideal conditions under which minority group members are most likely to acquire native-like proficiency in the dominant group’s language: the first of which is weak “in group identification” or L1 is not important for membership in the minority ethnic group; the second is that the individual does not suffer from an ethnic identity ‘inferiority complex’; third, low group vitality; fourth, flexible in-group boundaries; and finally, the group members have strong ties to other social categories such as professional, political, or religious ones that can make up for diminishing ethnic ties (72). Dörnyei cites other researchers (Johnson et al., 1983) who disagree with these assertions on the grounds that the model does not take into consideration “the interplay of the complex and often contradictory identity perceptions across a range of category memberships.” In other words, Giles & Byrne (1982) focus too much on the social group and not enough on the individuals. Among the respondents at higher levels of proficiency, self-reflection shows that the subjects desire to integrate with the larger society by learning L2 and maintaining L1 for social group as well as individual reasons. The following are examples of statements of some subjects’ attitudes toward the importance of L1 and L2. These subjects had a mean length of residence (LOR) of 14 to 17 years.

Subject A: “I think that learning English is as important as sustaining my Spanish.”

Subject H: “I also think English is important because I hope that knowing English and Spanish will help me get a better, higher paying job.”

Subject H: “Even though I prefer Spanish for personal use because I think it’s more expressive, English works as a common way to communicate with others even if they also speak other languages.”

Subject G: “I want to impart my experience to my children one day and tell them how being bilingual is truly a blessing.”
5. Limitations and suggestions for future research

Even though the corpus of the study is deemed adequate for the objectives of this research, it is somewhat limited in size especially for investigation of lexical usage. The current corpus of learner English could be further expanded by including a wider range of texts from Spanish-speaking learners at different levels of English proficiency. The scope of the language transfer study could be expanded to go beyond the sentence level to focus on language transfer on the discourse level in learner’s writing. Additionally, a more scientific measure of motivation could be employed. There are several methods for measuring motivation such as the Gardner et al. (1978) Attitude/Motivation Test Battery that would be instrumental in providing a more accurate measure of motivation.

6. Pedagogical implications

The findings of this study bring to light a need for greater collaboration between practical application, namely the classroom objectives, and the theoretical. Crookes and Schmidt (1988) point out this disconnect, noting that the “teacher-validated” definition of motivation is very often different from that of second language investigators (480). MacIntyre et al. (1988) frame motivation within a model where the pedagogical objective is to produce students with higher levels of WTC (willingness to communicate) in L2. Their definition of communications includes all communicative behavior in L2 which ranges from speaking in class, watching television in L2, to using L2 on the job. With such shifts in pedagogical objectives comes the difficult task of identifying and applying those determinants that would encourage such behavior in SL learners. Within their multi-layered model for WTC, McIntyre et al. (1988) identify two broad categories of “enduring influences” and “situational influences” that determine WTC (545). Some examples of enduring influences are learner personality type or intergroup dynamics. Situational influences include desire to speak with a specific person, or topic knowledge. Although situational influences are transient and context dependent, they seem to play a greater role than enduring influences. As termed by MacIntyre et al. (1988), “motivational propensities” fall under enduring influences which listed fourth in order of importance within the framework of their heuristic model (547). Here the model also draws on Gardner’s and Lambert’s work with motivation (1988). What is revealed is that while motivation is important, it can be augmented or diminished by more immediate concerns that the learner may have, such as self confidence issues (i.e., lack of knowledge about the topic), or the need to communicate with a particular person (i.e., a love interest or potential employer). These more immediate factors may prove more powerful in motivating a speaker with limited proficiency.

From an instructional standpoint, language transfer research can be particularly useful for educators when teaching English as second language to Spanish speakers. The preceding discussion of possible areas in which language transfer is most likely to occur is not exhaustive; however, it does present some areas that are immediate and noticeable in the English-Spanish interlanguage of Spanish speakers. Familiarity with some of these common problems with language transfer can be useful to the educator in promoting a more constructive approach to teaching English to nonnative speakers regardless of their language background.
References


Coping, Social Support and Health among African American Familial Alzheimer’s Caregivers

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School of Nursing

Abstract

Stress endured by family caregivers of Alzheimer’s patients is directly related to serious health impairment over time. Culturally, African-American caregivers report significantly worse physical health than white caregivers, implying an ethnic difference in caregiving (as cited in Dilworth-Anderson, Goodwin, & Williams, 2004). Coping and social support are known to be mediators of stress directly related to health. This study explores the following topics pertaining to African-American familial Alzheimer’s caregivers: 1) coping methods used by African-American caregivers, 2) the relationship between coping methods used and caregiver assessment of health, 3) whether different coping strategies are used by caregivers enrolled in support groups relative to those who are not, and 4) whether caregivers enrolled in support groups assess their health differently than caregivers who are not. Twenty-three African-American familial Alzheimer’s caregivers are surveyed using a 107-item questionnaire. The John Henryism Scale for Active Coping (JHAC12) (James, 1996) and the Ways of Coping (Revised) scale (Folkman & Lazarus, 1985) assess coping strategies and five single items measure religious coping. Eight items measure social support and four items measure caregiver health. Positive reappraisal, religious coping, and active coping (indicative of John Henryism) are prominent among the sample. Active coping is associated with a higher evaluation of health and reflects a gender effect between John Henryism and health. Escape-avoidance coping was related to higher stress. No significant differences are found in coping methods or health assessments of those who attend support groups and those that do not. Existing formal programs should be revised to become culturally inclusive and aware of coping strategies which may decrease stress and improve caregivers’ health evaluations.

Background/Underlying Concepts

Alzheimer’s disease in the increasingly geriatric population of the U.S. is becoming common, leaving more Americans with the responsibility of caring for a family member. According to a 2004 report by the Alzheimer’s Association and the National Alliance for Caregiving, there are approximately 44.4 million unpaid American informal caregivers in the United States. Moreover, of the 976 informal caregivers who participated in the survey, 227 were Alzheimer’s caregivers, of which 87 percent cared for relatives.

Caring for an Alzheimer’s patient is a full-time job and has been known to produce stress among caregivers. Compared with general caregiving, caring for an Alzheimer’s patient requires more hours per week and poses “extreme challenges” (Schulz, O’Brien, Bookwala, & Fleissner, 1995). Familial caregivers risk employment complications, strain, mental and physical health problems, reduced leisure time, and conflicts with other family members (Ory, Hoffman, Yee, Tennstedt, & Schulz, 1999). Furthermore, caregiving experiences and outcomes have been found to vary across racial and ethnic groups (Dilworth-Anderson, Williams, & Gibson, 2002). Such experiences characteristic of ethnic caregivers are important
in understanding the caregiver contextually in order to provide more effective services.

A study by Steritt and Pokorny (1998) shows that caring for a relative with Alzheimer’s disease is not only a traditional family value among African-Americans, but an act of love. Haley et al. (1996) find that African-American caregivers tend to report less depression than white caregivers and overall have greater self-efficiency in managing caregiving problems. A 1992 study by Lawton, Rajagopal, Brody, and Kleban demonstrates that African-American caregivers, as opposed to white caregivers, more strongly identify with traditional values that encourage providing care to older dependent family members. African-Americans are more culturally attuned to caregiving because of the rich ancestry stemming from pre-slavery civilizations in Africa. Elders held highly esteemed and respected positions in the family, and modern customs among African-American families reflect this tradition in the United States. The belief that elders are the closest to their ancestors strengthens this respect (Watson, 1984). The tight-knit family structure inherent in the African-American culture is an important component in the perpetuation of cultural values and beliefs through many generations (Dilworth-Anderson, et al., 2005). Several studies including McAdoo (1993) and Dillaway and Broman (2001) show African-American families to be perceived as more egalitarian and flexible in family roles than white families, implying that African-Americans have been socialized to provide care (as cited in Dilworth-Anderson et al., 2005). Dilworth-Anderson, Goodwin, and Williams (2004) report that a stronger cultural justification for caregiving in African-Americans predict poorer evaluations of health. Despite its negative effect on health over time, stress experienced by African-American caregivers can be mediated by certain psychosocial factors such as availability and usage of formal support networks, the familial relationship to the patient, coping strategy, and the length of time providing care for a patient.

Theoretical Framework

Pearlin’s (1990) study presents a conceptual model of Alzheimer’s caregivers’ stress (Figure 1). Stress as a process includes certain domains in the following order: background and context of stress, primary stressors, secondary role strains, secondary intrapsychic strains, and outcomes. Coping and social support are the two principal mediators of stress.

![Figure 1. Conceptual model of Alzheimer’s caregivers’ stress (Pearlin et al., 1990).](image)
These mediators can affect the domains at any level and have the potential for affecting the outcome as well as any succeeding level of stress after the mediator is applied. The present study is based on this model in that coping and social support are tested as mediators for stress among African-American familial Alzheimer’s caregivers.

Research Questions

Although numerous studies have focused on stress and coping strategies of Alzheimer’s caregivers as a whole population, this study contributes information specifically related to the cultural implications of caregiving stress as it is linked to health among African-American Alzheimer’s caregivers.

The following research questions are explored in this study: 1) What coping methods are used by African-American caregivers? 2) Is there a relationship between coping methods used and caregiver assessment of health? 3) Do caregivers who participate in formal support services use different coping strategies than caregivers who do not participate in formal support services? 4) Do caregivers who participate in formal support services assess their health differently than caregivers who do not participate in formal support services?

My hypotheses are: 1) There is a prevalence of active coping, associated with high John Henryism, among most African-American caregivers; 2) Physically and psychologically healthy coping methods correlate positively with caregiver assessment of health; 3) Positive, healthy coping strategies exist among caregivers participating in or who have participated in formal support services; 4) Positive health assessments are asserted by caregivers who have participated in formal support services.

Definitions of terms that will be frequently referred to in this study are as follows. An informal family caregiver is defined in this study as an unpaid family member who provides primary care to another member in need, either full- or part-time. Informal support is defined as help received from a family member, friend, neighbor, co-worker, church member, or other not affiliated with a program or service, whereas a formal caregiver is a volunteer or paid care provider associated with a service. Formal support may be paid or unpaid help received from a program or service such as advice, respite, counseling, physical chores, or emotional support. Cultural justification for caregiving may be any similar values or beliefs pertaining to providing care for a family member that is shared among any particular culture. Stress is defined as mental burden that may be expressed physiologically as well as emotionally, and may interfere with daily living activities. Active coping is defined as a method of coping with high stress involving increased physical efforts in carrying out a job, and is appraised by a low score on the John Henryism scale for active coping. John Henryism is described as persistent, high-effort coping with difficult and recurring social and economic stressors and has been linked to hypertension in African-Americans (Adams, 2003).

This study aims to assist in developing new support programs or revising existing programs to become more culturally inclusive of African-American caregivers’ needs. In addition, educating caregivers on how to utilize more effective coping strategies may decrease stress and possibly improve caregivers’ evaluation of their own health. A healthier caregiver will be able to provide the most efficient and unrestricted care for their loved ones.

Literature Review

Informal family caregivers are still the largest source of long-term care services in the United States (Family Caregiver Alliance [FCA], 2005). By the year 2040, 7 million to 12 million patients with dementia will be cared for primarily by spouses or adult children and almost half will require complete custodial care before death, sometimes for years (Office of Technology Assessment [OTA], 1990). The family is a pivotal force in a caregiver’s support network. Stronger filial obligation beliefs and more informal support usage were found
among ethnic minority caregivers compared to whites (Pinquart & Sørensen, 2005). However, one conflicting study by Fox, Hinton, and Levkoff (1999) points to a report of the National Survey of Black Americans, showing family networks among African-Americans are not as extensive as once thought (Greene, Jackson, & Neighbors, 1994). In the study by Fox et al. (1999), which interviews 10 African American dementia caregivers, many caregivers speak of how unsupportive their extended family is and that it even adds to their daily burden at times.

In several studies, the African-American caregiver is portrayed as one who perceives fewer burdens (Hinrichsen & Ramírez, 1992; Lawton et al., 1992; Mui, 1992) and suffers less depression than the white caregiver (Connell & Gibson, 1997; Haley et al., 1995; Lawton et al., 1992). As pointed out in Fox et al. (1999), the 1992 Advisory Panel on Alzheimer’s disease stated that lesser caregiver burden may “explain” African-American elders’ delayed presentation to health and social service institutions. Overall, formal support services have been found to significantly improve caregiver depression, anxiety, and anger (FCA, 2005). The most beneficial services work with both the caregiver and recipient, accentuate behavioral skills training, and are both multi-component and tailored to caregiver’s specific needs. However, many caregivers are unaware of formal support services. According to a study conducted by the Alzheimer’s Association and National Alliance for Caregiving in 2004, 75 percent of caregivers have unmet needs; only 9 percent use respite services, and only 11 percent participate in support groups (FCA, 2005). After interviewing dementia caregivers on formal services, Fox et al. (1999) find that many African-American caregivers want to use the services, but experience difficulty in doing so because of rude and demeaning welfare workers or long, drawn out application processes.

Fox et al. (1999) report that participants, although having trouble initiating formal services, have no trouble making use of such services once obtained. Home health aides, visiting nurses, and homemakers eventually become important parts of their lives.

Dal Santo, Scharlach, and Fox (2004) show that African-Americans are more likely to use respite help than other ethnicities. However, both Haley (1996) and Pinquart and Sörensen (2005) find no difference in formal support usage between African-Americans and whites.

A caregiver stress model by Pearlin, Mullan, Semple, and Skaff (1990) illustrates coping as one of two principal mediators of stress. The John Henryism Hypothesis is an active coping mechanism known to result in hypertension and poor health. One study by Dressler, Bindon, and Neggers (1998) assesses the relationship between blood pressure and John Henryism in a Southern African-American community. A significant gender effect apparently exists: a positive correlation between John Henryism and blood pressure in men, and a negative correlation between John Henryism and blood pressure in women. The JHAC12 has not been used in the context of caregiving stress in any previous study. Testing the mechanism on African-American familial caregivers serves to identify potential relationships between caregivers’ health and active coping employed to deal with caregiver stress. Studies measuring coping among white and African-American dementia caregivers find that positive reappraisal, or seeking positive aspects of the caregiving experience, is more commonly reported by African-American caregivers than by white caregivers (Knight & McCallum, 1998; Knight et al., 2000; Pinquart & Sörensen, 2005). Similarly, Picot, Debanne, Namazi, and Wykle (1997) present evidence that African-Americans perceive more rewards from caregiving than do whites. However, Fox et al. (1999) report conflicting findings such that some caregivers interviewed do not share in the “caregiving ideology” so prominently discussed in the literature. Two participants out of 10 were vocal about not feeling fulfilled and self-satisfied by their caregiving duties.

The importance of the church for African-American elders and caretakers in coping with illnesses is frequently noted in the social gerontology literature (Fox et al., 1999). The greater religiosity of African-Americans (compared with whites) is a core feature of prevail-
ing representations of the African-American caregiver experience. Religious coping by caregivers may be expressed in the form of increased church attendance or participation in church activities, increased prayer life or private devotional acts, and/or an increase in the importance of faith in the lives of caregivers (as motivation or strength). In a study by van Olphen et al. (2003), focused on African-American women residing in Detroit, the authors compare church members to non-church members on such variables as physical and mental health as well as social support. Findings reveal that those who frequently attend church are more likely to receive social support from church members. Frequency of church attendance is also associated with fewer depressive symptoms and better general health. Those who pray more often report fewer depressive symptoms and better mental health. Additionally, those relying on faith as a source of strength are less likely to report asthma and arthritis.

Fox et al. (1999), however, arrive at a contrary conclusion from their interviews with African-American caregivers on religious coping and support from church members. When people are asked about how they cope with illness and with the burdens of caregiving, they never spontaneously mention faith in God or church support. When interviewers ask specifically about the importance of church support, the majority of responses indicate that caregivers do not perceive the church to be an important source of support to them in their caregiving role.

Two caregivers in the study did emphasize the importance of spirituality and religion to them. In one interview, a wife who cared for her husband with Alzheimer’s said that she relied on God and prayer in difficult times of care. She prayed that her husband would “get his mind back.” For her, prayer was an important source of inner strength: “There’s a freedom in telling the Lord. Something’s uplifted off of you.” This couple rarely participated in religious services. However, deacons from her church visited on occasion. The caregiver wife explains that the deacons, unfortunately, were not around when she “needed them most.” She couldn’t afford to bury her husband when he died. Ultimately, the church where the husband was once an altarboy (not the church of the visiting deacons) paid for the funeral (515).

African-American familial caregivers of Alzheimer patients report having poor health more often than most other ethnicities, suggesting a cultural difference in caregiving (Smedley, Stith, & Nelson, 2003). Beliefs and values shared among African-Americans about caregiving may be a source of stress leading to poor health within this population of caregivers. Dilworth-Anderson et al. (2004) show a correlation between cultural justification in providing care and health over time. Both caregivers with very strong or very weak cultural justification for caregiving are least likely to report a positive self-evaluation of psychosocial health. Alzheimer’s disease is a devastating illness and family caregivers as well as patients should be treated. Caregivers may need emotional support, counseling, and educational programs about Alzheimer’s disease. Social support has been proven to be beneficial to the caregiver’s well-being (FCA, 2005). This is especially important because caregiving has both an emotional and a physical impact on the caregiver.

**Methodology**

A combination correlational, quasi-experimental design is employed for this project. Variables are analyzed using descriptive statistics and data are presented in the form of tables and graphs. Twenty-three participants (15 female, 7 male, and one missing a response) in the study range from 38 to 76 years old with the average age being 53. The majority of respondents report having a high school diploma. Most caregivers are offspring of the Alzheimer’s patient and provide most of the patient’s care. The length of time that this sample of caregivers had been attending to the patient ranged from four months to 20 years with the average being four years. The majority of caregivers were employed and admitted to earning an annual household income of $25,000-$49,999.
Participants were selected from St. Claire Center Adult Day Program in Murfreesboro, TN; Knowles Home Adult Day Program in Nashville; and Alzheimer’s support groups in Murfreesboro and Nashville, using purposive non-probability sampling and the snowball sampling technique. Two participants were from Silver Spring, MD.

Participants eligible for inclusion met the following criteria: 1) African-American informal caregiver, 2) presently caring for or have previously cared for a family member with Alzheimer’s disease, 3) at least 18 years of age, 4) able to verbally communicate, 5) able to read and write in English, and 6) prior to completing the survey, signing the consent form.

Announcements about the research study were passed out in nursing homes, Rivergate Mall in Goodlettsville, TN, and posted online at www.nashville.backpages.com. Nursing home social workers and support group leaders also assisted the researcher to identify potential eligible participants. African-American caregivers interested in participating in the study contacted the researcher by phone and then determined their eligibility. After eligibility was confirmed, appointments were scheduled with participants and surveys were administered in the caregiver’s home.

Participants were asked to sign a consent form prior to filling out a 107-item questionnaire assessing demographics, coping, social support, stress, and health. The items for this questionnaire are further delineated under the section entitled Instrumentation. After completing the survey, all participants were compensated in the form of a gift card.

Dependent variable – self evaluation of physical health

Four single items were used to measure caregiver health. Response formatting included yes or no, Likert scale, and a list of responses that the participant could add to. The items did not specify physical or mental health, but inclined more toward physical health with one item asking participants to rate their own health. The overall health score was achieved by using item 18 which asked the participant to rate their overall health. The response format was on a Likert scale from one (poor) to four (excellent). The response that the participant provided was used to measure the caregiver’s overall health.

Independent variables – coping method, social support, and stress

The Ways of Coping (Revised) scale (Folkman & Lazarus, 1985) assesses the coping strategies used among African-American caregivers. The scale is composed of a range of thoughts and actions that people use to deal with the internal or external demands of specific stressful encounters. Participants were asked to think about a specific stressful caregiving situation they have experienced and answer the 66-item survey accordingly. The response format consists of a 4-point Likert scale ranging from 0 = does not apply and/or not used, to 3 = used a great deal. There are eight scales within this instrument indicative of each coping process. Six items on the survey code for confrontive coping (e.g., Stood my ground and fought for what I wanted), six items code for distancing (Went on as if nothing had happened), seven code for self-controlling (I tried to keep my feelings to myself), six for seeking social support (I got professional help), four for accepting responsibility (Criticized or lectured myself), eight for escape-avoidance coping (Took it out on other people), six items for problem-solving (I made a plan of action and followed it), and seven for positive reappraisal (Changed or grew as a person in a good way) (Folkman & Lazarus, 1986). The scales were scored by summing the ratings for each one. Higher scores were indicative of the coping process used by the participant.

Five single items were used to measure religious coping. Three dimensions of religiosity were explored; they are organizational (formal or public participation in activities of a local religious congregation or community), non-organizational (referring to an individual’s private devotional acts), and subjective (participants’ opinion of how effective their own
beliefs are in their life). Many of the items were derived from a 1992 study by Chatters et al. and cited in Picot et al. (1997).

The John Henryism Scale for Active Coping (JHAC12) (James, 1996) is a 12-item scale designed to measure a behavioral propensity to cope actively with difficult psychosocial environment stressors. The behavioral propensity is called John Henryism (James, 1996). The JHAC12 items refer to how the participant views himself/herself as a person living day to day in the real world. The response format consists of a 5-point Likert scale ranging from 1 = Completely true, to 5 = Completely false. Affirmative answers are suggestive of high John Henryism. The total John Henryism score was attained by summing the numerical values for all 12 items together. The maximum scale score is 60; the minimum is 12. High John Henryism is designated by low scores in the range of 12-28 and is indicative of active coping. The JHAC12 was designed to be used with non-black as well as black populations and is equally appropriate for males and females. JHAC12 items emphasize three mutually reinforcing themes: efficacious mental and physical vigor; a commitment to hard work; and, a single-minded determination to achieve one’s goals (James, 1996).

Sherman James developed the John Henryism hypothesis which states, “psychological stress resulting from persistent social and economic oppression contributes to health problems in African-Americans” (Adams, 2003). The John Henryism hypothesis was applied to familial Alzheimer’s caregivers because of the psychological stress involved in caring for a loved one with dementia which comes with the price of giving up their social life as well as taking on a financial burden. The “high-effort” coping strategy of John Henryism may be exemplified by an increased dedication to caregiving, and the resulting stress may lead to hypertension or other serious health problems.

An overall coping score was derived using both religious coping score and JHAC12 score. The JHAC12 scoring range was divided into three categories of high John Henryism (scores falling between 12 and 28), average John Henryism (29-44), and low John Henryism (45-60). Each category was placed on a six-point scale to match the religious coping Likert scale.

Social Support was measured in the instrument by eight single items; five items measured formal support and three measured informal support. Response formatting for these items included yes or no, Likert scale, open-ended response, and a list of responses to choose from including other; in such case the participant was allowed to add to the list.

An overall support score for each participant was obtained by getting an average formal support score as well as an average informal support score. The average of those two Likert scores produced the overall support score on a scale of one to five.

Stress was measured by four single items. Items referred to emotional stress, physical strain, financial hardship, and psychological stress. Participants were asked to rate their level of stress on a Likert scale. The overall stress score was obtained by averaging the four scores which assessed stress. This average produced the participant’s overall stress score on a scale of one to five (one being least stressed and five being extremely stressed).

Results

Table 1 depicts the summary of demographic characteristics of the participants in the study. Twenty-three participants (15 female, 7 male, and one missing a response) contributed surveys to the study. Participants’ ages ranged from 38 to 76 years old with the average age being 53 (SD=9.45). The same number of respondents reported that the highest level of schooling completed was a high school diploma as did those who completed some college (26.1%). Most caregivers (56.5%) reported being the offspring of the Alzheimer’s patient and providing most of the patient’s care. The length of time that this sample of caregivers had been attending to the patient ranged from four months to 20 years with the average be-
Table 1.
**Demographic Characteristics of African American Familial Alzheimer’s Caregivers (N=23)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Frequency</th>
<th>SD</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>52.95</td>
<td>9.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td></td>
<td>68.2</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>7</td>
<td></td>
<td>31.8</td>
<td></td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School Diploma</td>
<td>6</td>
<td></td>
<td>26.1</td>
<td></td>
</tr>
<tr>
<td>Technical School</td>
<td>1</td>
<td></td>
<td>4.3</td>
<td></td>
</tr>
<tr>
<td>Vocational Trade School</td>
<td>2</td>
<td></td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td>Some College</td>
<td>6</td>
<td></td>
<td>26.1</td>
<td></td>
</tr>
<tr>
<td>Associates Degree</td>
<td>2</td>
<td></td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td>Bachelors Degree</td>
<td>4</td>
<td></td>
<td>17.4</td>
<td></td>
</tr>
<tr>
<td>Graduate Degree</td>
<td>2</td>
<td></td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td><strong>Relationship to Patient</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daughter or Son</td>
<td>13</td>
<td></td>
<td>56.5</td>
<td></td>
</tr>
<tr>
<td>Other (Son-in-Law)</td>
<td>4</td>
<td></td>
<td>17.4</td>
<td></td>
</tr>
<tr>
<td>Grandchild</td>
<td>3</td>
<td></td>
<td>13.0</td>
<td></td>
</tr>
<tr>
<td>Sibling</td>
<td>3</td>
<td></td>
<td>13.0</td>
<td></td>
</tr>
<tr>
<td><strong>Level of Care Provided</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most of Care</td>
<td>9</td>
<td></td>
<td>39.1</td>
<td></td>
</tr>
<tr>
<td>Up to Half of Care</td>
<td>8</td>
<td></td>
<td>34.8</td>
<td></td>
</tr>
<tr>
<td>All of Care</td>
<td>6</td>
<td></td>
<td>26.1</td>
<td></td>
</tr>
<tr>
<td><strong>Length of Time Attending to Patient (months)</strong></td>
<td>50.1</td>
<td>50.1</td>
<td></td>
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<tr>
<td><strong>Additional Employment</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>15</td>
<td></td>
<td>65.2</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td></td>
<td>34.8</td>
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</tr>
<tr>
<td><strong>Household Annual Income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$10,000-$24,999</td>
<td>5</td>
<td></td>
<td>21.7</td>
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<td>$25,000-$49,999</td>
<td>8</td>
<td></td>
<td>34.8</td>
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</tr>
<tr>
<td>$50,000-$74,999</td>
<td>5</td>
<td></td>
<td>21.7</td>
<td></td>
</tr>
<tr>
<td>More than $75,000</td>
<td>5</td>
<td></td>
<td>21.7</td>
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</tr>
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</table>
ing four years (SD=50.1). Many caregivers were employed (65.2%) and admitted to earning an annual household income of $25,000-$49,999 (34.8%).

Based on previous studies employing the Ways of Coping Questionnaire, Positive Reappraisal (seeking positive aspects of the caregiving experience) was more commonly reported by African-American caregivers than by white caregivers. The results of the present study were similar. Employing the revised Ways of Coping Questionnaire, 39.1 percent of participants scored the highest on the Positive Reappraisal subscale. As shown in Table 2, after Positive Reappraisal, Planful Problem Solving (21.7%) and Escape-Avoidance (17.4%) were the next frequently used. The least frequently used methods of coping were Seeking Social Support (8.7%), Self-Controlling (8.7%), and Distancing (4.3%).

<table>
<thead>
<tr>
<th>Coping Strategy</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Reappraisal</td>
<td>9</td>
<td>39.1</td>
</tr>
<tr>
<td>Planful Problem Solving</td>
<td>5</td>
<td>21.7</td>
</tr>
<tr>
<td>Escape-Avoidance</td>
<td>4</td>
<td>17.4</td>
</tr>
<tr>
<td>Seeking Social Support</td>
<td>2</td>
<td>8.7</td>
</tr>
<tr>
<td>Self-Controlling</td>
<td>2</td>
<td>8.7</td>
</tr>
<tr>
<td>Distancing</td>
<td>1</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Religious coping was prominently practiced among the present sample of African-American caregivers (shown in Table 3). The average score across the sample was 5.1 (SD=.616) on a scale ranging from 1 (low religiosity) to 6 (high religiosity). Active coping as defined by the JHAC12 was another major method used by the sample. The average score

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean Score</th>
<th>Scale</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Stress</td>
<td>3.2</td>
<td>1-5 (None-Tremendous)</td>
<td>0.5992</td>
</tr>
<tr>
<td>Overall Coping</td>
<td>3.5</td>
<td>1-6 (Low-High)</td>
<td>0.3919</td>
</tr>
<tr>
<td>Religious Coping</td>
<td>5.1</td>
<td>1-6 (Low-High)</td>
<td>0.6162</td>
</tr>
<tr>
<td>Active Coping (JHAC12)</td>
<td>22.70</td>
<td>12-60 (High-Low)</td>
<td>6.0260</td>
</tr>
<tr>
<td>Overall Support</td>
<td>2.6</td>
<td>1-5 (Low-High)</td>
<td>0.5250</td>
</tr>
<tr>
<td>Formal Support</td>
<td>2.0</td>
<td>1-5 (Low-High)</td>
<td>1.1900</td>
</tr>
<tr>
<td>Informal Support</td>
<td>3.2</td>
<td>1-5 (Low-High)</td>
<td>0.9144</td>
</tr>
<tr>
<td>Overall Health</td>
<td>2.8</td>
<td>1-4 (Poor-Excellent)</td>
<td>0.6000</td>
</tr>
</tbody>
</table>
across the sample was 22.7 (SD=6.03) on a scale ranging from 12 (high John Henryism indicative of more active coping) to 60 (low John Henryism or less active coping).

A multiple linear regression was calculated predicting caregivers’ assessment of health based on Ways of Coping, JHAC12 score, religious coping score, and overall coping score. The regression equation was not significant (F (4,18)=1.349, p=.29) with an R² of .231. Neither can ways of coping, religious coping score, nor overall coping score be used to predict caregivers’ assessment of health.

A Pearson correlation was calculated examining the relationship between caregivers’ JHAC12 score and overall stress score. A moderate positive correlation was found (r(4) = .393, p=.03), indicating a significant linear relationship between the two variables. Caregivers experiencing higher levels of stress tend to cope less actively.

An independent-samples t test comparing the mean level of emotional stress experi-

Figure 2. The relationship of JHAC12 score to caregiver health assessment.

A Pearson correlation was calculated examining the relationship between caregivers’ JHAC12 score and overall stress score. A moderate positive correlation was found (r(4) = .393, p=.03), indicating a significant linear relationship between the two variables. Caregivers experiencing higher levels of stress tend to cope less actively.
enced between those using Escape-Avoidance and those using Positive Reappraisal to cope with caregiver stress was calculated. A significant difference was found between the means of the two groups ($t(11) = -2.259, p<.05$). The mean of the Escape-Avoidance group was significantly higher ($m=4.25, sd=.957$) than the mean of the Positive Reappraisal group ($m=3.22, sd=.667$).

A Pearson correlation was calculated examining the relationship between caregivers’ JHAC12 score and caregivers’ religious coping score. A moderate negative correlation was found ($r(4) = - .350, p=.05$), indicating a significant linear relationship between the two variables. A Pearson correlation was calculated examining the relationship between caregivers’ attendance at religious services and caregivers’ assessment of health. A moderate positive correlation was found ($r(4) = .409, p=.03$), indicating a significant linear relationship between the two variables. Caregivers who have more regular attendance rates at religious services tend to assess their health as better than caregivers who attend religious services less regularly.

Four independent-samples $t$ tests were calculated comparing the mean coping strategy (religious coping, ways of coping, JHAC12, and overall coping) scores of caregivers who participate in support groups to the mean coping strategy scores of caregivers who do not participate in support groups. No significant differences in the means were found between any of the groups.

An independent-samples $t$ test comparing the mean overall stress scores of caregivers who do and do not participate in support groups found a significant difference between the means of the two groups ($t(21)=2.24, p=.04$). The mean of the participating group was significantly higher ($m=3.867, sd=.1155$) than the mean of the non-participating group ($m=3.1, sd=.5777$).

A Pearson correlation was calculated examining the relationship between formal support score and informal support score. A moderate negative correlation was found ($r(7) = - .536, p=.004$). Caregivers receiving more formal support have less informal support and caregivers with more informal support seek less formal support.

Finally, results from this study did reflect a significant negative correlation between the formal support score and religious coping score after calculating the Pearson correlation ($r(7)= - .351, p=.05$). These data suggest that those caregivers who rely on religious beliefs to cope with stress tend to use less formal services. An independent-samples $t$ test was calculated comparing the mean health assessment score of caregivers who participate in a support group to the mean health assessment score of caregivers who do not participate in a support group. No significant difference was found ($t(21)=.665, p>.05$). The mean health assessment of caregivers involved in a support group ($m=3, sd=.000$) was not significantly different from the mean health assessment of caregivers not involved in a support group ($m=2.75, sd=.639$).

**Discussion**

The main variables that were found to be significantly related to health outcomes in other studies (support, coping, and stress) were not significant as predictors of health assessment in the present study. However, the present study asked respondents to rate their own health and that rating was used as the dependent variable. Another method of determining health such as medical records would be more accurate in describing each participant’s health as it relates to caregiving stress over time.

African-American caregivers of Alzheimer’s patients are acknowledged empirically to evaluate and report their health as poor more often than most other ethnicities. The majority of caregivers in the present study have reported that they are in “good” health. Many caregivers did not have chronic health conditions, but those who did mainly had hypertension.

The present study has been the first to employ the John Henryism Scale for Active Cop-
ing (JHAC12) as a measure in the particular context of caregiving stress. I expected to find active coping associated with high John Henryism as a main coping method used by most African-American caregivers. As I predicted, respondents’ low JHAC12 score revealed John Henryism in the majority of the sample. However, a high JHAC12 score (indicative of less active coping) was found to be positively correlated with stress in the sample. Those caregivers who experienced a high level of caregiving stress were less likely to use active coping to manage their stress.

Additionally, the present study found that those caregivers specifically experiencing higher levels of emotional stress tend to use the Escape-Avoidance method of coping; contrary to those who use the Positive Reappraisal method of coping to manage caregiver stress. Escape-Avoidance is described as wishful thinking and a behavioral effort to avoid confronting a problem or stressful situation. Caregivers using this method most likely dread facing problems and therefore, emotional stress develops and accumulates with the caregiver as a result of not confronting the issue. Positive Reappraisal is described as a religious dimension, which includes attributing positive meaning to a situation by focusing on one’s personal growth. This method of coping entails confronting the situation and learning from it in order to become a better person. This method of coping is more psychologically healthy than Escape-Avoidance.

The JHAC12 score was also found to be negatively associated with caregiver health assessment (refer to Figure 2). Although these results were opposite of what the researcher expected, they are similar to the study by Dressler et al. (1998) in which a gender effect was found between John Henryism and blood pressure. In the present study, three out of four males reporting either hypertension or diabetes displayed John Henryism according to their JHAC12 scores and evaluated their health as either fair or good. Three out of 12 females without a chronic illness had JHAC12 scores under 20 (high John Henryism) but reported their health as either excellent or good. As the rest of the female participants’ (without chronic health issues) JHAC12 scores went up, indicating lower John Henryism, they rated their health as progressively worse. Male participants’ (without chronic health issues) scores increased with their health rating.

The same results could also be attributed to participants’ maximum and minimum JHAC12 scores being at the extreme ends of the health evaluation spectrum. Caregivers rating their overall health as excellent scored high for active coping and those who scored low for active coping rated their health as fair. This may be due to the restriction in range of the health measure, which was only two points. An increase in this range, implying either more options for respondents to answer or a different question to measure caregiver’s health assessment, would yield a better depiction of the true relationship between caregiver health assessment and active coping. A larger sample size would also contribute greatly to discovering an accurate reflection of linear regression.

That religious coping was negatively related to JHAC12 score suggests that the actively coping caregiver is more spiritually attuned and may rely more upon a higher deity for help in managing caregiver stress. In this way, religiosity acts as an outlet for the psychological stress accumulated by the active coping caregiver.

The study by van Olphen et al. (2005) found that frequency of prayer and church attendance were associated with better general health; however, the present study revealed only frequent church attendance to be a significant predictor of better overall health assessment. Despite some contradiction in the literature about whether or not African-American caregivers receive more formal or informal support, it is evident in the present study that caregivers receive more informal support from family and friends. Most caregivers belonged to a church and frequently attended services, but the majority of caregivers responded that they never receive assistance from church members or clergy. Although the van Olphen et al. (2003) study found church attendance to be positively correlated with social support from church members, the present study comports with Fox et al. (1999) interviews.
There is a significant difference between caregivers who attend a support group and those that do not. Caregivers who attend the support group meetings experience significantly more mental and emotional stress, possibly because some caregivers seek out social support under stress. This result is supported by a finding reported earlier that caregivers experiencing more stress cope less actively, and therefore may seek out a support group to help manage stress. This speculation is also supported by the significant negative correlation between formal and informal support also found here. A decrease in informal support such as the lack of family and friends prompts caregivers to seek out support elsewhere, such as respite programs or support groups. Those caregivers that have less formal support and more informal support tend to rely on religious coping to manage caregiver stress.

Although previous studies have found formal support services effective in improving caregiver depression, anxiety, and anger, the present study shows no significant difference in

<table>
<thead>
<tr>
<th>Table 4.</th>
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<tr>
<td><strong>Is Respondent Aware of Community Support Services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat Aware</td>
<td>14</td>
<td>60.9</td>
</tr>
<tr>
<td>Not at All Aware</td>
<td>6</td>
<td>26.1</td>
</tr>
<tr>
<td>Completely Aware</td>
<td>3</td>
<td>13.0</td>
</tr>
<tr>
<td><strong>Has Respondent Used Program(s) Before</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>16</td>
<td>72.7</td>
</tr>
<tr>
<td>Using Programs Now</td>
<td>5</td>
<td>22.7</td>
</tr>
<tr>
<td>Have Used Previously</td>
<td>1</td>
<td>4.5</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Length of Time Respondent has Used Program(s)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never Used Program</td>
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</tr>
<tr>
<td>Less than 6 Months</td>
<td>3</td>
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</tr>
<tr>
<td>6-12 Months</td>
<td>1</td>
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</tr>
<tr>
<td>1-2 Years</td>
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<td>4.5</td>
</tr>
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<td>More than 2 Years</td>
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<td>4.5</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td></td>
</tr>
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</table>

the way that caregivers assess their health depending on participation in support groups. However, in this particular study, only six out of 23 participants had ever used any type of formal support service, leaving 72 percent of participants who had never used any type of formal support (as shown in Table 4).
Conclusions

This study is not generalizable to the whole population of African-American caregivers. The sample is quite small. The study was also limited by a shortened time constraint. Data collection had to be cut off and I had to impose a date for surveys to be returned. I would have liked for the data collection to be ongoing to maximize the sample population. The current sample is also mainly localized to the southern region. I would like to expand the data collection to include all regions of the country in order to capture a more accurate depiction of African-American caregivers’ issues pertaining to coping, support, and stress.

Formal support services have been found by past studies to significantly improve caregiver depression, anxiety, and anger. However, the most beneficial services to caregivers are multi-component and focused on the caregiver’s specific needs. The majority of African-American caregivers from this sample are at least somewhat aware of formal services in their communities but do not utilize these services. African-American caregivers are more likely to rely on informal support from friends or family. The average stress score is at a medium range. Most caregivers are employed but still provide most of the care to the Alzheimer’s patient. The majority of caregivers are doing too much. Active coping is prevalent among this sample, which is known to be correlated with hypertension and heart disease, having extremely high incidence within the African-American population. This study shows that caregivers who do use formal support, do not assess their health any differently from those who do not. The implications that one may gather from this data is that the support services have been ineffective at meeting the caregiver’s needs. Support groups and other formal services need to discourage active coping among African-American caregivers as well as consult one on one with each caregiver to assess his or her individual needs.

In addition to discouraging active coping to benefit physical health of caregivers, support groups should discourage Escape-Avoidance coping and encourage Reappraisal to benefit the psychological health of caregivers. In implementing a positive reappraisal focused support group, leaders would encourage caregivers to talk about their stressful encounters in caregiving and guide them as to what they should learn from the particular situation in order for them to grow holistically stronger.

References


Emotional Empathy: A Comparative Analysis Between Pre-Professional Therapy and Business Students

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There is little research into the personality characteristics of students majoring in pre-professional therapy fields. However, research does document that students planning to work closely with disabled persons must have a certain level of empathy to be effective. The purpose of this study is to examine differences in emotional characteristics between students majoring in pre-professional therapies and students majoring in business.

What is empathy? Empathy lies on a continuum directly between sympathy and apathy. Sympathy is the tendency to feel sorrow for an individual who is in a particular situation or event. Apathy is the tendency to feel nothing, no sense of emotion, for another person. Empathy in the broadest sense refers to the reactions of one individual to the observed experiences of another (Davis 1983). However, the term empathy is viewed and researched in many different aspects, and through each aspect different ideas have arisen. One aspect of empathy is intellectual, “the intellectual or imaginative apprehension of another’s condition or state of mind without actually experiencing that person’s feelings” (Hogan 1969). Another aspect of empathy is emotional, or sympathy in response to the feelings or experiences of others. Multiple perspectives of empathy provide an integrative approach. Through this approach cognitive and emotional components are included in the multi-dimensional construct of empathy. (Chlopan, McCain, Carbonell, and Hagen 1985).

The effort to understand the internal mental and emotional events of other human beings involves empathy as a social-emotional experience. And though some people have a greater capacity to empathize with others — an empathetic personality trait — there is evidence to suggest that empathy is a meaningful personality construct (Stotland 1979). High empathy and related concepts, such as social intelligence, knowledge of social matters, susceptibility to stimuli from others in a group, and insight into the temporary moods or underlying personality traits of others, all have been proposed as playing important roles in social interaction, and as key elements of moral conduct and character (Chlopan et al. 1985). As these key elements play an important part in one’s character it can increase one’s abilities in terms of social intelligence. For high empathizers it has been shown that these elements result in above average ability to get along with others.

In addition to socioeconomic factors, life transitions, and health dispositional characteristics may mediate the empathy association (Schieman and Van Gundy 2000). Positive outcomes related to empathy, such as conformity to norms, moral conduct, and selfless behavior, are fairly established (Schieman and Turner 2001). Attributes such as mastery, introspectiveness, and the concern with social approval are frequently studied. The aspects of self-concept, self-esteem and mastery have been identified as important personal resources. High self-esteem enhances psychological well-being, physical health, and happiness while creating a solid sense of self and avoiding personal distress. Regarding mastery, though a greater awareness of others’ difficulties and sorrows can be stressful, masterful individuals may be better able to avoid, manage, and control distressing outcomes (Schieman and Turner 2001).
Social support represents an important resource and positively affects stress and mental health processes. Supportive social bonds encourage communication and commitment between individuals and are beneficial for emotional health. As empathy increases, one’s awareness of others’ problems increases as well. Without the availability of supportive others, one may have fewer opportunities for empathetic feelings which are the building blocks of supportive personal bonds. Empathetic individuals, who are involved in very few supportive relationships may have fewer outlets from empathetic concern, and may be more likely to personalize the problems of others (Davis 1990).

Gender differences also are important in the development of social relationships and levels of empathy. The influences of society during younger years contribute to this gender difference, as females are typically socialized to be nurturing and are encouraged to build intimate relationships. In contrast, for younger males, emotional expression and relationships tend to be a sign of dependence and weakness, and males tend to be less involved in others’ emotional concerns. Early impacts of the society may place males into a task-oriented, competitive social role which can lead to friendships strictly based on non-emotional, external activities. As females are encouraged to nurture and support, empathy levels will be higher as they have experienced helping another and in some way understand, emotionally or intellectually, other’s feelings. For males, empathy levels are not as high and they are more likely to be more distant emotionally as a result of socialization. (Schieman and Turner 2001).

Self-esteem, mastery, and social support are psychosocial resources. Educational attainment is characterized as “human capital.” Education can improve individuals’ ability to think, symbolize and communicate. Through its impact on an array of attitudinal measures, education can be considered an indicator of cognitive sophistication (Schieman and Turner 2001). People with higher levels of education tend to experience the intellectual aspects of empathy and avoid the negative emotional components related to the self. Being educated about various aspects of life allows an individual to gain a better understanding of the world and may decrease the possibility of depression. The various resources of self-concept, social support and educational attainment all affect an individual’s personality. Through these resources one’s level of empathy can be determined, in terms of high or low. However, in using possible resources individuals can improve or increase their level of empathy, as empathy is not so much a behavior as it is a “happening” that we can either facilitate or block (Davis 1990).

In healthcare careers, facilitating and training for empathy is of great importance. Helping behavior significantly correlates with empathy (Mehrabian and Epstein 1972). Persons who possess a higher empathetic tendency are more aroused by others’ emotional experiences, both positive and negative. Evidence shows that basic communication skills, such as empathy, respect, authenticity and confrontation are of importance in positive therapeutic outcomes. These skills not only lead to more successful trained therapists but untrained ones as well (Hammond, Corydon, Hepworth, Dean, and Smith 1979).

Developing a student’s therapeutic presence through professional socialization experiences and modeling compassion can facilitate empathy (Davis 1990). Promoting attitudes and behaviors such as self-awareness, non-judgmental positive regard for others, good listening skills, and self-confidence are important in the development of helping professionals. Facilitating students in the identification of any negative, fragmenting behaviors such as prejudice, self-preoccupation, excessive nervous talking, poor listening and poor assertiveness skills, and low self-esteem will assist them in taking responsibility to change these behaviors that block empathy and interfere with healing (Davis 1990).

The art of healing is, in part, made up of a therapeutic use of oneself or a therapeutic presence when interacting with patients. This presence is more than knowledge and skill alone; it is also composed of a compassionate understanding of the patient and a communication that the therapist is worthy of the patient’s trust. Empathy enhances the therapist’s
presence and deepens the patient-practitioner interaction without risk of losing one’s self in the process. This shared meaning seems to enhance the healing process (Davis 1990).

**EETS and BEES**

Mehrabian and Epstein’s (1972) scale, the Emotional Empathic Tendency Scale (EETS), was developed to measure emotional empathy. It consists of 33 items which are rated on a nine-point (-4 to +4) scale. There are seven subscales: Susceptibility to emotional contagion; Appreciation of the feelings of unfamiliar and distant others; Extreme emotional responsiveness; Tendency to be moved by others’ positive emotional experiences; Sympathetic tendency; and Willingness to be in contact with others who have problems. The EETS has been shown to correlate with a large number of personality measures, with physiological measures of emotional arousal, ratings of parent affection, prosocial behavior, and helping behavior (Mehrabian 1996).

Mehrabian (1996) updated the EETS, creating a new 30-item emotional empathy scale which contains 15 positively worded and 15 negatively worded items (hence the name, The Balanced Emotional Empathy Scale or BEES) rated on a -4 (very strong disagreement) to +4 (very strong agreement) scale. The BEES correlates at .77 with the original EETS and has excellent internal consistency reliability (alpha=.87). The scale is significantly and negatively correlated with measures of aggression and risk of violence, and positively correlated with a measure of optimism-pessimism. The scale yields a single score.

**Introduction to the Present Study**

The purpose of the present study is to survey students entering pre-professional therapy careers, specifically occupational, physical, and recreational therapy, to examine differences in emotional empathy characteristics, using students at Middle Tennessee State University and Belmont University. The scores of students majoring in pre-professional therapy careers were compared to students majoring in the careers of accounting, business, and computer science. The Balanced Emotional Empathy Scale (BEES) was used to distinguish the trait of “Emotional Empathy” for each individual student in each career path to determine students’ level of empathy and gain a better understanding of how one’s level of empathy and personality characteristics can have an effect in career decisions.

**Method**

*Subjects*

Six different samples (majors) are used for this study, with a total of 144 subjects participating in the research. Subjects majoring in Accounting, Business, Computer Science, and Recreational Therapy attend Middle Tennessee State University, while subjects majoring in Occupational and Physical Therapy attend Belmont University. All subjects participated voluntarily. If they wished, subjects received feedback on their personal test performance. All personal identification information was then blacked out and the scale scores stayed anonymous.

Accounting Sample. The 23 subjects majoring in accounting had an average age of 27 years (ranging from 20 to 46), with 14 men and 9 women. Subjects were asked to report their ethnicity: 83% (n=19) Caucasian, 13% (n=3) African American, and 4% (n=1) Asian. They were then asked about disabilities, with 0% reporting a disability.

Business Sample. Seventeen business majors had an average age of 23 years (ranging from 19 to 31) with 9 men and 8 women. Ethnicity was 88% (n=15) Caucasian, and 12% (n=2) African American. Six percent (n=1) reported a disability.
Computer Science Sample. The 25 computer science majors averaged 25 years (20 to 34) with 23 men and 2 women. Ethnicity: 80% (n=20) Caucasian, 12% (n=2) African American, 4% (n=1) Hispanic, 4% (n=1) Asian. One (4%) had a disability.

Occupational Therapy Sample. There 25 pre-occupational therapy subjects averaged 33 years (23 to 49). There were 20 women and five men. Ethnicity: 88% (n=22) Caucasian, and 12% (n=3) African American. No subject reported a disability.

Physical Therapy Sample. Thirty-three pre-physical therapy subjects participated (26 women and seven men). Their average age was 28 (25 to 53), with one person not reporting an age. Ethnicity: 91% (n=30) Caucasian, 6% (n=2) African American, 3% (n=1) Asian. One (3%) reported a disability.

Recreational Therapy Sample. Of 22 subjects majoring in recreational therapy, 15 were women and seven were men. Average age was 27 years (20 to 48). Ethnicity: 68% (n=15) Caucasian, 23% (n=5) African American, 9% (n=2) “other.” Nine (41%) had a disability.

Procedure

The Balanced Emotional Empathy Scale (BEES), designed in 1996 by Albert Mehrabian of the University of California, Los Angeles, is meant to distinguish persons who typically experience more of other’s feelings from those who are generally less responsive to the emotional expressions and experiences of others. It measures the trait of emotional empathy. Emotional empathy describes the individual differences in the tendency to feel and experience the emotional experiences of others. The scale consists of 30 items, 15 positively worded, 15 negatively worded, that are easy to understand and identify with rather than being technical and difficult. The scale yields a single score which is used in distinguishing the trait of emotional empathy, while showing a positive relation with emotional thinking, and indicative of psychological health, adaptive, and prosocial characteristics (Mehrabian 1996).

Subjects completed the 30-item scale on emotional intelligence in groups with members of the same major. Each subject received a packet which contained an informed consent, demographic questionnaire, and the Balanced Emotional Empathy Scale, as well as necessary instructions. The test was not timed and the empathy scale materials were self-administered. The entire process for each group took no longer than 15 minutes.

Results

The 30-item scale was first scored and reported for each individual in every sample (major). Scores for each individual were then used to determine the emotional empathy trait for each person by using the norms (mean and standard deviation) for the rest of the population to find each person’s z score. Once determined, the z score was converted to a percentile score that is used to interpret each person’s level of empathy.

In review, the students majoring in the pre-professional therapy careers, specifically occupational, physical, and recreational therapy scored higher in level of empathy in comparison to students in accounting, business, and computer science (Table 1). A majority of students in the pre-professional therapy careers had average to moderately high levels of empathy, scoring 50-84% higher than the rest of the population. A majority of the subjects in business careers had average to extremely low levels of empathy, scoring 0.6-50% higher than the rest of the population.
Gender differences were also examined (Table 2). Unsurprisingly, women scored higher on the scale than did men. In a comparative analysis of gender differences of those majoring in business careers, women (30% of business majors) scored between 16 to 50% higher than the rest of the population, ranging between moderately low levels to average levels of empathy. For the men (70% of business majors), scores were two to 31% higher than the rest of the population.
In a comparative analysis of those majoring in pre-professional therapy careers, women represented 77%, while men represented 23% (Table 3). Women ranged between average and moderately high levels of empathy, scoring between 50 to 84% higher than the rest of the population. For men, scoring between 50 to 69% they showed empathy levels of average to slightly high.
Table 3. Comparative Analysis of Gender Differences in Pre-Professional Therapy Careers

Cross analysis between the therapeutic careers and business careers using the gender majority of each career once again presented women as scoring higher in terms of empathy (Table 4). In therapeutic careers, women were the majority as men were in business careers. In comparison, the majority of women in therapeutic careers ranged between average to moderately high levels of empathy, scoring 50 to 84% higher than the rest of the population, while the majority of men in business careers ranged between slightly low to extremely low levels of empathy, scoring between 2 to 31% higher than the rest of the population.
Empathy in regards to a disability was also considered (Table 5). Those reporting disabilities in all majors scored between 84 to 92% higher than the rest of the population. Of the disabled students 83% were in pre-professional therapy and 17% were in business.
Finally, age differences were analyzed (Tables 6a and 6b). In the pre-professional therapeutic careers, a majority of individuals in the age range of 25 to 35 years had average to extremely high levels of empathy, as did a majority of individuals ages 35 and older. Among business majors, a majority of individuals from 20 to 35 years, had average to extremely low levels of empathy. Very few individuals past the age of 35 years scored above the majority of those ranging from ages 20 to 35 years.
Table 6a. Ages in Therapeutic Careers

Table 6b. Ages in Business Careers
Discussion

These results suggest that students entering into pre-professional therapeutic careers have higher levels of empathy than students entering business. Business majors seem to focus primarily on non-personal matters, so the interaction with others’ problematic situations are not as high.

Correlational analyses suggest that high empathizers were more likely to have emotionally expressive lifestyles, have parents who had spent more time with them, display more affection, be altruistic in behavior, and rate positive social traits as important. Through their empathy, they gain better insight into another person’s mood. Perhaps the constant use of resources, social and educational, play a major role in individuals becoming more empathetic in various problematic situations and events. Previous research shows that by using these resources, individuals in therapeutic careers enhance their empathetic levels, thereby becoming better therapists.

As expected, females scored higher than males in terms of empathetic levels. Males are socialized to be less involved in emotional concerns, and when they are placed in situations which trigger empathy, the stress of others becomes stress for themselves as well. This could possibly lead to depressive symptoms, and to the avoidance of others’ situations. The ability to encourage social interaction and the ability to endure others’ feelings of sorrow, requires a certain sense of personal self-esteem and mastery. An individual has the ability to distinguish others’ sorrows and stresses and has a sense of mastery through a greater awareness of others’ difficulties. They are better able to avoid, manage, or control distressing outcomes. They have a better chance of promoting their own and others’ positive health as they do not let the stress of others bring stress on them.

References

Expression of Photosystem Genes in Bundle Sheath and Mesophyll Cells in the *Zea mays* Leaf Tip, a C₄ Photosynthetic Plant

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Abstract

The goal of this project was to determine the differential expression of photosynthesis genes in bundle sheath and mesophyll cells in the C₄ plant *Zea mays*, (corn). C₄ photosynthesis is a highly efficient yet poorly understood biological process. A better understanding of this process could lead to higher yields in less efficient C₃ photosynthetic plants, which include the vast majority of non-grain crop plants. To explore this phenomenon, expression of certain photosynthetic genes was quantified in bundle sheath and mesophyll cells of one-month-old *Zea mays* leaf tips. The two cell types were dissected from leaf tissue using a combination of mechanical grinding and enzymatic digestion of cell walls. Total RNA was chemically extracted from these cells and the abundance of photosystem I and II mRNAs were quantified using real time reverse transcription polymerase chain reaction.

The data collected suggest that the levels of 4 photosystem I genes are higher in mesophyll cells than bundle sheath cells of *Zea mays* leaf tip. In the photosystem II gene family, four genes were more abundant in mesophyll, and four genes were equally abundant in the two cell types. Based on the results, an adequate description of transcript abundance of bundle sheath and mesophyll cells of mature C₄ photosynthetic maize is available in an area where knowledge is limited.

Introduction

C₄ photosynthesis is a biological pathway which allows certain plants to conduct photosynthesis at higher temperatures and at low O₂ levels. The adaptations that allow C₄ photosynthesis enable a much more efficient mechanism for the fixation of carbon dioxide from the atmosphere than C₃ photosynthesis (Sheen 1999). It is estimated that ~4 percent of flowering plants use this type of photosynthesis but they account for more than 25 percent of the total terrestrial energy production. Some C₄ plants, such as corn, have an anatomical adaptation called Kranz anatomy, which is related to this type of photosynthesis (Wakayama 2003). Kranz anatomy exists when bundle sheath cells develop unique chloroplasts that are able to conduct the light-independent part of photosynthesis while mesophyll cells, which surround the vascular bundle, perform the light-dependent steps (Majeran 2005).

Corn is used as the experimental plant because of its wide commercial use and because there is not much information about gene expression in maturing bundle sheath and mesophyll cells of maize. The object of the experiment is to determine the differences in chloroplast gene expression in bundle sheath and mesophyll cells in mature maize leaf tip tissue. My hypothesis is that since mesophyll cells perform light reactions while bundle sheath cells perform the light independent reactions, photosystem genes will likely be expressed primarily in mesophyll cells (Darie et al. 2006, Kubicki et al. 1994).
Materials & Methods

Plant Growth and Dissection

The T43 line of maize was grown for approximately one month (~8 leaf stage) and semi-emerged, stage-two leaves were dissected from the plant. These leaves were cut into nine distinct parts and the base, middle and tip sections were collected. Only the tip of the stage-two leaves were used for experimentation.

Bundle sheath cells were prepared by cutting the tissue into fine pieces. Tissue was macerated with a blender in a buffer solution (Sorbitol, NaCl, MgCL, EDTA, Tris and DTT), and bundle sheath cells were collected by straining the homogenate through a fine mesh filter. They were re-extracted in a second buffer (Sorbitol, EDTA, Tris, and BME). The process continued until a pure bundle sheath preparation could be visually confirmed (Sheen 1995).

Mesophyll cells were extracted as protoplasts prepared from whole leaf tissue cut into 5mm slices. Tissue pieces were incubated at room temperature for three hours in cellulase and macerase dissolved in protoplast buffer (Hepes, MgCL, Sorbitol) (Sheen 1995).

RNA extraction

Bundle sheath and mesophyll preparations were ground in liquid nitrogen using a mortar and pestle. RNA was extracted using Trizol following the manufacturer’s suggested protocol. The RNA was quantified with a spectrophotometer.

Assaying DNA contamination and Tissue Purity

All the RNA samples were treated with DNase which digests any DNA that may be contaminating the RNA. Contamination was checked by attempting to PCR amplify (Ramakers 2003) MDH (malate dehydrogenase) or ME (malic enzyme) from RNA preparations. Preparations were not used until PCR reactions failed to produce a product.

Bundle sheath and mesophyll preparations were tested for purity by amplifying MDH and ME transcripts from RNA preparations by Reverse Transcriptase PCR (Brunner et al. 2004). ME should only be present in bundle sheath cells and MDH only in the mesophyll cells. Contaminants were visually assayed by separating samples using agarose gel electrophoresis.

Quantitative Real Time RT PCR

Quantitative Real Time RT PCR amplifies a specific nucleic acid by utilizing primers (Brunner et al. 2004). I tested four primer sets from photosystem I, psa A, psa C, psa I, psa J, and 8 primers from photosystem II, psb A, psb B, psb C, psb D, psb E, psb J, psb L, and psb N. The abundance of a gene was calculated by using the CT (crossover threshold) and dividing each gene by psb a, which consistently had the highest CT. The gene abundance was determined by averaging all repeats for each gene, which yielded a normalized average gene abundance.

Results

All four of the photosystem I genes were higher in mesophyll cells than bundlesheath from the maize leaf tip (Figure 1). For photosystem II, four genes were more abundant in the mesophyll cells (Figure 2) and four genes were equally abundant in both the mesophyll and bundlesheath cells (Figure 3). Based on evidence I do not reject my hypothesis for four of photosystem I and four photosystem II genes but do reject my hypothesis for four of the photosystem II genes.
Figure 1. Four of the five photosystem I genes were compared by using Q-RT-RT-PCR to amplify mRNA from mesophyll and bundle sheath cells. The figure shows normalized ratios from six amplification replicates.

Comparison of Bundle Sheath & Mesophyll Cells in Photosystem II Genes

Figure 2. Four gene sets (psb B, psb D, psb E, and psb L) were compared by using Q-RT-RT-PCR to amplify mRNA from mesophyll and bundle sheath cells. The figure shows normalized ratios from six amplification replicates.

Comparison of Bundle Sheath & Mesophyll Cells for Photosystem II Genes
Figure 3. Four gene sets of photosystem II, (psb A, psb C, psb J and psb N) were compared by using Q-RT-RT-PCR to amplify mRNA from mesophyll and bundle sheath cells. The figure shows normalized ratios from six amplification replicates.

Comparison of Bundle Sheath & Mesophyll Cells in Photosystem II Genes

**Discussion**

My results show that four photosystem II genes are expressed equally in mesophyll and bundle sheath cells, and four are more abundant in mesophyll. For photosystem I, all four genes were more abundant in mesophyll cells. Kubicki et al. (1993) performed a similar set of experiments using dot-blot assays. Their data suggest that photosystem I genes in corn and sorghum are similar in mesophyll and bundle sheath cells, and that photosystem II genes are more highly expressed in mesophyll cells. The conflict between these two data sets may lie in the methodology used and instrumentation. In Kubicki young maize leaves are used while my experiment focuses on more mature leaf tip tissue. In addition to the tissue types, I use Quantitative Real Time PCR to determine the abundance of photosystem genes which may be more sensitive than RNA dot blot assays because it amplifies very minute amounts of RNA that would not be detected by other methods (Brunner et al. 2004).

Although I did find that in eight of 12 photosystem genes were expressed more highly in mesophyll cells, four were equally expressed in both mesophyll cells and bundle sheath cells. This directly conflicts with previously published results. Once again, the tissue samples used in the published study compared to this one are very different. Further research is needed in order to explain why the four genes are equally expressed in photosystem II genes. Also more research should be done on Zea mays genetic expression that examines whole tissue, middle tissue and base tissue and correlates the expression to protein translation.
References & Works Cited


The Phantom Legal Category of Terrorism

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I. Introduction

There are hundreds of people currently imprisoned in a military base in Guantanamo Bay, Cuba. The Bush administration has called them “terrorists” and “the worst of the worst” but has no idea what to do with them other than to just let them remain indefinitely at Guantanamo Bay. In the more than six years since the Global War on Terrorism began, the Bush administration still has not figured out how to handle a terrorist.

After the terrorist attacks on September 11, 2001, the United States declared a global war on terrorism. This “war” is unlike any we’ve ever fought before because it is conducted against practitioners of a certain type of political violence rather than an enemy state, it has no foreseeable end or victory, and the warfare cannot be engaged in conventional ways. When the global war on terrorism was announced it was apparent that the previous legal category of terrorism was insufficient and a new category became necessary. This conflict could not be waged according to the rules of the criminal justice system or the military justice system. Thus, our government needed to develop a legal category for suspected terrorists. Such a legal category has never been developed, however, thus leaving the Bush administration with one option: dealing with terrorism in an ad hoc and disorganized manner. Furthermore, Congress has not passed any meaningful legislation to develop a new category but rather has passively supported the Bush administration by exerting as little influence as possible into the creation and development of new policies.

After six years without a developed legal category of terrorism, we now find ourselves as a nation in a tripartite crisis. The United States is in a crisis politically, constitutionally, and logistically. The political element of this crisis is the international scorn that our current military detainment system (not to imply that it is in anyway systematic) has attracted from nearly everyone, including our allies.

1”These are the worst of the worst, and if let out on the street they will go back to the proclivity of trying to kill Americans and others . . . I mean, never forget who these people are. They are part of organizations that plotted and planned for a long time to kill thousands and thousands of innocent civilians on September 11th,” Rear Admiral Stufflebeem, Department of Defense News Briefing, January 28, 2002. Transcript available at: www.defenselink.mil/transcripts/transcript.aspx?transcriptid=2355.

2President Bush in his January 20, 2004 State of the Union address, pointed out that “After the World Trade Center was first attacked in 1993, some of the guilty were indicted and tried and convicted, and sent to prison” but declared, “After the chaos and carnage of September the 11th, it is not enough to serve our enemies with legal papers. The terrorists and their supporters declared war on the United States, and war is what they got.”

3“[Secretary of Defense] Robert M. Gates repeatedly argued that the detention facility at Guantanamo Bay, Cuba, had become so tainted abroad that legal proceedings there would be viewed as illegitimate . . . In particular, Mr. Gates urged that trials of terrorism suspects be moved to the United States, both to make them more credible and because Guantanamo’s continued existence hampered the broader war effort.” Thom Shanker and David E. Sanger, “New to Pentagon, Gates Argued For Closing Guantanamo Prison,” New York Times, March 23, 2007, sec. A.
terrorist from the point of detainment to the point where justice can be administered. To best understand the fundamental problem as well as its evolution into a crisis, we must understand legal categories.

Whenever the U.S. government seeks to legally impinge upon an individual’s freedom, there must not only be a reason for doing it, there must be a clear definition of the substantive act that triggered the loss of freedom and a clear statement of procedure for denying the actor’s liberty. The justification identifies a certain act, characteristic, or conduct. Based on the act, characteristic, or conduct, a legal category will be developed for people who are suspected of being somehow involved with whatever the government wishes to oppose.

A legal category consists of two elements: (1) Substance, or “what it is”; and (2) Process, or “how we determine the ‘what’ and the consequences.” The substantive element of a legal category is essentially the content of the act, its characteristics, and typical conduct which would place an individual into that category. The process element is made up of a systematic and comprehensive set of procedures for the government to follow to determine whether an individual belongs to a given category. It also mandates what must be done with an individual who is found by the government to belong to that legal category. Without these two elements, there is no legal category, and without a legal category, conflict and confusion are bound to arise.

Consider the legal category of first-degree murder. It has a substantive definition in the U.S. Code, and uses a very well-developed process known as the criminal justice system. The substantive element of the legal category of first-degree murder as defined in the U.S. Code is: “Murder is the unlawful killing of a human being with malice aforethought. Every murder perpetrated by poison, lying in wait, or any other kind of willful, deliberate, malicious, and premeditated killing; or committed in the perpetration of, or attempt to perpetrate, any arson, escape, murder, kidnapping, treason, espionage, sabotage, aggravated sexual abuse or sexual abuse, child abuse, burglary, or robbery; or perpetrated as part of a pattern or practice of assault or torture against a child or children; or perpetrated from a premeditated design unlawfully and maliciously to effect the death of any human being other than him who is killed, is “murder in the first degree.”

II. The Legal Category of Terrorism before 9/11

A. Origins of the Legal Category of Terrorism

The origins of the U.S. policies that began to lead to the creation of a legal category of terrorism can be traced back to a series of terrorist attacks in the 1970s. After a Palestinian terrorist group known as the Black September Organization murdered 11 Israeli athletes at the Munich Olympics, President Nixon established the Cabinet Committee to Combat Terrorism. This committee was supposed to coordinate a strategy between agencies and departments of the government (such as the Federal Bureau of Investigation and Federal Aviation Administration) to combat terrorism. The committee did not make any progress, however, because it only held one meeting in which it merely sanctioned counterterrorism measures that had already been adopted. Over the course of the next three decades, many effective strategies for counterterrorism were sought as the issue gained more importance with each successive president. Throughout this period, the Department of State was the most signifi-


Horowitz 2006.
cant in developing policies to thwart international terrorism. These policies did not necessitate or develop a legal category of terrorism because the initial strategies were based upon diplomatic principles instead of an organized legal campaign.

In the 1980s, the Reagan administration designed an organizational structure to respond to terrorism. Under this policy, the lead agency was determined by jurisdiction of the terrorist act. If the terrorist incident took place outside the territory of the United States then the Department of State was the lead agency to respond. If the incident took place within the territory of the United States, then the Department of Justice was the lead agency to respond. If, however, the terrorist incident occurs aboard an aircraft within the jurisdiction of the United States, then the Federal Aviation Administration was the lead agency to respond. Congressional legislation of anti-terrorism strategies which led to the creation of a legal category of terrorism included the 1984 Act to Combat Terrorism. This act provided guidance to the president on new counterterrorism efforts by urging “more effective international cooperation in combating international terrorism, including: (1) severe punishment for acts of terrorism; and (2) extradition of all terrorists to the country where the terrorist incident occurred or whose citizens were victims of the incident.”

It was not until another series of terrorist attacks that Congress began to attempt to develop a legal category for terrorism. In 1986, after Pan American Flight 73 was hijacked and 21 Jews were murdered in Turkey, Congress passed the Omnibus Diplomatic Security and Anti-Terrorism Act. While the act criminalized terrorism and gave the Justice Department the measures to bring international terrorists to justice by the application of criminal statutes, it did not create a different category for this unique behavior.

During the presidencies of both George H.W. Bush and Bill Clinton, further measures such as the Anti-Terrorism & Arms Export Act of 1989, Anti-Terrorism Act of 1990, War Crimes Act of 1996, and Anti-Terrorism and Effective Death Penalty Act of 1996 were adopted. Throughout this period, one of the notable departures from the key pillars of the U.S. counterterrorism strategy was that of jurisdiction. Originally, it was believed that captured terrorists should be tried under the legal systems of the country in which the offense took place. In the late 1980s, however, this practice shifted increasingly to extradition of suspected terrorists to the United States for criminal prosecution.

In 1994, J. Brent Wilson wrote in his analysis of the reasons for the mixed successes of the United States’ early international counterterrorism efforts, that:

First, the American response was too massive, as it attempted to bring the full resources of government to bear. Yet, at times, the apparatus was too cumbersome, and too many details were left out. The crisis management organization lacked interagency cooperation, which hampered both the planning and execution of counterterrorism measures . . . Second, in the past there was a tendency to look for quick solutions . . . Finally, difficulties stemmed from the way Americans perceive terrorism. Like Israel, they have tended to see it as a form of warfare that had to be met with force, a perception that has produced some negative consequences.

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6Wilson 1994, 177-78.
10Wilson 1994, 179.
11Ibid., 202.
B. Substance

In the various federal codes and regulations of the United States, there are more than a dozen different definitions of terrorism used today. Of course, despite their differences, there are some common themes in these definitions. Generally speaking, definitions of terrorism include three primary elements: (1) the threat or unlawful use of violence; (2) against a civilian population; (3) which is politically motivated. Yet, the “category,” such as it is, relies on some but not all of the provisions in the criminal code and laws of war.

The crime of international terrorism is defined in the U.S. Code as activities that (A) involve violent acts or acts dangerous to human life that are a violation of the criminal laws of the United States or of any State, or that would be a criminal violation if committed within the jurisdiction of the United States or of any State; (B) appear to be intended to intimidate or coerce a civilian population, to influence the policy of a government by intimidation or coercion, or to affect the conduct of a government by mass destruction, assassination, or kidnapping; and occur primarily outside the territorial jurisdiction of the United States, or transcend national boundaries in terms of the means by which they are accomplished, the persons they appear intended to intimidate or coerce, or the locale in which their perpetrators operate or seek asylum. Domestic terrorism is defined in the U.S. Code as activities that: (A) involve acts dangerous to human life that are a violation of the criminal laws of the United States or of any State; (B) appear to be intended to intimidate or coerce a civilian population, to influence the policy of a government by intimidation or coercion, or to affect the conduct of a government by mass destruction, assassination, or kidnapping; and (C) occur primarily within the territorial jurisdiction of the United States.

It can be observed from these definitions of terrorism that common elements do exist. These elements, though, are ambiguous and result in an extremely broad definition, not to mention the lack of procedures. For example, the definitions do not identify whether terrorist acts can be committed by individuals, organization, or governments. As this remains unaddressed, it can be asserted that nations are capable of committing terrorism. Furthermore, there is no prescribed threshold for the level of political motivation required to constitute terrorism. This raises the question, “what is the difference between political and non-political motivations?”

To test the ambiguity of these definitions consider how the following hypothetical examples meet the definition of terrorism:

1. The Republican mayor of New York City commits adultery with the wife of a Democratic activist. The activist discovers this and murders the mayor. The activist is then charged and convicted of terrorism, because he committed a murder with intent to affect the conduct of a unit of government by murder, assassination, or kidnapping.

2. A teenager calls his school by phone on the day of his final exam and makes a bomb threat to get out of his midterm exam because he has not prepared for it. He is charged with terrorism because he made a threat of violence intending to affect the conduct of a unit of government.

3. A college student jokingly tells a university professor that she intends to kidnap him until she receives a passing grade. The student is charged with terrorism by threatening to kidnap a government official in order to coerce that official into altering his policy.

4. France is invaded by a foreign power and its military is called upon to defend Paris. The French soldiers are charged with terrorism because they used violence to influence the
foreign power to halt their invasion and to prevent the defeat of the French government.

Questions about what constitutes a “political” motivation appear to be unanswerable. From the example involving the democratic activist, it can be seen how certain actions could be motivated by nonpolitical reasons but have political circumstances and consequences which may or may not have been intentional. In the example of the teenager who made the bomb threat to get out of a midterm, it was demonstrated how an action which was not in any way politically motivated may constitute terrorism under these definitions. The ambiguity concerning the element of a threat of violence is illustrated by the college student who told her college professor that she planned to kidnap him as a joke. A final example of how broad the definition is the plight of the French soldiers whose political motivations might be seen as legitimate by the United States.

These definitions of terrorism, despite how broad they are, fulfill in some measure the substantive element of the legal category. The definitions are broad enough so that it is unlikely that any group which the U.S. charges with terrorism could be found innocent on a technicality. However, because the substance includes more individuals and groups than just those who the U.S. State Department designates as terrorists, it became essential to have a process which could compensate for the deficiencies of the substance. This is because in order to reliably determine who is actually a terrorist, the system that each individual is put through must be well developed, consistent, and comprehensive.

C. Process

For many years leading up to 9/11, terrorism was viewed as a crime and thus terrorism suspects were subject to the criminal justice system. The criminal justice system, as seen earlier, is a very consistent and developed process for determining guilt or innocence as well as handling individuals once each determination is made.

The Bureau of Justice Statistics explains the sequence of events in the criminal justice in five basic phases. During each of these phases there is an affirmative or negative determination made as to whether there is enough evidence for the suspect to continue through the process. If at any point a negative determination is made, then the suspected terrorist is removed from the system and cannot belong to the legal category of terrorism. To summarize the phases of the criminal justice system:

Entry into the system:

Investigation – Law enforcement agents determine who is a suspect of terrorism, based on evidence; and

Arrest – The suspect is apprehended and put into government custody.

Prosecution and Pretrial services:

Charges filed against suspect – Prosecutor determines whether there is enough evidence to suspect the individual of terrorism;

Initial appearance – Suspect is informed of charges, obtains an attorney, enters a plea, and a judge has a hearing to possibly set the bond;

Preliminary hearing – Judge determines whether there is enough evidence to bind the suspected terrorist to the grand jury;

Grand jury – A special grand jury convenes to determine whether there is enough evidence to require the suspected terrorist to stand trial;

Arraignment – The plea is entered, bond is reconsidered by a judge, and the date for the pre-trial hearing is set; and

Pre-trial hearing – Motions are filed and plea agreements are offered.


17See note 5.
Trial:
- Final determination of guilt or innocence of terrorism suspect is made.

Sentencing and sanctions
- Sentencing hearing – Punishment options are considered against aggravating and mitigating factors of the offense; and
- Appeal – Terrorist is given the opportunity for judicial review of the fairness of the process they had gone through.

Corrections
- Incarceration / capital punishment – Terrorist either serves the time of the sentence or is possibly given the death penalty.

III. Establishing the Need for a New Legal Category

A. Departure from the Criminal Justice Paradigm of Terrorism

After decades of attempting to develop a legal category for terrorism within the criminal justice paradigm, a terrorist attack of unparalleled devastation would change everything. On September 11, 2001, the organization known as al Qaeda carried out the largest-scale terrorist attacks in the history of the United States. These attacks had nearly the same number of casualties as the Japanese attack on Pearl Harbor in 1941. The response of President Bush to the attacks was, in the words of then-Under Secretary of Defense for Policy Douglas J. Feith, “to depart radically and boldly from many years of a different policy.” Bush’s departure from conventional policy was made by perceiving the September 11 attacks as “acts of war” rather than criminal acts. This determination meant that instead of simply using the FBI and combined U.S. intelligence to track down and prosecute the perpetrators of terrorist attacks, Bush intended to use the United States military and any war powers that Congress may grant him to “conquer this enemy.”

In the days immediately following the attacks, he engaged in closed-door discussions with congressional leaders about a formal authorization for the use of military force against terrorists. On September 14, 2001, with the fires at Ground Zero still burning, President Bush took his first steps away from the criminal justice paradigm when he declared a state of national emergency and readied the armed forces for combat. On that same morning, legislation was introduced in the Senate which would authorize President Bush to “use all necessary and appropriate force against those nations, organizations, or persons he determines planned, authorized, committed, or aided the terrorist attacks that occurred on September 11, 2001, or harbored such organizations or persons, in order to prevent any future acts of international terrorism against the United States by such nations, organizations or persons.” The Authorization for Use of Military Force (AUMF) passed the Senate within a few hours of its introduction and identical legislation passed the House of Representatives later that after-

20Abramowitz 2002.
22Senate Joint Resolution 23 (Public Law 107-40).
noon. The only thing slowing down the legislation was a proposed amendment by Representative John Tierney which would have required President Bush to report his actions under the scope of the AUMF to Congress every 60 days. This proposed amendment, however, only stalled the resolution for a short period of time.\textsuperscript{23}

Despite the lack of preparation and consideration this new directive had been given, Congress fully endorsed Bush’s decision to treat the September 11 terrorist attacks as an act of war within one week. Upon signing the resolution, Bush issued a statement which said, “Our whole nation is unalterably committed to a direct, forceful, and comprehensive response to these terrorist attacks and the scourge of terrorism directed against the United States and its interests.”\textsuperscript{24}

The Military Order that President Bush issued in November of 2001 defines the enemies in the global war on terrorism (GWOT) as someone who:

\begin{quote}
there is reason to believe . . . is or was a member of the organization known as Al Qaida [or] has engaged in, aided or abetted, or conspired to commit, acts of international terrorism, or acts in preparation therefore, that have caused, threatened to cause, or have as their aim to cause, injury to or adverse effects on the United States, its citizens, national security, foreign policy, or economy.\textsuperscript{25}
\end{quote}

This definition is far broader than even the existing criminal definition of terrorism, and because the two have never been reconciled into one cohesive substantive element of a legal category, there are two different sets of criteria that could qualify someone as a terrorist. Within these pieces of a substantive element, there are bits of criminal law mixed up with the laws of war, but not really either. This means that a suspected terrorist could either be a criminal or a prisoner of war, which leaves serious inequities when the rights of a criminal defendant are put against the rights denied to a detainee in the GWOT.

Although the scope of the AUMF at first glance appears limited to only those terrorists responsible for the 9/11 attacks, the actual wording opens the military conflict to any nation, organization, or person who the president determines has or has had any involvement in terrorist activities. The AUMF is the first to grant the president the power to wage war against not only nations, but also persons and organizations as well.\textsuperscript{26} Furthermore, it does not provide any guidance to the president in making a determination of who the enemies in this conflict are. There is also no express objective within the AUMF. Instead, it remains in effect until the president has successfully prevented “any future acts of international terrorism against the United States” by anyone who had any involvement in the September 11 attacks. This would require the complete annihilation of each anti-American terrorist organization and the eternal preclusion of any resurgence before the objective in the AUMF would be met. This objective is, of course, impossible and effectively empowers the president henceforth to use “all necessary and appropriate force” to combat any nation, organization, or person “he determines” to be a terrorist.

\textbf{B. Addressing a “New Type of Enemy”}

While the global war on terrorism is similar in its premises to Lyndon Johnson’s War on Poverty and Richard Nixon’s War on Drugs, it marks the first time that the United States has gone to war militarily against an abstract idea. After declaring war on anti-American terror-

\begin{footnotes}
\footnote{Congressional Research Service 2007.}
\footnote{See note 31.}
\footnote{See note 24.}
\end{footnotes}
ists across the globe, the Bush administration set out to understand its new enemy. Secretary Rumsfeld explained our enemies this way:

The people who planned and carried out these attacks are not common criminals – they are foreign aggressors, vicious enemies whose goal was, and remains, to kill as many innocent Americans as possible . . .

This is not a law enforcement action. It is a war.27

However, he also identified distinctions between conventional war and the GWOT:

“[Terrorists] are, and remain, unlawful belligerents, adversaries who attacked our nation in contravention of the rules of war.”

The president added:

The terrorists who declared war on America represent no nation, they defend no territory, and they wear no uniform. They do not mass armies on borders, or flotillas of warships on the high seas. They operate in the shadows of society; they send small teams of operatives to infiltrate free nations; they live quietly among their victims; they conspire in secret, and they strike without warning.28

Under the laws of war, the provisions of the Geneva Convention govern the rights and procedures granted to detainees. In a military conflict between nations who are party to the Geneva Convention, detained military personnel are given “prisoner of war” status. This status confers certain rights and procedures to the detainee in the event that they are charged with war crimes. A major strategy of the Bush administration in the GWOT was to capture suspected terrorists and try them for war crimes under the laws of war. In fact, Bush even went as far as to announce at the U.S. Attorney’s Conference that it was lawyers who are “are on the front line of war.”29

Consequently, it becomes paramount that there be a legal process through which suspected terrorists can be tried and punished. Under the Uniform Code of Military Justice (UCMJ). There are legal categories for prisoners of war which have both substantive and procedural elements already developed and tested. However, Bush decided, “Given the danger to the safety of the United States and the nature of international terrorism . . . it is not practicable to apply in military commissions under this order the principles of law and the rules of evidence generally recognized in the trial of criminal cases in the United States district courts.”30 This meant that neither the civilian criminal justice system nor the traditional court system under the UCMJ would have jurisdiction of the detainees.

In explaining why the developed counterterrorism policies were no longer sufficient, the president stated, “The American people need to know that we’re facing a different enemy than we have ever faced. This enemy hides in the shadows, and has no regard for human life. This is an enemy who preys on innocent and unsuspecting people, runs for cover.”31 It was presumably this reasoning which led Bush to take his most drastic step away from all established precedent and into undeveloped legal territory. On February 7, 2002, Bush issued a


31See note 20.
memorandum that turned the precedent of the laws of war on their head. In this memo, he proclaimed his official determination as President of the United States and Commander in Chief of the Armed Forces that “none of the provisions of [the Geneva Convention] apply to our conflict with al Qaeda . . . because, among other reasons, al Qaeda is not a High Contracting Party to Geneva.” Bush went further to claim that although “the provisions of [the Geneva Convention] will apply to our present conflict with the Taliban . . . the Taliban detainees are unlawful combatants and, therefore, do not qualify as prisoners of war under Article 4 of Geneva.” Article 4 of the Geneva Convention relates to POW status and mandates minimum standards of treatment for detainees. His reasoning for his determination included the fact that “the war on terrorism was not envisaged when the Geneva Convention was signed in 1949. In this war, global terrorists transcend national boundaries and internationally target the innocent.” After this determination, detainees in the GWOT no longer fit in any pre-existing categories, because if the detainees aren’t criminal defendants or prisoners of war, there is no existing category in which to place them. As Bush articulated in the determination:

The war against terrorism ushers in a new paradigm, one in which groups with broad, international reach commit horrific acts against innocent civilians, sometimes with the direct support of states. Our nation recognizes that this new paradigm – ushered in not by us, but by terrorists – requires new thinking in the law of war.

Thus, eschewing the civil courts, the military courts and the Geneva Convention, the Bush administration attempted to create an entirely new procedural category for a yet undefined substantive category loosely labeled “terrorism.”

C. Establishing New Procedures

While clearing the way for a new legal category of terrorism, the Bush administration also began laying the foundation for a military commission system. On November 13, 2001, he issued the Military Order regarding the Detention, Treatment, and Trial of Certain Non-Citizens in the War Against Terrorism, which placed any suspected terrorists exclusively within the jurisdiction of military commissions. The order also established that all rules and procedures governing this military commission system would be controlled exclusively by the president and the secretary of defense. This provision allowed the Bush administration to unilaterally dictate the legal procedures applied to detainees without the approval of Congress or anyone else. Furthermore, the order stated that detainees “shall not be privileged to seek any remedy or maintain any proceeding, directly or indirectly, or to have such remedy or proceeding sought on the [detainee’s] behalf . . . in any court of the United States, or any state thereof, any court of any foreign nation, or any international tribunal.”

The order also permitted the rules and procedures of the military tribunal system to be changed in any way at any time. These military commissions would try suspected terrorists for “any and all offenses triable by military commission.” Since there were no pre-established set of offenses for which military commissions could try detainees, the president and secretary of defense also had the power to write their own offenses and punishment.

32See note 35.
35See note 31.
When asked about deciding the procedures and criteria to be used by the military commis-
sion system, Secretary Rumsfeld emphatically stressed that:

[I]t is not something we want to deal with on an ad hoc basis as it hap-
pens; we want to, at the very outset, to have thought it through very
carefully . . . so that it is launched and engaged in the Department prop-
erly from the very beginning, rather than having to get started and find
it would have been better to do it another way and have to make a cor-
rection.\textsuperscript{36}

Two weeks later Rumsfeld went a little bit further to add, “I don’t think there will be a
single set of procedures. I think it may vary, depending on the individuals.”\textsuperscript{37} Clearly think-
ing outside the box, and with an overwhelming concern for caution and forethought, Bush
concluded his first year in office by explaining his administration’s approach to developing
this new military commission system:

And by the way, we’re in the process of developing a system to deal
with each and every fighter, depending upon the nature of the fighter –
how to deal with them, legally. And I’ve instructed the National Secu-

\begin{itemize}
\item Rumsfeld and Gen. Pace. \textsuperscript{37}
\item McNair Research Review
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2001, Deputy Secretary Paul Wolfowitz testified before the Senate Armed Forces Committee for what the Senate hoped would be a “constructive discussion of the issues that the Department of Defense] must grapple with in designing procedures for military commissions.” Senator Carl Levin, who was then the Chairman of the Committee, advised the Bush administration that consulting with Congress in developing these procedures would “help assure that military commissions stand the test of time, so that we don’t look back with regret at how we handled these critical issues in the crucible in which we find ourselves.”

One issue brought to light during the hearing was that of the inconsistency of using military detention for some suspected terrorists while putting other suspected terrorists in civilian criminal courts. Two days earlier, the Department of Defense had obtained an indictment in a federal district court for Zacarias Moussaoui, who allegedly was an alternate for one of the hijackers in the attacks of September 11. Senator Edward Kennedy presented the issue to Deputy Secretary Wolfowitz:

KENNEDY: Mr. Wolfowitz, if you would be good enough to tell us, what were the considerations in making this decision to proceed in the federal courts as opposed to a military tribunal?

WOLFOWITZ: To the best of my knowledge, that was a decision made by the Justice Department.

KENNEDY: You weren’t involved in this?
WOLFOWITZ: I was not personally. I don’t believe we were as a department either.
KENNEDY: Do you have a view, Mr. Secretary, on that?
WOLFOWITZ: No, I don’t. I am – they obviously have the evidence that they believe gives them a case for going to trial, and I’m not aware – and I would have to know the details to have a view.

Senator Lieberman later followed up on the issue:

LIEBERMAN: I suppose I have to ask the direct question, whether the Department of Defense was consulted before the decision was made by the Justice Department to try Zacarias Moussaoui in the federal district courts?

WOLFOWITZ: We were not, senator, and so I probably should be careful not to speculate about the considerations.

From the beginning the collaboration between the Justice Department and the Defense Department was clearly ignored, and the inconsistency between military and criminal jurisdiction was never addressed by Congress or the Bush administration.

Besides the initial hearing on Military Commissions, Democratic Senator Patrick Leahy, who was then the Chairman of the Senate Judiciary Committee, urged President Bush to consult with Congress in determining the procedures of his military commissions system. He was joined by Republican Senator Arlen Specter, who would become the Chairman of the Senate Judiciary Committee in 2003. Both suggestions were ignored by Bush, and Congress was left in the dark. In the spring of 2002, both senators tried again to engage the Bush administration in collaboration on the military tribunal system by introducing legislation which would essentially codify the procedures already used by the Department of Defense. However, these offers were also ignored by Bush.

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The War Powers Resolution of 1973 requires, whenever presidential war powers have been authorized by Congress, that the President to consult with Congress “in every possible instance.” In the spring after Congress issued the Authorization for Use of Military Force against terrorism, the Senate Judiciary Committee held hearings on “Applying the War Powers Resolution to the War on Terrorism.” In these hearings, the committee considered “the perennial constitutional dilemmas related to the use of force by the American government.” One of those who spoke at the hearings was Alton Frye, Presidential Senior Fellow and Director of the Council on Foreign Relations. In his testimony, he advised the committee that those constitutional dilemmas “become particularly acute when the nation is faced with so grave and ill-defined a threat as the protracted war on terrorism that lies ahead.” He went on to explain the necessity of close consultation between the president and Congress in great detail and stressed to the senators that consultation “goes beyond congressional hearings and reports. Useful as committee hearings may be, I believe the Congress as a whole needs to construct a stream of regular, collective verdicts to test and convey its current stance on the evolving campaign against terrorism.”

Congress did not heed this advice, however, and for more than four years did not pass any resolutions or legislation that pertained to the military commission procedures in any way.

In March 2002, the American Bar Association offered to assist the Bush administration in developing legally sound procedures for military commissions. They were rejected by Defense Department General Counsel William J. Haynes II, who said that there “was not enough time.” But by November 2002, officials said that the administration wasn’t in a hurry anymore to try suspected terrorists by military commissions. Administration officials by that time were confident that they could hold detainees indefinitely. One official explained to the New York Times, “[t]he priority now is to continue to gather intelligence from these people, not to put them before any kind of court.” This shift by the Bush administration is evident in the announcement in October 2002 that an unknown number of detainees from unknown countries would be released in an undisclosed location at an undisclosed time. In explaining why a small number of the nearly 600 detainees would be released, Secretary Rumsfeld stated that they were “no longer of interest to the United States.” He went further to admit that “there are some people likely to come out the other end of the chute.” By the end of 2002, more than a year after military operations in the GWOT began, an unknown number of detainees had been released, and none had even been designated as eligible for trial by military commissions.

It is not publicly known exactly how many detainees have been held in Guantanamo Bay throughout its time as a military detention facility, but it is known that the population of Guantanamo Bay reached its peak on May 9, 2003, with 680 prisoners. It was two months after this that Bush finally designated some of the individuals imprisoned for suspicion of terrorism as eligible for trial by military commission. Out of the hundreds of detainees, only six are so designated by President Bush. Thus, it was more than a year after the procedures

45Public Law 93-148.
for the military commissions were released that the process was first set in motion. One senior military official at the time of the designation noted, “Things will start to move rather quickly now.” But 2003 ended the same as 2002: with more suspected terrorists imprisoned, some of them released, but not one of them brought before a military commission.

In fact, it was not until February 2004 that charges were even brought against a detainee. As for the remaining hundreds of people who are only suspected of terrorism, White House counsel Alberto R. Gonzales said they could be imprisoned forever and “need not be guilty of anything.” Pentagon officials also added that even if a terrorist served his entire sentence, he still might not be released.

In June 2004, the U.S. Supreme Court made one of its first rulings on the cases brought against the Bush administration for the military commission system. In *Hamdi v. Rumsfeld*, the Supreme Court ruled that even prisoners detained in a military conflict are entitled to some form of due process to challenge their status as an enemy combatant. This was, in the words of the Supreme Court, “to ensure that the errant tourist, embedded journalist, or local aid worker has a chance to prove military error.” The Department of Defense spent only one week developing these tribunals before announcing its compliance with the Supreme Court’s ruling. These Combatant Status Review Tribunals (CSRT’s) are the first chance that the detainees have been given to challenge their classification as an enemy combatant, and they are constructed only in response to a Supreme Court ruling.

However, CSRT’s only help detainees who can present sufficient evidence that they are not enemy combatants, and the detainees are not given an attorney to assist them in their defense. It must be wondered how many detainees could present evidence of their innocence beyond their own testimony when they have already been imprisoned for as much as two-and-a-half years.

For the next few months, the detainees imprisoned at Guantanamo Bay were rushed through the review proceedings so that four detainees could be tried before military commissions in August. Before the preliminary hearings of these detainees, John Altenburg Jr., the appointing authority for the Office of Military Commissions, explained to the press that many details of the military commissions process were being worked out as they progressed. One of the military lawyers, Lt. Cmdr. Philip Sundel, went further to say that “no one is really sure what will happen . . . The entire process is still in flux and is so poorly designed and the definitions are so ambiguous, yet they keep saying this is a full and fair process. How would an average person feel going into court without knowing the rules in advance?”

One official from the National Institute of Military Justice who was also a former Coast Guard lawyer agreed, saying, “Everybody in the profession is trying to figure out

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what’s going on. A lot of these rules have been made up as they go along and they are still making up new rules.”

Given these observations, it is not surprising that the preliminary hearings for the military commission trials are a complete disaster. In the month following the hearings, officials admitted in a New York Times article that “the process is in turmoil” and that “there will be substantial changes made in coming weeks to restore credibility.”

As the first trial was about to begin, a federal judge issued a ruling that halted the military commissions entirely. The ruling was made on the grounds that President Bush had ignored basic provisions of the Geneva Convention and exceeded the powers of the presidency.

After three years of preparation, a motion was filed urging the Bush administration to completely abandon its military commissions system and use the procedures established by the UCMJ. The motion was not filed by Michael Moore; it was filed by the deputy chief judge of the Air Force Lt. Col. Sharon Shaffer. When the year 2004 came to a close, the Bush administration’s military commission system had the same record as before: more detainees imprisoned, some released, but not one of the suspected terrorists brought to trial.

In July 2005, eight months after the military commission hearings were halted, the U.S. Court of Appeals for the District of Colombia reversed the lower court’s ruling. In response to the ruling, the new Deputy Secretary of Defense Gordon England promised that “the Department of Defense will resume commission proceedings immediately.” However, more cases were filed against the government program, and on September 1, 2005, the Pentagon announced a major set of changes to the procedures used by military commissions. These changes were intended to make the commission system “more efficient” and respond to mounting international criticism (including that of our allies) that the system was unjust.

The first act of Congress to participate in the development of procedures for military commissions was the Detainee Treatment Act (DTA) of 2005, which was actually an amendment to a Department of Defense appropriations bill. Although Congress had more than four years to develop procedures of some kind, the DTA simply empowered the Bush administration to proceed by making up the rules as they went along. The act is ironically praised for prohibiting the use of torture by the president in the GWOT. While the act prohibits “cruel, inhuman, or degrading treatment or punishment” of detainees and requires “uniform standards” of interrogation, it gives the president the power to define and promulgate the rules on torture (which it was doing anyway). The only other significant effect the DTA had on detainees was that it precluded them from challenging their detention in any court. By December 2005, more than 500 prisoners remained at Guantanamo Bay, a total of 294 had been transferred out of the facility, and not one had been tried as a terrorist.


62The Department of Defense Appropriations Act of 2006 (Title X, H.R. 2863)

63See note 50.
The year 2006 began optimistically, as military commission hearings were scheduled to resume on January 11.\(^{64}\) On January 20, charges were referred for yet another detainee, and progress was being made toward his trial.\(^{65}\) However, with the Supreme Court prepared to rule on the constitutionality of the military commission system, President Bush admitted, “I’d like to close Guantanamo.” He went further to lament that “we’re holding some people that are darn dangerous and that we better have a plan to deal with them in our courts.” He maintained that military commissions were the best option available, but said that he and his administration were waiting on the Supreme Court to decide the issue.\(^{66}\) On July 29, 2006, the Supreme Court decided the issue and struck down the military commission policies of the Bush administration entirely. The court held that the power to create the military commissions “can derive only from the powers granted jointly to the president and Congress in time of war.”\(^{67}\) This ruling came nearly five years after the Bush administration decided not to consult with Congress on creating the military commission system and promised to “[think] it through very carefully . . . so that it is launched and engaged … properly from the very beginning, rather than having to get started and find it would have been better to do it another way and have to make a correction.”\(^{68}\)

It was this Supreme Court decision which gave “Congress and the administration a clear opportunity to work together to address the matters raised by the case, including the appropriate procedures governing military commissions.”\(^{69}\) So, the Senate Judiciary Committee had hearings where it was discussed what legislation would best legitimize the military commission system. Rather than developing legislation that would represent careful consideration and consultation of the issues of a new legal category for terrorism, Congress did nothing until September 6, when Bush introduced his own legislation.\(^{70}\) The proposed Military Commissions Act of 2006 was little more than a few minor procedural changes to the same ineffective system, but this did not stop members of the president’s party from praising him for finally engaging Congress in a “collaborative process.”\(^{71}\) Nonetheless, some senators expressed their weariness of the proposed denial of habeas corpus rights to detainees, despite the fact that legislation they had passed less than a year before went to great lengths to pre-

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\(^{67}\) 548 U.S. 27 (2006).

\(^{68}\) See note 37.


\(^{70}\) See note 29.

vent detainees from challenging their indefinite detention.\textsuperscript{72} To resolve the matter, the Senate Judiciary Committee held hearings on “Examining Proposals to Limit Guantanamo Detainees’ Access to Habeas Corpus Review.” One of those who testified was retired Rear Admiral John Hutson, who was also the president and dean of the Franklin Pierce Law Center. He testified that, “I’m surprised that anyone is suggesting jettisoning habeas corpus because it actually provides a reasonable way for us to extricate ourselves from the Gordian knot we have tied around our hands in dealing with long-term detention.”\textsuperscript{73} His words did not sway the Senate, and the bill was passed by Congress without a single amendment.\textsuperscript{74}

It seems strange that the bill passed without a single alteration when one considers the prior statements of senators such as Arlen Specter, Chairman of the Judiciary Committee, who said that the Military Commissions Act (MCA) was “patently unconstitutional on its face.” Surprisingly, Specter voted for the bill, as did many other senators who had made equally derisive comments about it. After the MCA passed the Senate, Specter had a different perspective, saying that there were some good items in it, and “the courts will clean it up” by striking the denial of habeas corpus rights to detainees. True to his earlier sentiments, when the Supreme Court agreed to hear the case of a detainee who challenged the constitutionality of the military commission system, Senator Specter filed an Amicus Curiae brief on behalf of the detainee.\textsuperscript{75} If the chairman of the Senate Judiciary Committee is supposed to be the most constitutionally conscientious member of Congress, it is a valuable insight into Congress’s character that he chose to pass legislation that he believed to be unconstitutional and rely upon the Supreme Court to clean up the mess.

To put the circumstances surrounding Congress’s passage of the Military Commissions Act into more context; it was mere weeks until the mid-term elections. Whatever the reasons were, when the Supreme Court gave Congress the perfect opportunity to carefully develop a framework that could address terrorism as a legal category, Congress and the Bush administration merely staged a compromise and resumed the status quo.

The Department of Defense had released yet another set of rules for the military commission system before the legislation passed.\textsuperscript{76} Of course, the legislation eventually did pass Congress and was signed into law on October 17, 2006.\textsuperscript{77} When 2006 came to an end, 111 more detainees were transferred from Guantanamo, three had committed suicide, and not one of them had been tried as a terrorist.\textsuperscript{78}


\textsuperscript{78}See note 50.
In January 2007, the Pentagon released a new comprehensive set of rules and procedures for the military commission system. Hearings were being prepared for some of the detainees who had been designated as eligible for trial by the president, charged with war crimes, and had not been transferred or released to another country. Pentagon officials said, however, that the less significant prisoners would be the first sent through the newly developed procedures. This decision displayed uncharacteristic forethought on the part of the Defense Department, because on June 4, when trial proceedings for the first two detainees to be tried as terrorists began, the charges against both detainees were dismissed by the presiding military judge. The Bush administration has since appealed the decision, but has not yet made any additional procedural changes to correct the problem.

E. The Phantom Legal Category of Terrorism

The substantive and procedural elements produced by the Bush administration to combat terrorism have not formed a legal category. Two obstructions with those policies that have been developed are: (1) the arbitrary and inconsistent treatment of individuals suspected of terrorist activity; and (2) the incoherent string of events which the Bush administration refers to as a “process” for Guantanamo detainees. These two issues would have to be resolved before a legal category of terrorism could be developed.

The problem of inconsistent treatment emanates from the dichotomy between criminal and military jurisdiction created by the AUMF against terrorism. This is because all of the substantive and procedural elements developed over the 30-year evolution of U.S. counterterrorism policies remained in effect after the United States went to war against terrorists. In fact, both Congress and the Bush administration actually continued to create new criminal penalties for terrorism and expand police power to prosecute terrorists in the criminal justice system. It was only a little over a month after Congress passed the AUMF that it passed another major piece of legislation which granted the FBI and other government agencies unprecedented power to conduct criminal investigations against suspected terrorists. The USA PATRIOT Act, which was written by the Justice Department, was approved by Congress before most lawmakers even read it. It provides criminal investigators increased authority to curtail the civil liberties of suspected terrorists, whether they are foreigners or U.S. citizens. Apparently neither branch of government realized that when an entirely new paradigm is ushered in, something must be done with the old one.

Military operations in the GWOT began more than six years ago, and it has never been resolved whether suspected terrorists are subject to criminal prosecution or military detention. This dichotomy has been handled by the Bush administration in an exceedingly inconsistent and ad hoc manner. Whenever a decision is made between one system or the other, that decision is still subject to change at any time. On one occasion, when the president changed his mind and moved a detainee out of the military commission system and into the criminal justice system, officials even emphasized to the press that the decision would have


83Doyle 2002.
no bearing on any future decisions. Rather than developing the “automatic process” that Bush promised during his first year (more than six years previous), the administration prevented any structure or precedent from developing and forming a legal category.

The harder one searches for a rule or precedent in how suspected terrorists are treated, the deeper the rabbit hole goes. The president’s military order suggests that military detention only applies to non-citizens, but U.S. citizens have been subject to both criminal prosecution and military detention. Likewise, non-citizens have been both convicted in criminal courts and held in indefinite detention by the military.

In 2001, when Secretary Rumsfeld was asked about the overlap between the criminal justice system and the military commission system, his explanation was that “the Department of Justice has a totally different set of issues than does the military . . . I think to even begin to compare them is not a good idea.” He went on to discuss a hypothetical situation in which someone would have to determine what to do with a detainee:

[I]t may be something that would be handled by the Department of Defense totally apart from the military commission[s] . . . It may be handled in any number of ways. It could also be handled by another agency of government. It could end up being handled by the Department of Justice.

The Bush Administration appears to be aware of this inconsistency, but has only blurred the lines between jurisdictions further by moving suspected terrorists form one to the other without explanation or justification. The key to differentiating between suspected terrorists cannot be found in contrasting the definitions of “unlawful enemy combatant” and “terrorist” either. The Manual for Military Commissions defines an enemy combatant as:

A person who has engaged in hostilities or who has purposefully and materially supported hostilities against the United States or its co-belligerents who is not a lawful enemy combatant (including a person who is part of the Taliban, al Qaeda, or associated forces).

If a lawful enemy combatant is essentially a professional soldier of a nation who wears a distinctive uniform, then an unlawful enemy combatant could be easily defined as someone who engages in “the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives,” which is the FBI’s definition of terrorism. Unfortunately, both are so broad and vague that it is impossible to find solid distinctions. In part, it is this overlap which allows President Bush to transfer suspected terrorists between the military commission system and the criminal justice system at his discretion.

Consider the case of Jose Padilla, a U.S. citizen who was arrested by law enforcement officials on May 8, 2002, because he was supposed to testify as a material witness in someone else’s trial. After a month in the custody of the Justice Department, he was designated by President Bush as an “enemy combatant,” based on allegations that he planned to deto-
nate an explosive somewhere in the United States. He was then transferred from the civil court system to a military compound. Once in military custody, the Department of Defense did not allow him to meet with the attorney that he had consulted before. In December of that year, a federal judge ruled that the president cannot deny Padilla access to his lawyer. He remained in military detention until December of the following year, when a federal appeals court ruled that the president cannot indefinitely detain an American citizen. It was not until March of 2004 that the Bush administration allowed Padilla to meet with his lawyer. In July 2004, Padilla’s appeal finally reached the U.S. Supreme Court. Instead of ruling on the question of whether the president can detain U.S. citizens indefinitely and deny them their legal rights based on mere allegations, the Supreme Court ruled that Padilla’s lawsuit was filed in the wrong place. He filed the lawsuit again, and in February 2005 a different federal judge ruled that the president cannot hold an American citizen. This time the federal appeals court reversed the lower court’s ruling. When the case was about to reach the Supreme Court where the question could finally be settled once and for all, Bush transferred him back to the civil court system. No charges were brought against Padilla while he was detained in the military tribunal system.91

The second major problem with this “phantom” category of terrorism is the baffling series of events which the Bush administration characterizes as a “process” for determining who is really a terrorist and who is not. Although the administration has instituted procedural elements which make affirmative and negative determinations about detainees, these elements are merely disjointed and arbitrary parts of a sequence of events that leads nowhere. Contrasted with the process provided by the criminal justice system or even the military justice system as set forth in the UCMJ, the procedural elements of the military commission system appear to be more of a black hole (See Appendix 2) in which almost nothing can be resolved.

To begin with, an individual who is suspected of terrorism can be imprisoned at Guantanamo Bay at the whim of military interrogators and Washington bureaucrats.92 There are no standards whatsoever to govern how much evidence is required to imprison someone in a military compound. Once a person is imprisoned at Guantanamo, he is only entitled to one hearing to prove his innocence. These hearings are called Combatant Status Review Tribunals (CSRTs), not to be confused with legitimate fact-finding proceedings such as criminal trials. Their only purpose, as described in the memorandum governing their implementation, “is to determine, in a fact-based proceeding, whether the individuals detained by the Department of Defense at the U.S. Naval Base Guantanamo Bay, Cuba, are properly classified as enemy combatants and to permit each detainee the opportunity to contest such designation.”93 As the only guaranteed opportunity for detainees to contest their indefinite imprisonment, CSRTs are ineffective at properly determining whether someone is or is not an enemy combatant. This could be because they were created in the Bush administration’s rush to avoid judicial review, rather than being created out of a concern for providing detainees any hope of proving their innocence. For example, detainees are not given an attorney or advocate to assist them in presenting evidence of their innocence. As a matter of fact, these “Personal Representatives,” as they are called, are instructed to inform the detainees, “I am neither a lawyer nor your advocate, but have been given the responsibility of assisting your

91See note 85.
preparation for the hearing. None of the information you provide me shall be held in confidence and I may obligated to divulge it at the hearing.”

Personal Representatives essentially just explain the procedure to detainees and stand next to them at the hearing. Another factor which stacks the deck against detainees is the instructions to the tribunal that “Preponderance of evidence shall be the standard used in reaching this determination, but there shall be a rebuttable presumption in favor of the government’s evidence.” This presumption is particularly disastrous for detainees because they are only allowed to present “reasonably obtained evidence” and cannot examine any evidence which is deemed classified. However, if the CSRT does find that the detainee is incorrectly classified as an enemy combatant, then a recommendation is sent to the Secretary of State to find some place to send or otherwise dispose of the detainee. At such time adequate conditions of release (whatever those may be) are found, the detainee is transferred out of Guantanamo Bay.

There is another proceeding which can result in the release of fortunate detainees, which is conducted annually by Administrative Review Boards (ARBs). However, the function of ARBs is not even fact-based. The purpose of ARBs is to “provide an annual review to determine the need to continue to detain enemy combatants . . . or explain why the enemy combatant’s release would otherwise be appropriate.” They are not supposed to “render an opinion on any legal issues related to an enemy combatant’s case,” but instead simply determine “whether there is a reason to believe that an enemy combatant continues to pose a threat to the United States or its allies.” In this proceeding, detainees are not provided even a Personal Representative, and still cannot be present when any classified information is being considered by the board. If the ARB cannot find any reason to suspect that a detainee could be dangerous, then it will make a recommendation that the detainee should be released. This recommendation is not final, however, and must be reconsidered by the Designated Civilian Official (DCO). If the DCO approves the recommendation then it is sent to the Secretary of Defense who forwards the information to the Secretary of State. The Secretary of State will then try to find a suitable place to send the detainee.

For a prime example of how inadequate these procedures are: it has been reported that a German citizen was transferred to Guantanamo Bay in 2002, even though U.S. intelligence officials agreed that the man was innocent. The CSRTs and ARBs, however, determined that he was a dangerous ally of al Qaeda and should remain imprisoned. Intelligence officials had earlier found that Murat Kurnaz, who was picked up in Pakistan, had just chosen a bad time to visit religious sites. The records of the tribunals showed that the members based their conviction that the man was an ally of al Qaeda on a memo from a U.S. brigadier general. However, the memo merely stated that he had prayed during the recitation of the U.S. national anthem and that he had “expressed an unusual interest in detainee transfers and the guard schedule.” Kurnaz, who U.S. intelligence officials believed was innocent, was not released from Guantanamo Bay until August 2006, nearly five years after he arrived there.

Aside from these two proceedings, detainees are not guaranteed any chance to ever be released from Guantanamo Bay. Ironically, one of their only hopes is to be designated by the

94Ibid.


president to be eligible for trial by military commissions. Aside from proceeding toward a trial by military commission, a detainee has few other possible avenues out of Guantanamo Bay. One is to be transferred to the custody of another government for trial under its criminal justice system. Another possibility is that the president could transfer the detainee to the criminal justice system. If a detainee is particularly lucky, then her home country could negotiate for her release. In fact, there have been multiple occasions where President Bush has released the imprisoned nationals of U.S. allies despite objections from the Department of Defense, the Department of Justice, and the Central Intelligence Agency.

If none of these occur, then the detainee’s only other chance is to be given an opportunity to prove innocence in a military commission trial. Even if a detainee is designated by the president to be eligible for trial by military commission, the detainee still must have charges brought against him in order to make any further progress. Fewer than 30 detainees have ever had charges brought against them, and not one has ever made it to trial. As a matter of fact, trial by military commission is the least likely way a detainee will be transferred out of indefinite detention at Guantanamo Bay. The only detainee who has ever gotten close to trial was an Australian named David Hicks. Before the trial could even be attempted, Hicks plead guilty and gave the military commission system its first conviction. A sentencing hearing could not be attempted either, because Australian Prime Minister John Howard convinced the Bush administration to return Hicks and another Australian detainee to their home country. In fact, Hicks’ guilty plea was a part of the “going home” deal.

Considering the competing ambiguous substantive elements with these failed procedural elements, we find something similar to Alice’s rabbit hole where we have created the need for a legal category. With only bits and pieces of a whole category, all we are left with is the phantom legal category of terrorism.

IV. Dilemmas of an Undeveloped Legal Category

A. The “black hole” in which suspected terrorists find themselves

It is admitted even by the Bush administration that not all detainees at Guantanamo Bay are terrorists. Yet, the administration also insists that there are “many dangerous detainees

99 See note 85.
104 See note 99.
in Guantanamo, who would pose a threat to the United States and other countries if they were released." 105 While hundreds of detainees have been released, only one has ever pled guilty. It was estimated in 2006 that as much as 10 percent of those released from Guantanamo have “returned to fighting us in Afghanistan.” 106 From these figures alone, the military commission system is not working.

When President Bush admitted that he would like to close Guantanamo Bay, he explained that it could not be done because the detainees were too dangerous to be set free. 107 “Part of closing Guantanamo,” the president said, “is to send some folks back home, like we’ve been doing.” 108 The Central Intelligence Agency has been trying to limit its responsibility for Guantanamo Bay since early 2005. It began by trying to work with the State Department and other agencies to transfer as many detainees as possible out of the facility. 109 Another possibility the CIA considered was trying to shift responsibility for Guantanamo detainees to the FBI, but FBI officials made clear that they would oppose any such attempt. Frustrated with the CIA’s role as sole custodian, one senior intelligence official said, “No one has a plan for what to do with these guys, and the CIA has been left holding the bag.” 110

Unfortunately, many countries do not want these detainees who have been consistently labeled “terrorists” back into their countries, and are in no way obligated to do so. As of June 2007, there were 80 detainees who had been found eligible for release by ARBs. The home countries of those detainees, however, would not take them back. 111 John Bellinger, an advisor to the State Department, explained that the administration has three serious issues it must resolve before Guantanamo can finally be shut down: (1) it must find somewhere to put the 80 detainees who have been found innocent; (2) it has to work out a way to determine the guilt or innocence of another 60 to 80 detainees; and (3) it eventually has to decide what to do with the more than 200 remaining detainees that the administration does not want to release or try. 112 The Bush administration has instituted a system which, because of an undeveloped legal category, has created a void and filled it with people that it now cannot figure out what to do with.

B. Loss of international credibility

When President Bush confessed that he wanted to close Guantanamo Bay, he also admitted that “Guantanamo sends a signal to some of our friends – provides an excuse, for example, to say the United States is not upholding the values that they’re trying to encourage

106 Ibid.
other countries to adhere to."\(^{113}\) Former Secretary of State Colin Powell has argued for the closing of Guantanamo Bay from the beginning. In an interview he said, “Guantanamo has become a major, major problem ... in the way the world perceives America, and if it were up to me I would close Guantanamo not tomorrow but this afternoon.”\(^{114}\) In fact, the new Secretary of Defense, Robert Gates, has argued since his appointment that Guantanamo Bay has ruined the reputation of the United States abroad.\(^{115}\) For that reason and the fact that the legal process is internationally regarded as illegitimate, Secretary Gates has pushed for the closing of Guantanamo Bay.\(^{116}\)

The United Nations has expressed opposition to the military detentions at Guantanamo Bay several times over the years. In 2005, several UN human rights experts characterized the activities of the United States at the detention facility as “amount[ing] to inhuman and degrading treatment.”\(^{117}\) A year later, UN Secretary-General Kofi Annan backed a United Nations report calling for the closure of Guantanamo Bay.\(^{118}\) One of the first acts of the current UN Secretary-General Ban Ki-moon was to proclaim his opposition to the military commission system and the detentions at Guantanamo Bay.\(^{119}\) Even the United Kingdom, arguably the most faithful ally of the United States, has found the military detentions unacceptable to human rights and ineffective in combating terrorism.\(^{120}\)

C. Lingering legal questions

The most ominous developments of the blunders of the Bush administration in the GWOT are the “perennial constitutional dilemmas” that Congress was warned about shortly after the war began.\(^{121}\) The military commission system and the treatment of suspected terrorists at Guantanamo Bay have unleashed a host of unanswered legal questions about the president’s power as commander-in-chief of the armed forces. Since the global war on terrorism began, the Bush administration has fought using methods as unconventional and unprecedented as the terrorists themselves. Presidential wartime powers have expanded into uncertain and shadowy areas that Congress has taken no part in abating. The Supreme Court has been the only body to assert limits on the alleged privilege of the commander-in-chief.\(^{122}\)

\(^{113}\)See note 109.


\(^{121}\)See note 47.
Unfortunately, the Supreme Court is hesitant to intrude into what it describes as "the authority of the Executive in military and national security affairs," noting that Congress and the Bush administration have disregarded their responsibility to consult each other and cooperatively establish the substantive and procedural elements necessary for a complete legal category. For example, the Bush administration ignored the offers by Congress to give official sanction to his detention policies and proceeded with its military commission program without knowing whether such an action was constitutional.

When the Supreme Court was resolving the issue, President Bush said, "the best way to handle – in my judgment, handle these types of people is through our military courts. And that’s why we’re waiting on the Supreme Court to make a decision." The Supreme Court then ruled that the action was unconstitutional and struck down the entire program. If the president would have taken that first step toward cooperation with Congress, then there would not have been the scramble to quickly institute the same inadequate procedures as happened with the Military Commissions Act. Congress has been equally culpable in the disregard for constitutional obligations by not passing any legislation or resolutions providing guidance or accountability to the president. Even the chairman of the Senate Judiciary Committee, Senator Arlen Specter (Rep. PA), would pass a law he believed to be unconstitutional and let the Supreme Court “clean it up.”

V. Conclusion

A legal category must be consistent and thorough, which requires consultation and cooperation between all branches of government. This has not happened with respect to terrorism, which is why the United States has found itself in hot water with the international community over a prison which may or may not have terrorists in it that no one can figure out what to do with.

If it is Congress’s job to create laws, and it is the president’s job to find the best way to enforce them, it is paradoxical that both have relied on the Supreme Court to develop the legal category through rulings. Congress has not created a sound policy for combating terrorism. Instead, it has allowed the Bush administration to institute whatever measures it chose and rubber-stamped the policy whenever prompted by the Supreme Court. Conversely, the Bush administration has abandoned any obligation to find the most effective method of combating terrorism. The military commission system, which was created as the only “practicable” method of bringing terrorists to justice, has not sentenced a single one. The record of Bush’s military commissions speaks for itself. Secretary Rumsfeld once told Tim Russert on NBC’s Meet the Press, “Do you treat terrorists differently than you do people in the criminal justice system? . . . That [issue] deserves debate and discussion . . . The criminal justice system that we use for a car thief or a bank robber in the United States wouldn’t work for terrorists.” Despite this belief the Bush administration continued to allow the Justice Department to promulgate ineffective counterterrorism policies. Surpris-

124 See note 109.
125 See notes 75 and 76.
126 Article 1, U.S. Constitution.
127 Article 2, U.S. Constitution.
ingly, there was no policy shift when the Justice Department announced on September 5, 2006, that it had convicted 288 persons of terrorism or terrorist-related activities since September 11, 2001. In addition to these 288 individuals, there were also 168 other defendants charged with terrorism or terrorist-related activities that were on their way to a reliable court system. At least 11 of those terrorist convictions were also connected in some way with al Qaeda or the Taliban. The point is not that the criminal justice system is the most effective way to combat terrorism, but rather that developed substantive and procedural elements of a legal category are indispensable if the legal system is going to work. If Congress and the Bush administration had worked together to address this “new enemy” to create new methods of combating it, then the Guantanamo Bay Crisis would never have emerged.

Interestingly enough, now the Bush administration is trying to shut the prison down, senior advisors to the president are considering if they can work with Congress to develop legislation that would allow long-term detention on American soil. In fact, the New York Times has reported that the “idea of creating a new legal category for some foreign terrorism detainees . . . is gaining support among some White House and national security officials as the most promising course to allow the president to close the site at Guantanamo Bay, Cuba.”

Works Cited


Appendix

A.) Detainee is transferred to the custody of another government.
B.) President transfers the detainee to the civil court system.
C.) Diplomatic ally of the U.S. negotiates for the transfer/release of a detainee.
D.) Combatant Status Review Board Tribunal Hearing.
F.) Recommendation for the transfer/release is accepted by the Defense Department, Justice Department, FBI, CIA, and other agencies.
G.) A.R.B. recommendation is approved by a designated civilian official.
H.) Charges are brought against the detainee.
I.) Detainee is found innocent or is found guilty and serves sentence.
J.) A suitable country is found for the detainee to be released in.
K.) Detainee is designated to be eligible for trial in a military tribunal by the President.
AIMS Festival Performance

Dione Johnson

Edoardo Müller
Director, AIMS
Musik ohne Grenzen
AIMS Benefizkonzert für Ärzte ohne Grenzen
Stefaniensaal, Donnerstag, 2. August 20:00

AIMS Festival Orchestra und Solisten
Musikalische Leitung: Edoardo Müller
Musikalische Einstudierung: Robert Thieme

Wolfgang Amadeus Mozart
(1756 - 1791)

aus Die Zauberflöte (1791)
(Libretto: Emanuel Schikaneder)

Ouverture
O zittre nicht
Königin der Nacht: Alexandra Picard, Sopran

Hm! Hm! Hm! Hm!
Papageno: Zoltán Nagy, Bariton
Tamino: Charlie Choel Kim, Tenor
Drei Damen:
Katrina Holden, Sopran
Dolores Noel, Sopran
Cathleen Candia, Sopran

Bilder auf der Titelseite: oben - Pressebilder des Musikbretz HerbstroHatten, Dänemark (Die Zauberflöte)
unten - Ráné Fleming als Violetta in La Traviata. Photo: Los Angeles Opera and Robert Millard
Programm

Ach, ich fühls
Pamina: Julie Bermel, Sopran

Bald prangt, den Morgen zu verkünden
Drei Knaben: Martin Püllmann, Jakob Leitner, Patrick Hahn
Pamina: Yungee Rhie, Sopran

Papageno! Papageno!
Papageno: Mark Wanich, Bariton
Drei Knaben:
Martin Püllmann, Jakob Leitner, Patrick Hahn
Papageno: Dione Johnson, Sopran

« « PAUSE » »

Giuseppe Verdi
(1813 - 1901)

aus La Traviata (1853)
(Libretto: Francesco Maria Piave)

Preludio

Un di felice, eterea
Violetta: Heather Ousley, Sopran
Alfredo: Adam Cromer, Tenor

Bitte nur während des Applauses fotografieren.
Photography is permitted only during the applause.
Tonbandaufnahmen sind nicht gestattet.
Recording is not permitted.
Das Publikum wird gebeten, nicht hinter die Bühne zu kommen.
The audience is asked not to come backstage.
Programm

Ah, fors’è lui che l’anima
Violetta: Theresa Bickham, Sopran
Alfredo: Adam Cromer, Tenor

De’ miei bollenti spiriti
Alfredo: Yi Jie Shi, Tenor

Di Provenza il mar, il suol
Germont: Brian A. R. Newland, Bariton

Preludio Atto Terzo

Addio del passato
Violetta: Lisa Eden, Sopran

Parigi, o cara, noi lasceremo
Annina: Lynne Ricci, Mezzosopran
Violetta: Lisa Eden, Sopran
Alfredo: Dominick Chenes, Tenor

Die Grazer Kapellknaben ...
