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## Message from Nancy M. Giardina

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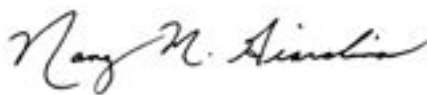
We are proud to present the tenth volume of the Grand Valley State University McNair Scholars Journal. It is the culmination of intensive research conducted by our student scholars and their faculty mentors through our Ronald E. McNair Scholars Program.

The Ronald E. McNair Scholars Program, now in its 12th year here at Grand Valley State University, provides an opportunity for students and faculty to apply much of what is learned within the classroom by engaging, outside the classroom, in research activities in a particular area of scholarly interest. These research activities provide a journey through the challenges and affirmations of scholarly work and better prepare students for graduate study and the pursuit of a doctoral degree.

Thank you to the faculty mentors who have worked so closely with our McNair Scholars to propel their research skills towards the next level of educational challenges.

Congratulations to the twelve McNair Scholars whose research is presented here. Your journey and the challenges you have met during this scholarly activity speak to your talents and persistence in pursuing both your educational and life goals. Thank you for sharing your talents with the university community and continuing the spirit of this program.

Finally, thank you to all the people behind the scenes that work to sustain this program and produce this journal. Your work is valued as well.



Nancy M. Giardina, Ed.D.  
Assistant Vice President for Academic Affairs



**GRAND VALLEY  
STATE UNIVERSITY**

## ***Before You Can Make A Dream Come True, You Must First Have One.*** — Ronald E. McNair, Ph.D.

**R**onald Erwin McNair was born October 21, 1950, in Lake City, South Carolina, to Carl and Pearl McNair. He attended North Carolina A&T State University where he graduated Magna Cum Laude with a B.S. degree in physics in 1971. McNair then enrolled in the prestigious Massachusetts Institute of Technology. In 1976, at the age of 26, he earned his Ph.D. in physics.

McNair soon became a recognized expert in laser physics while working as a staff physicist with Hughes Research Laboratory. He was selected by NASA for the space shuttle program in 1978 and was a mission specialist aboard the 1984 flight of the USS *Challenger* space shuttle.

After his death in the USS *Challenger* space shuttle accident in January 1986, members of Congress provided funding for the Ronald E. McNair Post-Baccalaureate Achievement Program. The goal is to encourage low-income, first generation students, as well as students who are traditionally under-represented in graduate schools, to expand their opportunities by pursuing graduate studies.



## **Ronald E. McNair Post-baccalaureate Achievement Program**

### ***The Purpose***

The McNair Scholars Program is designed to prepare highly talented undergraduates to pursue doctoral degrees and to increase the number of individuals (from the target groups) on college and university faculties.

### ***Who are McNair Scholars?***

The McNair Scholars are highly talented undergraduate students who are from families with no previous college graduate, low-income background or groups under-represented at the graduate level for doctoral studies. The program accepts students from all disciplines.

### ***Program Services***

The McNair Scholars are matched with faculty research mentors. They receive academic counseling, mentoring, advising, and GRE preparation. In addition to the above services, the McNair Scholars have opportunities to attend research seminars, conduct research, and present their findings orally or written via poster presentations. In the first semester of their senior year, the scholars receive assistance with the graduate school application process.

### ***Funding***

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## Table of Contents

# 2006 McNair Scholars

### **Charlene Boyd**

Coping and emotional intelligence in women with a history  
of eating disordered behavior. . . . . 5  
Faculty Mentor: Andrea Rotzien, Ph.D.

### **Erika Buckley**

A Cross-Cultural Study of Weddings through Media and Ritual:  
Analyzing Indian and North American Weddings. . . . . 13  
Faculty Mentor: Jennifer Stewart, Ph.D.

### **Ebonē S. Colbert**

Media Coverage of the Civil War in El Salvador . . . . . 29  
Faculty Mentor: Julie Guevara, Ph.D.  
Faculty Mentor: Toni Perrine, Ph.D.

### **Rachel A. Dudley**

Confronting the Concept of Intersectionality: The Legacy of Audre Lorde  
and Contemporary Feminist Organizations . . . . . 37  
Faculty Mentor: Marshall Battani, Ph.D.  
Faculty Mentor: Dennis Malaret, Ph.D.

### **Beth Fisher**

Presidential Rhetoric: How John Adams and George W. Bush  
Used Religion to Effectively Communicate with Their  
Respective Constituency. . . . . 47  
Faculty Mentor: Fred Antczak, Ph.D.

### **Eric Gladstone**

Nookaler ambitions: a social-psychological analysis of persuasive speech. . 55  
Faculty Mentor: Jennifer Stewart, Ph.D.

### **Melissa Guzman**

Inducing The Holy Spirit through the Pentecostal Message . . . . . 67  
Faculty Mentor: George Lundskow, Ph.D.

### **Brent Hehl**

Exploring Important Protein Interactions in the Mammalian  
Diaphanous-Related Formins: A Closer Look at the Relationship  
between the Intracellular Skeletal Network and a  
Single Amino Acid Residue . . . . . 77  
Faculty Mentor: Bradley Wallar, Ph.D.

## Table of Contents

# 2006 McNair Scholars

### **Brandi Murrell**

Advanced High Temperature Semiconductor Packaging Material  
Based on PBO Foam Technologies . . . . . 83  
Faculty Mentor: Robert Smart, Ph.D.

### **Rebekah Nicholson**

The Enlightenment and Its Effects on the  
Haitian Revolution of 1789-1804. . . . . 89  
Faculty Mentor: Grace Coolidge, Ph.D.  
Faculty Mentor: David Eick, Ph.D.

### **Stephanie A. N. Payne**

Epitope Labeling of Histidine Decarboxylase in *Drosophila melanogaster*. . . . 97  
Faculty Mentor: Martin G. Burg, Ph.D.

### **Catherine Willis**

Study of the human mitochondrial DNA polymorphism . . . . . 107  
Faculty Mentor: Alex Nikitin, Ph.D.

About the TRiO Programs . . . . . 116

# Coping and emotional intelligence in women with a history of eating disordered behavior



**Charlene Boyd**  
McNair Scholar

## Abstract

*Eating disorders pose a serious problem in our society. Studies have found that there is a negative correlation between eating disorders and emotional coping mechanisms, a factor of emotional intelligence (EI). This study was designed to discover if women who have a history of eating disorders resemble women who report no current or past history of eating disorders and women with current eating problems. Participants included 157 college females. It was found that women who reported a history of eating problems resembled the control group on most measures.*

## Introduction

Eating disorders pose a serious problem in our society. According to the Diagnostic and Statistical Manual of Mental Disorders 4th Edition Text Revised (DSM-IVTR), anorexia nervosa affects between .5 to 1% of females ages 14 to 18 (APA, 2000). Many more women are affected at a subclinical level. Anorexia is one of the deadliest mental health disorders; approximately 1 in 10 patients with anorexia will die of medical complications or suicide (Office on Women's Health, 2006). The symptoms of anorexia include: a refusal to maintain normal body weight (body weight less than 85% of what is expected); intense fear of becoming fat even when very slim; distorted self- image (patient sees herself as fat when she is not); and loss of menstrual cycles (DSM-IVTR, APA, 2000, pg. 589). There are two types of anorexia: 1) restricting type, where the person significantly reduces calorie intake and 2) binge-purge type, where the person has episodes of significant overeating followed by extreme efforts to get rid of the food (i.e., vomiting, laxative use, diuretics, or enemas). Approximately 50% of individuals with anorexia will later develop bulimia nervosa (ANRED, 2006).

Bulimia Nervosa affects 1-3% of women (DSM-IVTR, APA, 2000). Individuals with this disorder also experience significant concerns in regard to their body image, particularly shape and weight. While they tend to maintain normal or slightly above average weight, they engage in extreme binge episodes, followed by some form of compensatory behavior. For those with the purge type of bulimia, the behavior tends to be self-induced vomiting, laxative use, diuretics, or enemas. For the non-purge type, the behavior may include fasting or excessive exercise. Individuals with bulimia are at high risk for numerous medical complications, such as electrolyte imbalance, cardiac arrest,



**Andrea Rotzien, Ph.D.**  
Faculty Mentor

esophageal erosion or tears, dental problems, and other impulse control problems such as substance abuse (Office of Women's Health, 2006).

The most recently recognized eating disorder is binge eating. This may be the most common eating problem. Some researchers hypothesize that 15-50% of individuals participating in weight loss programs are binge eaters (DSM-IVTR, APA, 2000). Binge eaters consume extremely large amounts of food in short time periods. They report a lack of control while eating, and during these episodes, they may eat more quickly than normal, eat until they are uncomfortably full, eat when they are not hungry, and eat alone out of embarrassment. Many indicate that they feel guilty and unhappy after the binge. The complications that arise from this disorder are related to being overweight or obese and include high cholesterol, diabetes, and high blood pressure. Many are depressed (Office of Women's Health, 2006). Obesity, whether it involves binge eating or not, has become a significant problem in the U.S. Based on the 2003 Youth Risk Surveillance Report, 13.5% of U.S. students are overweight and an additional 15.4% are at risk for becoming overweight (CDC, 2004).

The final category is Eating Disorder Not Otherwise Specified (NOS). Individuals with this disorder do not quite fit the other diagnoses, but clearly exhibit eating disordered behavior. They may binge less frequently, not quite fall below the 85th percentile in weight, or purge after eating smaller amounts of food (DSM-IVTR, APA, 2000). Disordered eating is a common problem in America's youth. Recent research indicates that 13.3% of students report going without eating for longer than 24 hours to lose weight. Approximately 9% have taken diet pills, liquids or powders, and 6% have vomited or taken laxatives (Youth Risk Behavior Surveillance Survey, CDC, 2004).

Given the seriousness of these problems, a considerable amount of research has been conducted to better understand what variables correlate and/or predict the onset of eating disordered behavior. One area of particular interest has involved the relationship between eating disorders and emotions. For example, studies on individuals with anorexia have found that they have difficulty recognizing negative emotions in the faces and voices of others (Kucharska-Pietura, Phillips, Gernand, & David, 2003) and that they suppress their own negative feelings which appears to be related to interpersonal relationship problems and body dissatisfaction (Geller, Cockell, Hewitt, Goldner, & Flett, 2000). Gattellari and Huon (1997) found that people associate emotions with food. For people who feel the need to restrain themselves in regard to food, "forbidden" foods like carbohydrates and sweets are associated with pleasure, relaxation, and friendship. Unfortunately, the participants in this study also linked these foods to guilt and anxiety. Heatherton and Baumeister (1991) proposed a theory that eating in response to emotional arousal is a coping mechanism to deal with unpleasant emotions. Indeed stress and negative emotion have been repeatedly linked to binge eating (e.g., Abraham & Beumont, 1982; Costanzo, Mustante, Friedman, Kern, & Tomlinson, 1999). Thus, it appears that emotions and coping are related to eating disordered behavior.

Moreover, current mood problems and anger management play a part in the organization of emotions. Women with eating disorders are often times suffering from depressive symptoms (Matos, 2002). Coping strategies also play an important role in eating disorders. Women with past or current eating disorders use proportionately less purposeful problem solving and confrontive coping, and they seek less social support compared with dieting

women and women who are not dieting (Ghaderi & Scott, 2000).

Recently, a handful of researchers have begun to study the link between the construct of emotional intelligence and eating disordered behavior. Emotional intelligence, which grew out of the industrial organizational psychology literature, involves "the capacity to perceive emotions, assimilate emotion-related feelings, understand the information of those emotions, and manage them" (Mayer, Salovey & Caruso, 1999, p. 267). Based on the previous literature, the assumption is that individuals with eating disordered behavior would have a lower level of emotional intelligence than those without eating problems. Several initial studies using the research version of the emotional intelligence survey created by Mayer and Salovey found a negative correlation between eating disordered thoughts and behaviors and emotional intelligence (e.g., Bair & Rotzien, 2001; Rotzien, 2000; Rotzien, Radisic, Bair, & Rakers, 2001). Bair & Rotzien (2001) found that participants who reported being uncomfortable with negative emotions and overeating in response to them had lower levels of emotional intelligence. A follow-up manuscript that is currently under review by Cage, Pawlow, Daus, & Rotzien found similar results using the standardized and published emotional intelligence instrument. These are promising findings because emotional intelligence is believed to be a malleable skill. It is possible that improving an individual's ability to understand and manage emotions could serve as a treatment and prevention goal. Of course, many questions still remain.

Another method for testing the relationship between coping and emotional intelligence is to examine individuals who have recovered from eating disorders. If there is a strong relationship between these variables,



it seems that individuals who no longer engage in eating disordered behavior would have similar coping skills and emotional intelligence levels as individuals who have never had significant eating problems. Conversely, it is possible that individuals with a history of eating problems maintain their difficulties with emotions and thus would be more like individuals with current eating problems.

The purpose of the current study is to compare three groups of women on emotional eating, emotional expression, psychological functioning, anger management, coping skills, and emotional intelligence. The first group will be women who report a history of eating disordered behavior, but no current problems in this area. The second group will include women who report current eating disordered behavior, and the third group will include women with no current or previous eating disordered behavior. There are two hypotheses that will be examined. The first hypothesis is that women with a history of eating disordered behavior will more closely resemble women with no history of disordered eating on emotional intelligence. Specifically, women reporting current eating problems will have the lowest emotional intelligence scores, lending some credence to the idea that poor emotional identification and control are related to eating disorders. On the other hand, women who have no history of eating problems and those reporting that they no longer have eating problems will score higher on emotional intelligence; thereby, providing further support for the aforementioned theory. The second hypothesis is that women who have “recovered” from their eating issues will resemble the control group on other variables commonly associated with eating disorders including: body image, current mood problems, emotional eating, anger, self-silencing, and coping.

## Method

### Participants

The participants for this study were drawn from a larger sample of 538 college females. These women were recruited from the Introductory Psychology subject pool and received partial course credit for their participation. The mean age of the participants was 18.78 (SD = 5.0). A majority of the sample was Caucasian (85%), with the remainder including Black/African American (5%), Asian/Pacific Islander (4%), Hispanic (2.8%), Other/Biracial (2.6%), and Native American (.2%); a small proportion of the sample left this item blank. A majority of the sample was freshmen (80%) or sophomore (14%), and most lived in dorms (69%) or in apartments off campus (17%). This sample only includes females, because they tend to be the most likely to experience eating disorders. This study included 157 women; 51 women with a history of eating disordered behavior, 55 women with no history of eating disordered behavior, and 51 women with current eating disordered behavior.

### Instruments

Each participant completed a demographic questionnaire to obtain information on age, ethnicity, dieting history, and family history of psychological, health, and eating problems. The *Eating Disorder Inventory-2 (EDI-2)* (Garner, 1991) is a 91-item, self-report measure, which has been validated on both clinical and non-clinical populations and assesses the level of eating disorder symptomology. The individual responds to items using a 6-point scale (Always to Never). The measure has eight major subscales: Drive for Thinness, Ineffectiveness, Body Dissatisfaction, Interpersonal Distrust, Bulimia, Perfectionism, Maturity Fear, Introceptive Awareness, and

three provisional subscales: Impulse Regulation, Social Insecurity, and Asceticism. The EDI-2 is a strong measure with test-retest reliability coefficients of .80 and above. Internal consistency coefficients are also above .80. Factor analytic studies have confirmed the 8-scale structure, and several studies demonstrate evidence of positive correlations with personality measures and convergent validity in relation to other eating disorder measures. To examine body image, adapted versions of *Standard Figural Stimuli* (Silberstein, Striegel-Moore, Timko, & Rodin, 1988) and the *Body Shape Questionnaire (BSQ-10)* (Cooper, Taylor, Cooper, & Fairburn, 1987) were used. On the figural stimuli, participants examined figures of increasing size and noted which figure looked most like them and which figure they wanted to look like. On the BSQ, they rated their happiness or comfort with various body parts. The *Emotional Eating Scale (EES)* (Arnow, Kenardy, & Agras, 1995), a 25-item, self-report questionnaire, contains three subscales that reflect eating in response to various mood states. The *Silencing the Self Scale (STSS)* (Jack & Dill, 1992) is a 24-item, self-report measure of cognitive schemas related to intimate relationships. The *Brief Symptom Inventory (BSI)* (Cooper, Taylor, Cooper, & Fairburn, 1987) consists of 53 items and assesses for psychological problems such as depression or anxiety. The BSI scales include: Somatization, Obsession-Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. It also provides three global indices of distress: Global Severity Index, Positive Symptom Distress Index, and Positive Symptom Total. Derogatis (1993) reported that the BSI had good internal consistency reliability on the nine dimensions ranging from .71 to .85. No data are provided for the global

indices. Test-retest reliability ranges from .68 to .91. Factor analysis results indicate good validity as well. The *State-Trait Anger Expression Inventory-2* (STAXI-2) is a 57-item measure of anger feelings and expression. STAXI-2 includes the following subscales: Feeling, Feel Like Expressing Anger Verbally, Feel Like Expressing Anger Physically. Trait anger includes: Angry Temperament and Angry Reaction. Additional scores examine the expression of anger toward persons or objects in the environment, the suppression of anger, and the conscious control of anger. Reliability and validity data support the use of the instrument (Forgays, Forgays, & Spielberger, 1997). The *Mayer Salovey and Caruso Emotional Intelligence Test* (MSCEIT; Mayer, Salovey, & Caruso, 2002) is a 141-item, ability-based assessment of emotional intelligence with four subscales that measure how well people perform tasks and solve emotional problems. It has been shown to have good levels of reliability and convergent and discriminant validity. Finally, the *Coping Inventory for Stressful Situations* (CISS; Endler & Parker, 1990) is a 48-item inventory that measures three types of coping: Task-Oriented, Emotion-Oriented, and Avoidance Coping. It also identifies two types of avoidance patterns: Distraction and Social Diversion.

#### Procedure

Data were collected in groups during a two-hour session. During the session, the investigator obtained informed consent and asked each participant to complete the study materials, which included all of the instruments. We maintained the anonymity of each of the participants by assigning a number to their packets. The only place their names appeared was on the informed consent. For the BMI, we obtained each participant's height and weight in a separate room. At the end of the session, each participant was given a debriefing form that reviewed the general

aims of the study, the prevalence rate and seriousness of eating disorders in our society, and offered suggestions for seeking assistance if an eating problem is suspected. To protect the confidentiality of the participants and the integrity of the data, the materials were kept in a locked file cabinet in the principal investigator's office.

#### Results

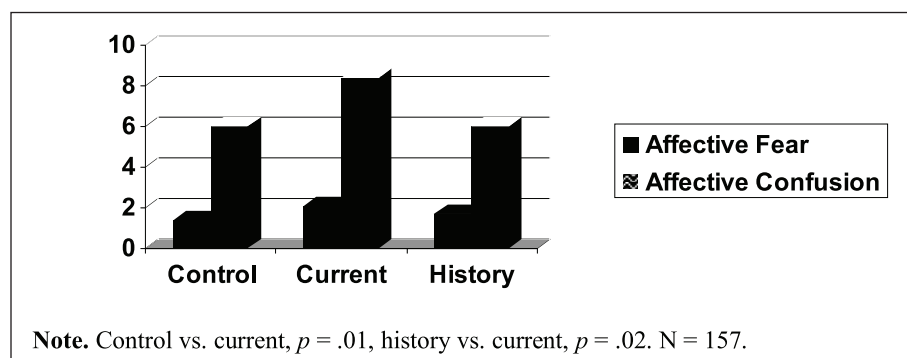
A Multivariate Analysis of Variance (MANOVA) was used to test the emotional intelligence scores of the three groups. It revealed no differences between the eating disordered groups on the total emotional intelligence total score,  $F(2, 154) = .213, p = .81$ . There were no differences between the groups on the subscales or subtests of emotional

intelligence. Thus, our first hypothesis was not supported.

To further examine emotional functioning between the groups, an ANOVA was conducted using cluster scores from the EDI-2. Differences were found on the affective confusion scale,  $F(2, 154) = 4.1, p = .02$ , but not the affective fear scale  $F(2, 154) = 1.8, p = .17$ . Post hoc analyses revealed that for affective confusion, there were no differences between the control group and the history group, but both groups had lower scores than the current eating problem group (Figure 1).

Our second hypothesis was supported. A number of differences were found between the groups on other measures (Table 1). These differences were generally in the expected direction.

**Figure 1.** Mean Scores on EDI-2 Affective Fear and Affective Fear Scales for Eating Disorder Groups.



**Table 1.** Significant MANOVA Results

Variable	<i>F(df)</i>	<i>p</i>	<i>Eta</i> <sup>2</sup>
BSQ Body Shape	13.0 (2, 154)	.00	.15
BSI-Global Severity	7.6 (2, 154)	.00	.09
Emotional Eating (Angry/Frustrated)	7.1 (2, 154)	.00	.09
Emotional Eating (Anxiety)	4.0 (2, 154)	.02	.05
Emotional Eating (Depressed)	6.3 (2, 154)	.00	.08
STAXI-Anger Expression Index	3.7 (2, 154)	.03	.05
STAXI-2 Trait Anger	3.4 (2, 154)	.04	.04
STAXI-2 Angry Temperament	3.2 (2, 154)	.05	.04
SSTS-Silencing the Self	2.4 (2, 154)	.10	.03
CISS Avoidance Coping	4.3 (2, 154)	.02	.05
CISS Social Diversion	3.4 (2, 154)	.04	.04
CISS Emotion Focused Coping	2.6 (2, 154)	.08	.03



Figure 2. Mean Score on Body Shape Questionnaire..

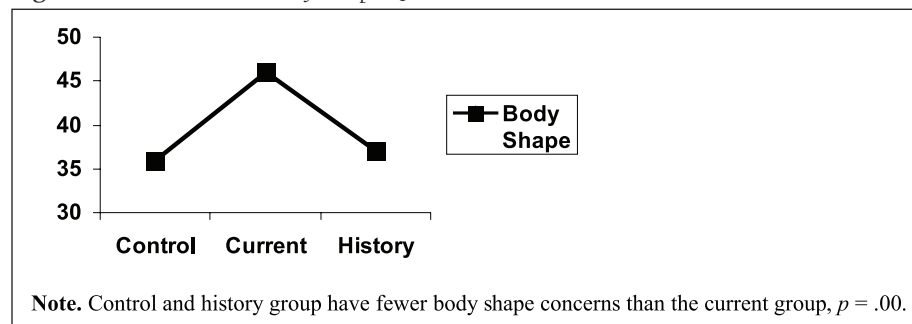


Figure 3. Mean Scores on the EES Scales.

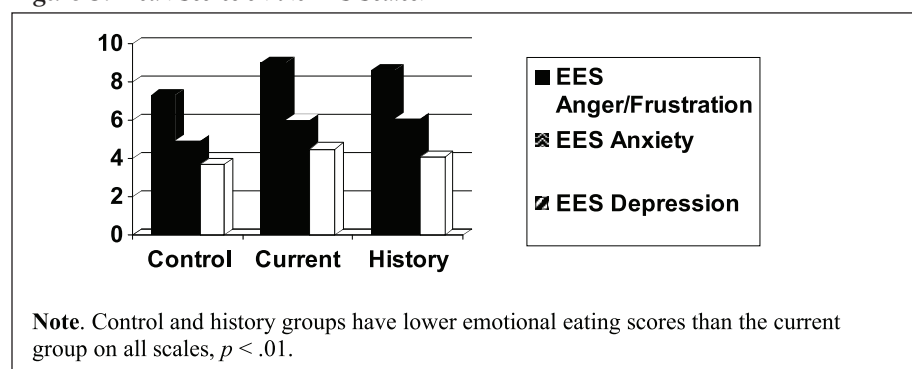
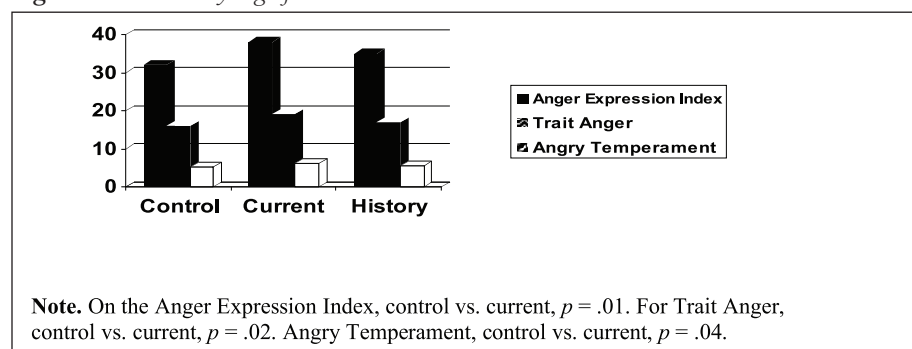


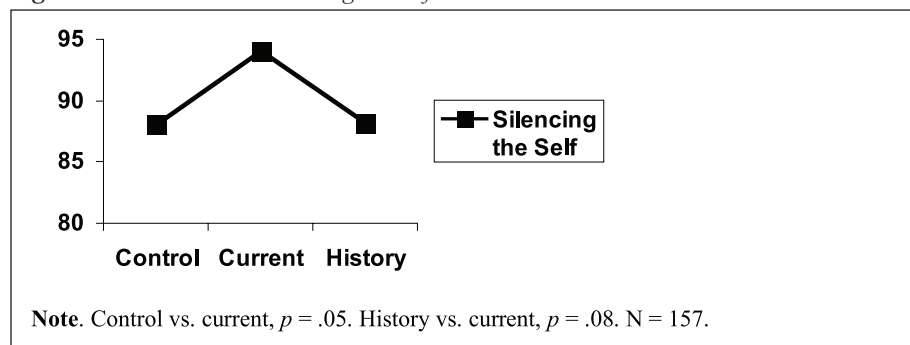
Figure 4. Statistically Significant STAXI-2 Mean Scores.



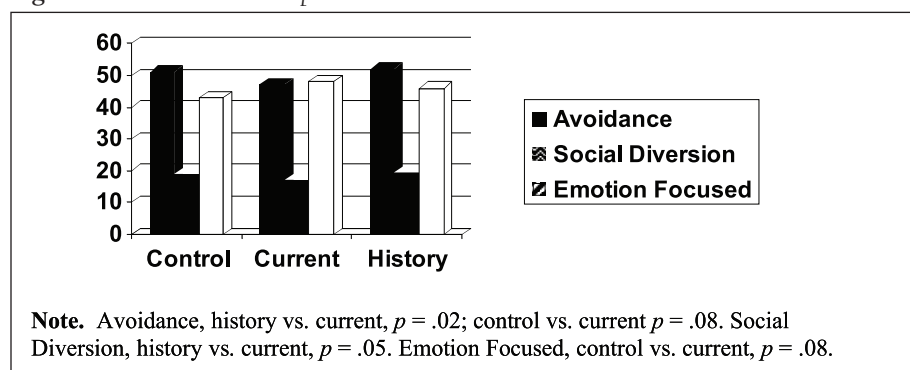
For body image, no significant differences were found between the groups on the Standard Figural Stimuli; however, significant differences were evident when participants were asked to rate their comfort with specific body parts as measured by the BSQ (Figure 2). Both the control and history groups reported experiencing fewer body image concerns than the current eating problems group. On the BSI, our measure of psychological distress, the control group reported significantly lower levels of distress than both the current eating problems group ( $p=.00$ ) and the history group ( $p=.01$ ). The current eating problems group and the history group did not differ. Specifically, individuals reporting a history of eating disorders also reported higher levels of somatization than the control group ( $p=.00$ ). Both the history group and the current problems group reported higher levels of obsessive compulsive tendencies ( $p<.02$ ), self-consciousness ( $p<.03$ ), and psychotic symptoms ( $p<.01$ ) than the control group. The current eating problems group also differed from the control group on depression and paranoia ( $p=.00$ ).

In regards to emotional eating, the control and history groups had lower levels of emotional eating when compared to the current eating disorder group (Figure 3). On the STAXI-2, differences were found between the groups on the Anger Expression Index, an overall rating of anger. The results indicate that the differences are primarily in trait or innate forms of anger and angry temperament, the tendency to experience anger without any provocation (Figure 4). The control group reported lower levels of anger than the current eating problems group. The history group did not differ significantly from either of the groups. However, it is worth noting that the history group more closely resembled the control group and exhibited

**Figure 5.** Mean Score on Silencing the Self Measure.



**Figure 6.** Mean Scores on Reported CISS Scales.



marginal ( $p=.10$ ) differences on the aforementioned scales when compared to the current eating problems group. Additional marginally significant scores were found on the silencing the self measure. As depicted in Figure 5, the control group reported significantly less self-silencing than the current eating problems group. Again, the history group was similar to the control group with marginal differences from the current eating problems group.

Lastly, differences were found in regards to coping. The chief differences were between the groups on avoidance coping via social diversion. There was a marginal difference on emotion focused coping (Figure 6). The history group reported using avoidance coping through social diversions (socializing) more than the current eating disorder group. The control group demonstrated a similar pattern with only marginal

significance. Current eating disordered participants were slightly more likely than controls to focus on reducing stress (emotion focused) when dealing with a difficult situation.

### Discussion

The aim of this study was to investigate the differences between women with current eating disordered behavior, women with a history of eating problems, and women with no current or past eating problems. Women exhibiting significant symptoms of anorexia, bulimia, or binge eating were examined. We were particularly interested in their emotional intelligence and their ability to understand and manage emotion as measured by other instruments. We also sought to investigate differences in these women on a number of other variables commonly associated with eating disorders.

We found no differences between the groups on emotional intelligence. This may have been due to several factors including: small sample size, a limited range of scores, and high score variance within groups. The sample used was small and lacked variability, particularly in regard to age and ethnicity. In order to better generalize the results of this study, future research should incorporate a larger more diverse sample. Indeed, recent studies have reported that minority adolescents and minority adults are affected substantially by eating-related problems and that the prevalence of some problems such as binge eating may be comparable to those observed in Caucasians (Barry & Grilo, 2001).

Another possible issue with the sample is the fact that we chose to combine women with a variety of eating disorders into one group. It is possible that individuals that exhibit different eating disorders demonstrate variability in emotional intelligence. We did investigate this possibility through preliminary analyses before combining the different eating problems into one group, and we did not find any significant differences, but again this may not be the norm. Moreover, our history group did not vary much in age or experience, but they did differ in regard to the length of time since their last reported eating problem (ranged from 6 months to several years). This is worth noting as it is likely that as time passes emotional functioning improves.

An additional factor may have been the limited range in emotional intelligence scores. As would be expected, most of the sample scored in the average range on emotional intelligence. This limited range made it difficult to uncover differences. It is likely that if differences do exist that they are subtle and would be more evident in an examination of patterns of performance on subscales

(i.e., detected through profiles of strengths and weaknesses). Again, a larger sample would be necessary as we found that within our groups there was a lot of variation in regard to performance on specific tasks measuring emotional intelligence.

Although significant differences were not found for emotional intelligence, significant differences were evident using other measures of emotional functioning. Participants with current eating problems reported being confused by emotions. It is possible that these individuals become easily overwhelmed by their emotional experiences and have difficulty distinguishing between types and sources of emotion. It is interesting that the emotional intelligence and EDI affective cluster score results are discrepant. This may be due to the methods used to obtain the scores. The MSCEIT, our measure of emotional intelligence, requires that the participant perform certain tasks that are scored by experts (much like other intelligence tests); whereas, the EDI is a self-report measure where the participant responds to statements using a Likert scale. Future research should further investigate the source of these discrepant scores. It is possible that although these individuals feel confused by their emotions, this confusion does not significantly impact their ability to understand and manage emotions in regard to standardized testing. In other words, emotional intelligence as measured by the MSCEIT may not generalize to the emotional intelligence needed to function in everyday life or to prevent the onset of eating problems. Or as aforementioned, it is possible that the impact of this confusion on standardized testing was not detected in this study.

Our results indicate that managing emotions in everyday life was a problem for our participants with current eating problems. They reported that their body shape concerns affect their mood

and behavior. They were more likely to engage in emotional eating when angry, depressed, and anxious. They had higher levels of anger and were more likely to experience unprovoked anger. In addition, there is some indication that they are less likely to express this anger in an effort to “protect” their relationships. This lack of assertiveness or silencing of the self in relationships can lead to increased dissatisfaction and depression (Jack & Dill, 1992). Further, these women reported higher levels of psychological distress, particularly obsessive compulsive and depressive symptoms. Finally, these women demonstrated a tendency to use emotion focused coping. This means that their coping behaviors are designed to reduce stress from emotions. While some of these behaviors may be effective and appropriate (a walk), others may be dangerous (purging).

In general, our second hypothesis was supported. Women who reported a history of eating problems resembled the control group on most of our measures. They did not report affective confusion. They did not exhibit extreme body shape concerns. They did not report problems with emotional eating or self-silencing. Their scores on anger were between the control and current groups (more similar to controls). However, they did report high levels of psychological distress, particularly in regard to somatization. Somatizers tend to focus on bodily functions and channel negative emotions into physical symptoms. Women in the history group also reported significant levels of obsessive compulsive tendencies and significant problems with self-consciousness. A final difference was that women in the history group were more likely than the other two groups to use avoidance coping. Specifically, they tend to rely on social networks to distract themselves from stress. This could be a very beneficial approach to

stress assuming that the social activities are healthy and assuming that the stressor cannot be better resolved with a specific action. Thus, this study appears to suggest that women with a history of eating problems are “healthier” than those with current eating problems, but they still have some lingering troubles. They do not differ from the control group on most variables, particularly in areas related to eating disorders. However, they have significantly more psychological problems than the control group. These findings compare to existing literature by Blaase and Elklit (2001). In their study, women who previously suffered from eating disorders were psychologically similar to the women in the control group. There were only a few significant differences found in relation to perfectionism and coping style.

Future research should continue to investigate the relationship between emotional intelligence and eating disordered behavior using a larger more diverse sample. While the variables we included in this study were useful in detecting differences between the groups, the effect sizes were rather small indicating that a more complex combination of variables could be more effective in differentiating between women with current, past, and no eating problems. Prospective researchers should also consider creating more distinct groups of eating disordered behavior, as well as controlling the length of time one has gone without engaging in unhealthy eating patterns.

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# A Cross-Cultural Study of Weddings through Media and Ritual: Analyzing Indian and North American Weddings



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## Introduction

The wedding is one of the only rituals or events that many cultures of the world consistently have in common. Weddings are found in almost every society. A wedding can feed consumer appetites and the industry that supports it. Costs for the average United States wedding can range from \$26,000 to \$35,530 or more ("Cost of Weddings" 2006). The costs of Indian wedding ceremonies vary from \$34,000 up to \$2 million (Das 2005). Despite this large range the Indian wedding industry averages only \$11 billion annually while its American counterpart is a whopping \$50 billion each year ("Cost of Weddings" 2006, Das 2005). Remarriages constitute 30% of the American wedding industry (Ingram 1999) while in India, remarriage is relatively uncommon.

Given the amount of money spent on this cultural ritual, it is reasonable to assert that it carries a great deal of personal, cultural, and social significance. I'm going to contrast and compare Indian and American weddings through an examination of film. This study is similar to Best's (2000) study of American proms, another related cultural tradition. Specifically I will examine portrayals of wedding ceremonies as presented by both Hollywood and Bollywood films.

I will be analyzing the components of the wedding ritual as well as analyzing the material and cultural interpretations of marriage ceremonies. Perspectives vary by differing roles; there are commonalities and differences in values. I hope to elucidate what this event means for those anticipating and engaging in the wedding ceremony.

It is important to look at these rituals as they pertain to the popular culture in the United States as well as in India. While wedding ceremonies in the U.S. can vary dramatically, this study will be restricted to the ideal "white wedding". Therefore, I will also limit my

examination to Judeo/Christian practices and ceremonial components that were popularized prior to the 19th century and have continued to the present day, particularly within the white middle class. The Indian wedding rituals will be analyzed using the Vedic ceremony (i.e., those rituals most commonly associated with the Hindu or Buddhist practices) commonly found in the higher caste systems.

Previous research in this area has been limited in its analysis of Indian wedding rituals (Kolenda, 1984). Similarly, there have been only a few examinations of pre-wedding preparations or post-wedding preparations for American weddings in regards to work (Sniezek, 2005). There are a small number of sociological analyses of the American wedding and their rituals in recent decades (Chesler, 1980; Ingram, 1999; Wallace 2004). Most studies have limited their research to romance and marriage ideals (Coontz, 2005). Few studies have been performed cross-culturally about the execution of the wedding ceremony itself (Dunes, 1996; Kolenda, 1984). Some similar studies have been performed, however, analyzing related rituals and other rites of passage such as American proms and debutante balls (Best, 2000). Proms and their counterparts can hold many clues to the significance of the components embedded in the wedding.

The present study explains the involvement of families and community as they relate to negotiations between public and private displays and interactions in an explanation of this ritualized event. This study will differentiate between rituals allocated by religious requirements and those that have developed due to capital displays and class structures. These topics are analyzed through a qualitative examination of American and Indian ritual components within media depictions of weddings.



This research addresses the following questions. First, what are the rituals that are embedded in the marriage ceremony? Are wedding rituals in more modern societies drastically different from those in more traditional societies or are there commonalities? Second, how are we socialized into these rituals and how do participants come to understand their roles in these events? Finally, what are the cultural and social meanings of these weddings?

### **Background**

A ritual is defined as a:

Set of prescribed behaviors... 'It is generally agreed that ritual is particularly endemic in situations of change at those times of an individual, group, or society when there is the greatest uncertainty and when people have difficulty in expressing their ideas and feelings in a more direct way. In fact, ritual is dynamic and creative, because it allows people to handle situations that are otherwise troubling and disruptive. Ritual not only brings order out of chaos, but relieves people's fears about their personal and collective futures (Gills in Wallace, 2004 p.3-4).

According to Rappaport, 2002:

Ritual as a structure that is a more or less enduring set of relations among a number of general but variable features. As a form or structure it possesses certain logical properties, but its properties are not only logical. In as much as performance is one of its general features, it possesses the properties of practice as well. In ritual, logic becomes enacted and embodied-is realized-in unique ways.

However, according to Berardo and Vera, 1981:

Rituals and ceremonies form a part of the institutional arrangements

which can be understood only in terms of the ideas, beliefs, attitudes, and values, i.e., the ideological frameworks, which render them meaningful. The movements, gestures, instruments, times, places, and words that constitute these rituals are expressions (signs and symbols) of other aspects of society.

Proms, another U.S. ritual, can be seen as precursors to weddings (Best, 2000). Parents prod girls to perfect themselves, planning for months at a time for this single night. Boys are socialized to be less invested in proms. Their main concern usually is directed toward payment of the night's events, making arrangements for transportation and expenses related to post-prom activities (Best, 2000), though the division of payment has altered slightly over the years.

With respect to weddings, historically women's families pay for the necessities of the event (Wallace, 2004). Changes in the economy have forced couples to start sharing the cost of weddings (Ingram, 1999) and, recently, girls have increasingly been paying for their portion of expenses related to proms (Best, 2000). The view of gender roles can vary slightly across racial and ethnic categories but the mainstream view of proms and weddings in North American culture is very constant.

While much of the research in the arena of weddings ultimately is studying marriage (Coontz, 2005), there are a few studies of both Indian and North American wedding rituals. Emphasis has been placed on the division of labor and gender roles within North American society. Studies have shown that women disproportionately do more work for the wedding, home, and what has been frequently referred to as "kin work" (Sniezek, 2005). Women in addition often do not perceive this as an unfair division of work until

the disparity in effort concerns two-thirds of the responsibilities attached to planning a wedding or engaging in house work (Sniezek, 2005). It is uncertain whether this outcome is found among Indian couples.

While interest in U.S. weddings is growing, theories have barely begun to form in regards to the Indian Vedic wedding. These wedding rituals have barely altered through centuries and may hold many answers for not only Indian society but North American society as well. Studies that have analyzed specific Indian societies have included weddings as part of their study because it is an important component of most cultures (Kolenda, 1984). More current research needs to be done across time and place so a better understanding of social expectations and meanings can be attained.

In order to identify properly the two groups' rituals and separate them into categories, I borrowed from Max Weber. By following Max Weber's "ideal type," I constructed an ideal type of wedding to represent the average Indian and American wedding ceremony. This construction facilitates cross-cultural comparisons. For the Indian wedding, the ideal type took the form of the Vedic Ceremony (for full descriptions see Appendix I). For the North American wedding, the ideal type was the Judeo-Christian "white wedding" (for full descriptions see Appendix I). To further examine different cultural practices and their importance in the ritual, I have examined movies and text and broken the rituals into five categories: gender, wealth, kinship, superstition, and fertility.

### **Gender**

Ingram (1999) alludes to the concept that by American females being so heavily involved in the construction and ideology of the perfect "white wedding" from early ages, the male's exclusion



from the world of the wedding at a similar time by default expresses a need to do other “more important” tasks. The white middle class female is socialized and marketed to by means of toys, movies, games, and parents in hopes that in the future the female will be a primary player in capital consumption particularly in regards to the wedding industry. Males and most minority groups, however, are not seen as such a viable interest, and are not as heavily included in the marketing strategies (Ingram 1999). The lack of visibility and exclusion in the wedding industry sets the stage for future gender division of responsibilities where most often the male has few tasks.

Much of the consumerism, exclusion of males, and changes in ritual that currently exist in the U.S.A. began to form during the country's transitional phase from the last half of the 19th century towards the beginning of the 20th century, according to Wallace (2004). The bride's family had always performed such tasks as making the cake, housing the wedding, making the dress, creating a good trousseau, and attaining flowers. The male's duties included making sure he had a home to bring his new bride to and finances enough to keep her. As consumer culture began to popularize in the late 1800's to early 1900's traditionally home created rituals began to be paid for and contracted outside of the home. The bride's family often covered the cost of the wedding excluding the groom's tux, the rings, and the honeymoon because families did not want the groom to have certain expectations of reaping “gifts” early if he did contribute to the wedding (Wallace, 2004). Women after that time often carried the burden and pride of creating their “white weddings.” A prime example of the domination of the wedding by the female members of the family is shown in *Father of the Bride*. Multiple times George (the father) is told

to not fuss and ultimately let the women handle everything. He is just there to pay. Even after he has a slight nervous breakdown because of his feelings of lack of control in “his own” daughter's wedding, he still succumbs to the tradition that “women rule” the wedding and he pays for what they want.

The exclusion of males in wedding ritual preparations gives the impression that 1) the male has more important things to be doing with his time that are not wedding related (Ingram 1999), and 2) the wedding is not the male's domain. A problem arises with modern American weddings due to the desire of the bride to involve the groom in the preparations, even though he has been socialized for decades not to participate. Often the male does not want involvement in those activities, as shown in the rhetoric used to describe the to-do-list for the groom. Wedding manuals include instructions for men to “Endure the gift registry process with fiancé,” implying a burden or a sentiment that they are just there while things are being performed around them. While modern additions to these preparations are trying to include the groom in the decision making process (Delaney 2005), he may just be more content including himself as a financial contributor similar to males in the prom ritual.

When comparing each culture's bride and groom to-do-lists there are some key differences in the allocation and language used to describe everyone's duties. In the Indian tradition the groom and bride have almost an equal amount of preparations to perform. The vocabulary used to describe the execution of such tasks evokes a need to work together because it is practice for the future. In comparison the duties given to the bride in American weddings drastically outweighs those listed for the groom. While in the American wedding, many of the rituals such

as exchanging the rings and lighting candles are performed together, they were not necessarily prepared together. In the Indian ceremony the rituals may be performed together or with another family member, and their preparation was performed by family, bride, groom, or both together.

The Indian wedding is not without its gendered rituals however. Madhuparka Vidhi is a ritual in which the mother-in-law washes the feet of her new son-in-law that shows a change in the respect hierarchy from mother in law to her new son in law. There are also still rituals such as giving the bride away where the bride is still in essence a form of property. This ritual is cross cultural and similar gender roles are exhibited and actions performed. In both societies women are considered the property of her parents, her father in particular. That ownership was passed off to the groom and his family through the ritual of the wedding. In the American ceremony this can be understood by the officiator asking “Who gives this woman away.” In the context of the Indian wedding, the concept of a dowry is often still in effect. The dowry is a way for the bride's family to help pay for her new expenses that she will incur while in her new family.

### Wealth

Several ritual components in the wedding ceremony pertain to wealth across both cultures. One such example is jewelry. Only families whose incomes can afford jewelry have it. In the Indian wedding, jewelry is considered to be very important, especially bangles. They are almost comparable to the diamond engagement ring in American society. Indian families in higher castes are more likely to have an engagement ceremony, where rings may be exchanged. That shows the differences in wealth between classes. While In American society caste systems do not exist, class systems do. There is a clear difference between

North American upper and middle classes. While the middle class attempt to make it appear as if there is no difference between their lifestyles and that of the wealthy and famous, a price must be paid for lavishness. In *Madea's Family Reunion* the mother of the bride is in essence selling her daughter to a man that abuses her, just to attain money. She has to be viewed as wealthy and the biggest show for her is her daughter's wedding, which she proceeds to spare no expense even though her funds are limited. This makes the wedding less about the couple and more about the appearance of attainment of the American dream. The "dream wedding" is the announcement.

For middle class North Americans, weddings can create and often include some debt. Much of that debt they will incur heavily because of the cost of the "dream wedding" they really can not afford. The average middle class American bride's family can not usually afford to pay for the wedding alone either. The recent change in the societal norms and economic construction of society has caused grooms to begin to help pay for the wedding without it being construed as a ploy to attain specific "services" early. Two incomes are necessary for basic home living and with the average cost of a wedding causing families to incur debt, males have begun to contribute. Even though couples are beginning to pay for weddings jointly, the cost is still disproportionately felt by the female who still earns less than the male, debt is still being incurred.

One of the most important and most expensive rituals in the wedding is the wearing of a white wedding dress. This dress usually is only worn by the purchaser once. The white dress has deviated from its predecessor the dark colored wedding dress, and it became the descendant of the pastel wedding dress. Up until the mid 1800's to 1900's wedding dresses were still made to be

worn multiple times. Brides wanted dresses to be durable and darker so they showed less stains when they were worn multiple times. Even in WWII some women were still wearing colored dresses that they planned to wear multiple times. The white wedding dress had began to run parallel to the dark dress around the late 1800's after Queen Victoria's wedding. The 1900's sparked entrance of the white dress into mainstream society. Around the 1960's and 1970's the white dress being worn only once grew in popularity and became an institution in North American weddings (Wallace, 2004). Only with wealth, or the concept of having wealth, can a person wear an article of clothing, which cost them several hundreds or thousands of dollars, for one day and then have it sit in storage or give it away.

This wealth in many senses isn't real wealth for the average North American family; it is just the illusion of wealth. Wealth is the total value of the accumulated assets owned by an individual, household, community, or country (Deandroff, 2001). In the late 1800's to 1900's the emergence of wedding debt began to appear, as consumerism grew and North American women wanted to be able to feel like a queen or socialite on "their" one day. Women at the time were still encouraged to keep their weddings realistic and in range of their real income (Wallace, 2004). That hasn't kept brides and grooms from spending. In *Father of the Bride*, George is constantly checking the numbers about the cost of the wedding. He is continuously having emotional breakdowns because they are so high. He even pitches the idea of a home wedding to his wife and daughter because the cost is so high. The North American wedding industry has made couples and their families feel almost pressured to have the dream "white wedding" (Ingram, 1999). They are not

fulfilling the American dream, or are ruining their daughter's if they don't spend all they can. In response middle class couples and families keep spending their imaginary wealth.

While their Indian counterparts spend only what they have saved and can afford, Indian families, rich and poor, are also still keeping in mind dowries. In Indian society a family saves up money from their daughter's birth for the wedding. The family understands that they will probably still have to pay for a dowry, which will be used to sustain the daughter in her new home. The wedding and dowry are in Indian culture less an expression of wealth but a manner in which Indian families can celebrate their children and "thank" the other family for taking their unmarried daughter off of their hands. They may on average spend more on the wedding, but it is all inclusive to not only their daughter's wedding but her life after. Here the underlying gender valuing in India is more important than the overall perception of a wealth display.

### Kinship

In the American wedding, there are a few rituals that involve family members. Those same rituals also reflect the absence of familial involvement later on in the marriage and the lack of responsibility and importance placed upon family in mainstream North American culture. This may explain why so many wedding rituals do not include the family of either bride or groom. One such exception to the rule may be the giving away of the bride. This is a ritual less about kinship than about ownership. The question of "Who gives this bride away" is in actuality saying "Who owns the bride now?", thus giving gender dominance to the males in her life. First the father of the bride has ownership over the young woman and during the wedding ceremony the father-in-law passes his possession and dominance to the bride's groom. "The father owned his

daughter until he had chosen a worthy marriage partner to 'give' her to (Seligson, 1973)" (Chesser 1980).

In the giving away of the bride in Indian culture the bride is, in essence, considered property. A clear example of this is in the movie *Hum Dil de Chuke Sanam* where the female is compared to a kite. The ground is her family and the sky her future husband. The bride is sent into the sky with a string. That string could be said to be the wedding. She will forever be connected to the family, but she now belongs to the sky. Her connection should never be cut. If some how it is, it is a tragedy. Within the Indian rituals of the wedding the family involvement is a pivotal part. The participation of family within numerous rituals expresses and are exhibited within the marriage after the wedding. These rituals may give insight in to the expectations of family in the society. These rituals are present throughout the whole ceremony. The following rituals fall under kinship type rituals: Kashi Yatra, Parchan , Varapreshanem, Kanyadaan (Kanya Dhanam), sapatapadi(seven vows),Vaaku Nichaya Muhoortham, Maangala Dharanam, Laaja homam, Ashirvadam, Vadhupraves. They aren't just symbolic. The bride often is moving literally into the home of her new husband with his whole family: father, mother, grandmother, and possibly aunts and uncles. In the Movie *Chori Chori*, The bride is nervous and crying about her wedding for many reasons. One is because she was an orphan and has no biological family to help her perform any of the rituals. The presence of family for the enactment of the rituals is the key. It is very important when her knew family tells her that she is now more apart of their family than the groom, before the wedding even begins.

In the view of mainstream North American society the family inclusion often is limited to her immediate in-laws,

her husband's parents. To that measure, they are as close as distance allows. Often those very in-laws are not living in the home of the new bride and groom. For many North Americans, in post 1960's, the opposite might have been the case, but with the popularization of retirement homes the live-in parent has moved out. The individualistic concept not commonly found in Indian culture was deemed normal in North American culture. North American cultural norms, rarely include family, much less extended family.

In Indian culture, wedding responsibilities are more likely to be shared by both families and even members of the community. Family involvement in almost every part of the wedding does not allow for as much individual responsibility. This lack of individual responsibility helps avoid the occasional feeling of "ruining" the wedding. Unlike North American weddings where a wedding can be "ruined" by one person forgetting something duties are distributed amongst the guruji (several families, and their members). It is very difficult for one person to ruin an entire wedding through carelessness. A prime example is the keeping of the rings. It is such a social taboo and constant occurrence that many American media depictions of the wedding include this faux pas. In Indian representations of similar events this lack of attention does not completely ruin the event because rituals often are not left up to one individual. The wedding is a group project or ritual for the community. There are problems with a ritual that could potentially "ruin" an Indian wedding, but it would be on a bigger scale. If by chance, someone forgot the garlands for the bride and groom's saptapadi (seven vows) or if the sacred fire was not present, the wedding would not take place. Each of these rituals is not just performed by bride's family alone. The groom's family is also equally involved. In *Mere Yaar*

*Ki Shaadi Hai*, the bride's family and groom's family check with each other to make sure specific parts of the wedding are being taken care of, showing open communication and trust that has developed between the two families.

### Superstition

Superstition is the largest category of all of the ritual categories. This is due to the fact that most of the rituals that may have fallen under any other category usually also fall under superstition. All of the fertility rituals fall under superstition. The mere presence of things such as children and flowers around a person do not normally invoke pregnancy or an easier ability to get pregnant, but for some reason that changes with its presence at a wedding. In both *Chori Chori* and *The Wedding Planner* there are scenes where the superstition of the groom not seeing the bride before the wedding is mentioned. It is as if the wedding ceremony itself is able to cast a spell over the rituals and symbols within it making them supernatural and powerful. That is the only way that a piece of cloth can protect a couple of people from an evil eye or evil spirits. It is also almost as if the wedding itself invites such calamities. Why did the evil spirits appear? Why will bad things just happen to you if you do not have these symbolic things on this particular date? Why would they not manifest on another day? What calls upon these evil things to want to attack a bride and groom, and the need to have to ward them off or trick them away from the couple and the wedding? It is apparently the producer of things good and evil. Does that say something about society's perceptions of the act in and of itself? Do we subconsciously believe that the act is not sensible? In the Indian and American ceremonies in the vows and the rituals, the couple has to fight off bad situations in life and is told about

the struggles they will endure together. Are we secretly saying that these struggles would not have manifested had this ceremony not been “conjured up,” or is it the fact that love has been paired with marriage recently?

The ritual of the wedding historically cross-culturally may have some clues. Indian culture has a theme that coincides with arranged marriages and has for centuries: You marry first and love comes later. (Cootz, 2005) This may have been a theme prior to the mid 1800's in American society when marriages were often still arranged. (Wallace, 2004) It isn't known for sure, but couples were not likely to be instantly in love with each other. In many other scenarios they may have met each other for the first time at their wedding or only a few days before. In fact early Catholic married couples were encouraged not to be in love too much with each other. Catholic leaders were comparing too much love for one's wife to committing the act of idol worship (Cootz, 2005) possibly because they should not be loving anything as much as God. This belief could be considered religious superstition of condemnation from God upon your wedding if you care too much for your future spouse.

### **Fertility**

“White wedding” ceremonies tend to have more rituals pertaining to fertility than the Vedic ceremony. While both Indian and North American ceremonies have flowers, the Indian weddings physically speaks about children and the parents duties to them and each other, the American wedding, however, has more symbolic showings of reproduction. These portraits include the flower girl and the ring bearer. Rituals of fertility include the cutting of the cake with the male's hand over the female's hand. The flowers of the wedding are not to be excluded. All of these fall under the category of fertility, flowers

being the most recognizable. Flowers could be found in bridal garlands adorning the crowns of peasant brides (Chesser, 1980). They would appear on the shoulders of WWII brides. Flowers would also appear in the form of the orange blossom a favorite of brides in the U.S. from prior to the 1800's to the 1940's (Wallace, 2004). The orange blossom was believed to be a dual increaser of fertility, because it bloomed and bore fruit (Wallace 2004). In every single American or Indian film flowers appeared somewhere. In the movie *Mere Yaar Ki Shaadi Hai*, the whole house especially the mandap (canopy) was covered in flowers that were decorated by the bride's family and friends. In *Wedding Crashers* every wedding had flowers on some wall or table. If not they were at least on the cake.

The cake symbolized several things from breaking of bread (Wallace, 2004) to fertility. Its forms have altered over time from heavy European fruit type of cake to the light and fluffy American style. (Wallace, 2004) It is often cut to symbolize the breaking of the hymen and hopeful production of children (Dunes, 1996). Fertility ritual in the Roman days was also in the form of a wheat cake that was offered to the god, Jupiter. In this ritual there was also often an alter boy, who ushers the inclusion of children in the wedding ceremony as vessels of fertility. The modern day American ring bearer and flower girl could be said to be manifestations of an alter child. Children still carry sacred ritualistic symbols up isles to alter or the ritualistic places where weddings are often held.

The Vedic ceremony revolved around future children. Children's creation and actual childhood are considered at least nine of the sixteen Hindu Samskaras after the wedding. They are not so much hoped for, like they are in the “white wedding,” as they are expected. They are discussed in the *saptapadi* in one of the vows.

Children are viewed more as an institution and a religious doctrine. They can not be conjured.

### **Religion**

While religion may seem to take prominence in the “white wedding,” it does not have the largest number of rituals dedicated to it. The Indian wedding has more rituals in it dedicated to religious practices than the American wedding. The Vedic rituals overall practice in the Indian wedding often come back to their religious beliefs because the wedding rituals are viewed as a new contribution to Hindu life. The unification of two people replicates activities performed by Hindu deities. The creation and fostering of children is a sacrament and rite of passage, just like the wedding itself, under religious doctrine or dharma (duty). An example of such beliefs is the practice of *Kanayadan*, while it is the giving away of the bride, it is also where the bride takes upon the form of the goddess *Laxmi*. The groom is supposed to be lord *Narayan*. It is the family's greatest duty and honor to give her away because she is the figurative embodiment of a goddess. Another example of religious participation can be viewed in the film *Kuch Kuch Hota Hai*, the couple can not have their wedding until the auspicious time of their horoscopes line up exactly right, so the wedding is postponed. They can not get married until “God/Gods” give them permission through the horoscope.

In North American weddings people are not often viewed as reenacting the actions of God or doing their religious duty in getting married. The closest thing to that is the Judeo/Christian belief that the marriage is a covenant or agreement between the couple and God. The priest could be the medium by which this agreement is taking place. In the “white wedding” ceremony it

does take place often in a temple or church, which are considered religious buildings. Other than the location and the officiator presiding over the wedding there are few religious rituals that are generalized across the North American wedding. These Judeo/ Christian rituals may be enacted on an individual basis, but they are not as pervasive as the Vedic religious rituals. In text and media there were more rituals that appeared under the religious context Indian culture than in North American. Most other categories out numbered the religious category in appearances counted in media.

#### **Data and Methods**

The ideal type weddings were created for proper identification of rituals within the viewed films. The films were chosen on the basis of popularity in each of their cultures, amount of wedding preparation shown, and ceremony showings. All of the seven American films were chosen from different categories such as comedies, dramas, and “family” or “feel good films”. The seven Indian films were chosen from a range of Bollywood films as well. After selecting the films to be analyzed, I performed a content analysis counting specific component rituals for the number of times they appeared in the film. They were then categorized into five categories: wealth, gender, fertility, religion, and kinship (see Table 1 and Table 2, Appendix II and III). The number of rituals in each category was tallied (see Table 3, Appendix IV). The number of North American rituals is greater than the Indian rituals in the categories of gender, wealth, superstition, and fertility. Conversely, kinship and religious rituals were more common in the construction of Indian wedding rituals.

Fertility rituals in the Indian films appeared fifteen times in total for the two wedding rituals considered

to be fertility rituals. This number of appearances is in comparison with the 73 times that the five North American fertility rituals appeared in the “white wedding” films. This gap in presentation of fertility rituals shows support for the contention that there is a greater importance placed on fertility in North American films compared to Indian films.

In regards to the category of religion more religious rituals were identified for the Indian culture than North American. The number of appearances of these same religious practices in Table 4 appeared in the Indian films more often than in North American films. There is a trend for the Indian media to project an image of the wedding as more of a religious event than North American films. While the North American weddings are often shown taking place in churches or synagogues, places considered religious realms, the Indian wedding gives more all around religious practices in the wedding than North American weddings.

There is a stronger presence of the concept of kinship for Indian weddings than in the North American weddings (see Tables 3 and 4, Appendix IV). In Indian movies, kinship rituals appeared over forty times while the North American movies emphasized kinship rituals only sixteen times. This coincides with the previously stated concepts about family and kinship being valued higher in Indian culture, as shown through the wedding practices and film.

Under the category of gender, the number of rituals for each cultural group was almost equal. The amount of gendered rituals that appear in North American film only slightly outweighed the number of gendered wedding rituals viewed in the Indian media. It is possible that the degree of importance placed on gender roles is equal in each culture. Another interpretation could be that both cultures are almost

equal in their valuing of both genders. It could also be viewed that females are greatly valued in each culture and still expected to fulfill different duties in their roles determined by each culture. Alternatively, both cultures could value one gender group over the other to the same degree, which shows that females are not valued highly in each culture to the same degree. However, they still are expected to fulfill their different gendered responsibilities in each culture.

Under the category of superstition the number of identified rituals for North American culture was twice that of Indian culture. The number of viewed rituals for North American culture didn't contradict the ratio or the fact that the superstition may be valued more in American society. There is a slight correlation in the fact that the religious rituals are low and the superstitious rituals are high in North American culture. This may be due to the fact that Indian culture is only recently starting to be viewed as an up and coming capitalist society and still has many parts that are considered sacred and traditional, and has fewer superstitious rituals not related to religion. The high amount of superstition in North American culture could also be related to the concept of capitalism, education, and shifts in such becoming “developed” societies where popular cultural ideas related to religion, become symbols that eventually morph into superstitious practices. The religion is reduced in importance and replaced with other popular cultural norms, so the original connections are lost to the society. The new norms become more prominent like the old religious practices.

Rituals categorized as associated with wealth were also higher in North American culture than in Indian culture. The amount of times wealth rituals were observed in North American wedding movies was high as well. One might attribute this to the capitalistic nature of not only the North American



wedding industry but the society as a whole, a prime example of how the media uses the wedding to sell ideas for other things in American society. As previously discussed weddings are used for multiple purposes in North American society. In Indian culture wealth rituals were the second highest observed set of rituals of the wedding. This could be correlated with their rise in the capitalistic market, or strictly an event where unlike anything else, Indian families want to put their best foot forward. The high display of wealth may be both the North American and Indian cultures' ways of giving their children that one fairy tale when the majority of both cultures cannot actually afford it. The question is, while it is known that most North American families are going into debt to pay for their "dream white weddings" (Ingram, 1999), are Indian families doing the same or saving up to pay for the wedding?

### **Conclusion**

This research attempted to set an example for future research about cross-cultural wedding studies.

In response to the first questions, "What are the rituals that are embedded in the marriage ceremony? Are wedding

rituals in more modern societies drastically different from those in more traditional societies or are there commonalities?" The ideal American wedding and Indian wedding rituals were divided into five major categories and are described in the charts on pages 24-28. There are similarities in their societal values related to gender and religion as based on the rituals, while the other categories such as fertility, wealth, superstition and kinship show clear differing social values. Some differences and similarities were expected and others were not.

In analyzing the second question, "How are we socialized into these rituals and how do participants come to understand their roles in these events?" It was found that, due to historical presentations of gender roles, some of the socialization processes helped give insight to the development of these rituals and their significance. Through the media and commercialization of the wedding, the "white wedding" became seen as the female domain, while males were socialized into thinking the wedding was not a male domain.

Finally, it was asked "What are the cultural and social meanings of these weddings?" The "white wedding"

has become an example of American consumer culture after humble beginnings prior to the late 1800's as a small family community organized event. Indian weddings are still community organized and executed events. They tend to focus on the couple within the community that united them. While Indian weddings may not be small in size or price, their underlying values have not changed greatly over the centuries.

Future research may include attending weddings and interviewing married or engaged couples regarding their weddings.

Wedding rituals may appear to be just physical manifestations but through my data and textual research, it is apparent that the rituals seem to be based on ideas, attitudes, beliefs, and values. New rituals and traditions appear every year in all cultures because of globalization. The wedding as well is evolving. New trends are becoming rituals through popularization (Berardo, 1981). The more they are practiced and performed the more the rituals say about the evolving cultures which produce them.



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## Appendix I

### *Vedic ceremony*

The rituals should last about three to four days. There are witnesses in all the parts of the wedding often family, friends, and community members that may have helped either unite, introduced the couple, or that prepared the wedding. The Vedic ceremony begins with an engagement ceremony on the first night of the wedding. The bride and groom exchange rings. The night continues with blessings from their families and friends and music with dancing. There are flowers on the blessing plates, the walls and tables of the bride and groom's homes, and on the mandap, which is usually in the bride's home, for all the events. The bride is wearing traditional garb during these rituals such as wedding bangles, a bindi, a red sari, veil, necklaces and even a nose ring that may extend by a chain to her ear. The groom wears a sherwani, which usually is cream, tan or white. Next Ganesh poojan can be performed where obstacles are believed to be removed for the couple in their home by invoking lord Ganesh. Following that Mandaparohana, where the place of the wedding is established, is performed. Also a Kashi Yatra (barat) happens, where the groom is in a parade, and he is "convinced" to come to the married life by the bride's family. The groom is greeted and escorted (Vara Yatra) by them to the wedding spot in their home. Then Parchan takes place, where the mother of the bride greets the groom with a flower garland (Jaymala). Grahshanti is then performed by washing the feet of groom by his mother-in-law. The groom is then fed by his mother in law in Madhuparka Vidhi. Varapreshanam is started and the bride's family and groom's family are introduced and the declaration of marriage is made. The bringing of the bride to the mandap takes place, and Kanyadaan (Kanya Dhanam) is performed, where the bride is offered to the groom by her family. This has been

deemed one of the most important rituals in the wedding besides saptapadi (seven vows). Mangalferal takes place next, where the bride and groom encircle the fire with hands joined. Vaaku Nichaya Muhoortham is performed when the two fathers face each other and mantras are chanted. Next the groom and his sister tie a mangala sutra (sacred rope) around the bride which is called Maangala Dharanam. In the most important act of Saptapadi, the bride and groom take seven steps around the sacred fire (Agni) tied to each other. While taking those seven steps seven vows are recited by bride and groom towards the end of the wedding. Panigrahan is where the groom takes the bride's hand in his as his new wife. Next in Dhruvadarshan the couple looks at the pole star together. Laaja homam is where the brother of the bride and her husband help her feed the sacrificial fire in the ceremony. Finally, in Ashirvadam, the bride and groom receive blessings from their parents, the guruji, and elderly members of their families. That concludes the main wedding ceremony. Bidai is the exiting of the bride and groom to the groom's home. The bride and groom exit in a carriage or car that has been tested for safety. The wedding party leaves the bride's home and travels to the home of the groom and his family. Vadhupravesam is the ritual of welcoming the bride and groom by his family into the home of the groom and his family by another party.

### *The "white wedding" ceremony*

In the ideal type North American wedding the ceremony begins with the witnesses being seated first. The ceremony will most often take place in a church or temple for one day only. The building will be carefully decorated with flowers and candles. There could even be a flower archway at the altar awaiting the bride and groom. The processional, which is the walking down the aisle of the whole wedding party,

includes bride's maids and groom's men, the mother of the bride, flower girl, ring bearer, and father of the bride. The father of the bride escorts the bride down the aisle that is lined with flowers. The bride wears a white dress, a veil, and many articles of jewelry including her diamond engagement ring. The father hands her to the groom after which the officiator asks "Who gives this woman to be married?" The father responds "I do." There will be brief speech by the officiator of the wedding, and then there will be the exchange of rings and vows. There is the call for any objections from the attendees. The officiator will pronounce them husband and wife. They will receive permission for the kiss, and then perform the act. Then there will be the recessional that is led by the bride and groom, in the opposite order from how they entered the site. There is a reception shortly following the initial ceremony, where there will be tables decorated with flowers. There will be a dance floor and a head table for the wedding party facing the guests. The reception takes place in a wedding venue where dinner will be catered. There will be the occasional pause for a speech, during the dinner from the maid of honor and the best man. The food and dancing will continue, only for a short while, until the cutting of the cake by the bride and groom. The groom's hand should be placed on top of the bride's during the actual penetration of the cake. The couple will feed each other the first slice of cake, before it is served to the guests. The top layer of the cake will be taken home by the bride and groom and frozen for a year to be eaten on their one-year anniversary. The dancing will then continue with the father and bride dance, followed by the bride and groom's first dance as husband and wife. There is the removal of the garter belt by the groom. He tosses the garter into a group of males. The male who catches it is deemed to be the winner and he is predicted to be a groom

within a year. A similar ritual takes place when the bride tosses her bouquet behind her back into a group of women. The female who catches it is believed to be the next female to be married. The music and dancing continue until it is time for the bride and groom to leave. They are showered with rice during their exit to their vehicle. The car is covered with ribbons, flowers, cans on the bumper, and a sign of some sort that reads "just married."

## Appendix II

**Table 1.** Indian films and the wedding rituals that appeared in them

		Number of times that a ritual has appeared in the movie							
	Movie Name	Chori Chori	Mere Yaar Ki Shaadi Hai	Chori Chori Chupke Chupke	Hum Tum	Kuch na Kuchna Hota Hai	Mujhase Dosti Karogi	Kuch Naa Kaho	Total times shown
Ritual									
Witnesses (wealth)		2	1	1	1	2	1	2	10
Giving away the bride/ Kanyadan (gender/ religion/kinship)		1			1	1	1	1	5
Dowry/trousseaus (gender/wealth)			1						1
Carrying the bride across the threshold (gender)									0
Bridal veil (superstition/ gender (American))		2	1	1	1	1	2	1	9
Wedding sarri (gender)		2	1	1	1	1	3	1	10
White wedding gown (gender/ wealth)									0
The groom's attire: Sherwani/ black tux (wealth/ gender)		2	1	1	1	1	1	1	8
Feeding each other food (kinship)									0
Cutting the cake (fertility/ superstition)									0
The cake (superstition/ wealth)									0
Sweets at an Indian wedding (superstition/ kinship)		1					1		2
Bouquets of flowers (fertility/superstition/ wealth)									0
Flower girl (superstition/ fertility)									0
Ring bearer (superstition/ Fertility)									0
Indian flower garlands (superstition/Kinship)		3	1	1	1	1	2	1	10
Flowers in the wedding (fertility/superstition/wealth)		2	2	1	3	1	4	2	15
The fire in the mandap/Agni (religion)		1		1	1	1	2	1	7
The vows/saptapadi (7 steps) (religion/ kinship)				1	1	1	2	1	6
Something borrowed something blue (superstition/kinship)									0
The parade of the groom/ Kasi Yatra/ Barat (wealth/ kinship/ gender)								1	1
Mandap (religion/ kinship)		2	1		1	1	1	1	7

*Continued on next page*

Table 1. Continued from page 24

Number of times that a ritual has appeared in the movie								
Movie Name	Chori Chori	Mere Yaar Ki Shaadi Hai	Chori Chori Chupke Chupke	Hum Tum	Kuch na Kuchna Hota Hai	Mujhase Dosti Karogi	Kuch Naa Kaho	Total times shown
Ritual								
Jewelry on bride (wealth)	2	1	2	1	1	2	1	10
The diamond ring/ engagement ring (wealth)	1	1	1		1	2	1	7
Trading of the wedding rings/ giving of ring (gender/wealth)	2	1				2	1	6
Blessing the bride in her part and groom with red bindi/ Saubhagya Chinha (religion/ gender)	3		1	1	1	1	1	8
Henna /Mehendi party (gender)	2	1	1	1	1		1	7
Church/temple/synagogue/hall (religion)								0
Bride or groom's home in wedding (kinship/ gender)	2	2	1		1	2	1	9
Engagement party (wealth)		1			1	2	1	5
Priest/pastor/Guruji (religion)	1			1	1		1	4
Horoscope's are aligned/ picking a date (religion)	1	1			1	1		4
Bridesmaids (superstition/ wealth)								0
Groom can't see bride before the wedding (superstition)	1							1
The kiss (gender)				1				1
Tossing of bouquet (superstition)								0

### Appendix III

**Table 2.** American films and the wedding rituals that appeared in them

Number of times that a ritual has appeared in the movie							
Movie Name	My Big Fat Greek Wedding	Wedding Crashers	Meet the parents	The Wedding Planner	Father of the Bride	Monster-In-Law	Madea's Family Reunion
Ritual							
Witnesses (wealth)	1	4	1	5	1	1	1
Giving away the bride/ Kanyadan (gender/religion/kinship)	1	1		2	1		
Dowry/trousseaus (gender/ wealth)							
Carrying the bride across the threshold (gender)							
Bridal veil (superstition/ gender (American))	1	8		3	1	1	1
Wedding sarri (gender)		1					
White wedding gown (gender/wealth)	1	7	2	3	1	1	1
The groom's attire: Sherwani/ black tux (wealth/ gender)	1	5	1	2	1	1	2
Feeding each other food (kinship)		2					
Cutting the cake (fertility/ superstition)		1					
The cake (superstition/ wealth)	1	1			1		1
Sweets at an Indian wedding (superstition/kinship)		1					
Bouquets of flowers (fertility/superstition/wealth)	1	4	1	3	4	1	4
Flower girl (superstition/fertility)	2			1	2		2
Ring bearer (superstition/fertility)	2				1		1
Indian flower garlands (superstition/kinship)							
Flowers in the wedding (fertility/superstition/wealth)	3	13	1	10	7	6	
The fire in the mandap/Agni (religion)							
The vows/saptapadi (7 steps) (religion/kinship)	1	1			1		1
Something borrowed something blue (superstition/kinship)	1						
The parade of the groom/ Kasi Yatra/ Barat (wealth/kinship/ gender)							
Mandap (religion/kinship)						1	

*Continued on next page*



### Appendix III

Table 2. Continued from page 26

		Number of times that a ritual has appeared in the movie						
	Movie Name	My Big Fat Greek Wedding	Wedding Crashers	Meet the parents	The Wedding Planner	Father of the Bride	Monster-In-Law	Madea's Family Reunion
Ritual								
Jewelry on bride (wealth)		1	7	1	3	1	1	1
The diamond ring/engagement ring (wealth)		1		2	1	1	1	
Trading of the wedding rings/giving of ring (gender/wealth)		1	1			1		
Blessing the bride in her part and groom with red bindi/Saubhagya Chinha (religion/ gender)								
Henna/Mehendi party (gender)								
Church/temple/synagogue/hall (religion)			5		3	1		1
Bride or groom's home in wedding (kinship/gender)				1		1	1	
Engagement party (wealth)		1						
Priest/pastor/Guruji (religion)		1	2	1	3	1		1
Horoscope's are aligned/ picking a date (religion)								
Bridesmaids (superstition/wealth)		8	7	1	8	3	3	3
Groom can't see bride before the wedding (superstition)		1			1		1	1
The kiss (gender)		1	2	1				1
Tossing of bouquet (superstition)						1	1	

#### Appendix IV

**Table 3.** *Number of rituals identified in each category in the movies*

Ritual category	Indian Films	American Films
Gender	7	8
Family/ Kinship	7	3
Superstition	5	10
Wealth	6	9
Religion	6	4
Fertility	2	5

**Table 4.** *Number of times rituals appeared in the movies*

Ritual Categories	Indian Films	American Films
Wealth	63	166
Gender	64	61
Superstition	37	132
Kinship	40	16
Religion	41	34
Fertility	15	73

# Media Coverage of the Civil War in El Salvador



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## ABSTRACT

*The United Nation's Truth Commission Report documented the 1980-1992 Civil War in El Salvador. During the Civil War the Salvadoran government's repression was connected to the 1989 murder of six Jesuit priests. This analysis focuses on newspaper and television coverage of this event in the United States media. I used the Truth Commission Report as my historical source and compared it to media reports in the United States. I also used a 1989 Radio Venceremos radio broadcast as a source of information. Interviews were conducted in 2006 with Salvadorans to explore their perception of the 1989 media coverage of the Jesuit priest murders.*

How do people find out what is going on in the world? Whether the news occurs in our city or on the other side of the ocean, the media connects U.S. citizens to places and keeps them informed about major events. We usually do not question what the media tells us because we assume it is an objective version of events. In this paper, I explore the subject of media bias using El Salvador's Civil War as the case study. I primarily focus on the 1989 murder of the Jesuit priests at the University of Central America. This research focuses on how the murders of the Jesuit priests were covered by the United States media. I examine the amount of coverage the story received as well as the content of the news stories.

When I began researching the history of El Salvador, I did not know about the civil war. I was surprised that I did not learn about it in school because the United States was very involved. I discovered that the event was extensively covered by the United States media. I found over 200 newspaper articles and over ten television news broadcasts in the United States that gave media coverage about the murders of the Jesuit priests. This stimulated my interest in learning more about the event, the U.S. involvement, and the way that it was covered in the media. I chose to focus on the murders of the six Jesuit priests because that was the last major event before the civil war ended.

My method to determine the objectivity of the media coverage was to analyze newspapers from the United States including the *New York Times*, *St. Louis Post-Dispatch*, *St. Petersburg Times*, *The Washington Post*, and *The Grand Rapids Press*. I also took a critical look at transcripts from CBS, ABC, and PBS (Public Broadcasting Station) news, examined a 1989 radio broadcast from El Salvador, and analyzed interviews I conducted in El Salvador with people who experienced the war. The time



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period I examined was November 16, 1989, the day that the Jesuit priests were murdered, to November 16, 1990. I wanted to know how the news story of the Jesuit priests' murders was covered that first year. I examined newspapers with both liberal and conservative editorial positions. *The New York Times* is considered a liberal paper and *The Grand Rapids Press* is considered a conservative paper. I looked at the content of the articles, the length of the articles, and their location in the paper. For television news transcripts, I looked at the length and content of the stories. The news articles, television transcripts, and radio broadcast were analyzed to determine the extent of media bias.

I compared the content of newspapers articles, television broadcasts, and radio broadcast to *The United Nations Truth Commission Report* released in 1993. The report provides a historical and objective account of what happened during the civil war. When I read the articles and transcripts, I analyzed the way the articles were written and what information they tried to convey. I had expected the media to accuse the members of the rebel army of the murders. On November 16, 1989 that did happen. The media in the U.S. reported that the rebels were responsible for the priests' deaths. The U.S. media reports shifted within the next two days to place blame for the murders on the Salvadoran army. A radio station from El Salvador named *Radio Vecercemos* was analyzed to determine how the media in El Salvador covered the story. In 2006 when I was interviewing people in El Salvador, I discovered from them that *Radio Vecercemos* was a popular non-commercial rebel-run radio station. *Radio Vecercemos* accused the Salvadoran army of the murders in their November 16, 1989 broadcast. In my interviews, I learned that the commercial radio stations in El Salvador blamed the rebel army for the murders

of the priests until February 1990 when Salvadoran President Alfredo Christani admitted that the Salvadoran army was responsible for the murders. The mainstream media in El Salvador reported different stories about who murdered the priests. From the interviews I conducted, I learned that the Salvadoran government controlled what the mainstream media reported in order to influence how citizens felt about the Farabundo Martí National Liberation Front (FMLN). The FMLN was the major political party that opposed the Salvadoran government during the civil war.

When watching, listening to, or reading the news, people might not realize that the media has an agenda. "Agenda setting occurs because the press must be selective in reporting news. News outlets, as gatekeepers of information, make choices about what to report and how to report it" (Littlejohn 280). Whether liberal or conservative, most news media have an editorial position that slants the reporting towards one point of view. "One bias, which we refer to as ideology, reflects a news outlet's desire to affect reader opinion in a particular direction" (Shleifer 1). This is not always done consciously, but it does occur often. In my analysis, media bias is present when a story is slanted to show one point of view. For example, the amount of coverage a story gets may correspond to a pre-existing bias on the part of the reporters who created the story or the editors who are in charge of editing the story. The responsibility of a reporter and editor is to make sure that the public stays informed but sometimes their bias shows through in their work.

Journalistic practice is based on the assumption of objectivity. Objectivity is practiced to provide the public with information that does not reflect the journalist's feelings towards a story.

Objectivity is generally regarded as treating or dealing with facts independently of the mind, personal feelings or prejudices while journalistic objectivity is usually seen as the selection, collection and dissemination of information which reflects the reality without involving [the] journalists' own preferences, biases or opinions. (Cheng 1)

The goal of objectivity is to report all sides of the story with no bias and to provide background information pertaining to the story. Though complete objectivity is not possible, some media outlets are closer to this goal than others.

To understand the murders of the priests, readers need to know the historical context of the war in El Salvador. From 1980 through 1992, the United States participated in the Civil War in El Salvador. The United States media presented the civil war as a simple conflict in which the United States did not play a major role. In fact, the U.S. helped the Salvadoran government out of fear that El Salvador would adopt a socialist government. Starting in the late 1970s and throughout the civil war, the Salvadoran government repressed civilians who spoke out about the election fraud and the mismanagement of land. During this time, many innocent people were attacked, injured, killed, or they disappeared. A group known as the "Death Squad" attacked the people while the Salvadoran government turned away. Archbishop Oscar Romero spoke out against the injustices, the violation of human rights, and the repression by the government. Archbishop Oscar Romero asked then President Jimmy Carter to stop sending monetary aid to the Salvadoran government but his plea was not answered. One month later, on March 24, 1980 Archbishop Romero

was murdered by the Death Squad while performing Mass in the chapel of the Hospital de la Divina. Archbishop Romero's murder precipitated the twelve-year civil war.

The murders of church clergy escalated after the death of Archbishop Oscar Romero because the clergy spoke out against the government repression of the Salvadoran people. In December 1980, four church women from the United States, Maura Clarke, Jean Donovan, Ita Ford, and Dorothy Kazel, were abducted while coming from the San Salvador airport in El Salvador and were raped and brutally murdered by the Salvadoran National Guard. After these high profile murders of U.S. citizens, the United States press started to pay more attention to the escalating civil war in El Salvador because U.S. citizens had been killed.

The six Jesuit priests of the University of Central America spoke out against the government's repression whenever they could. Ignacio Ellacuría, one of the priests, was a frequent guest on the FMLN-operated radio station *Radio Veceremos*. The army wanted the priests killed because they were suspected of supporting the revolution. The priests wanted the people of the country to have rights, but they did not support the war.

They weren't the brains behind the revolution. They were part of our national conscience, the critical, scientific conscience that searched for the roots of the conflict by researching our history, to try to find a path to peace and national reconciliation. (Vigil 228)

On November 16, 1989, Ignacio Ellacuría, Ignacio Martín Baró, Segundo Montes, Joaquín López y López, Amando López, and Juan Ramón Moreno were murdered in cold blood along with their housekeeper, Elba

Ramos, and her sixteen-year-old daughter, Celina Ramos.

The Truth Commission report went into detail about the murders of Oscar Romero, the four American church women, the Jesuit priests, and others who were murdered during the war. The report goes from the planning of the murders to the cover-ups.

The lieutenant in command, José Ricardo Espinoza Guerra, gave the order to kill the priests. Fathers Ellacuría, Martín-Baró and Montes were shot and killed by Private Oscar Mariano Amaya Grimaldi, Fathers López and Moreno by Deputy Sergeant Antonio Ramiro Avalos Vargas. Shortly afterwards, the soldiers, including Corporal Angel Pérez Vásquez, found Father Joaquín López y López inside the residence and killed him.

Deputy Sergeant Tomás Zarpate Castillo shot Julia Elva Ramos, who was working in the residence, and her 16-year-old daughter, Celina Mariceth Ramos. Private José Alberto Sierra Ascencio shot them again, finishing them off. (United Nations 47) (See Appendix C.)

These men killed the priests, their housekeeper, and her daughter to make it look like they were murdered by the FMLN. They wanted the FMLN to lose the peoples' respect and support. In 1980, the army murdered the American church women and tried to blame the FMLN for their murders.

In *Manufacturing Consent*, Noam Chomsky conducted a study comparing news coverage of Jerzy Popieluszko, a Polish priest murdered on October 19 1984 in Poland, to the news coverage of Romero, the four American churchwomen, and the murder of church clergy in Guatemala from 1980 to 1985. He used *Time*, *Newsweek*,

*The New York Times*, and CBS News (transcripts accessed via Lexus Nexis) as his sources. The study showed that Popieluszko received more news coverage than the murders of Romero, the American church women and the church clergy in Guatemala combined. Chomsky suggested after Popieluszko, the American churchwomen received the most coverage because they were U.S. citizens who were killed in a foreign country.

When four American churchwomen were found murdered in December 1980, the impact upon the media was threefold. For the first time, the Salvadoran conflict became a television story since now it provided 'bang bang'. It brought the bloodshed right into American living rooms. (James 9)

In addition to the quantity of news coverage, Chomsky also looked at the content of the stories. There were quite a few details left out of the coverage when it came to the stories of the American churchwomen, but every detail was mentioned when it came to Popieluszko, from the way the Polish police found his body to the trial of his murderers.

We may note the failure of *Time* and *New York Times* to mention the bruises (which both of these publications mentioned and repeated, as regards Popieluszko); the failure to mention the destruction of Jean Donovan's face; the suppression of the degrading and degraded use of the nuns' underwear; the failure to give the account of the peasants who found the bodies. These and other details given by Bonner and suppressed by *Time* and *The New York Times* (and also *Newsweek* and CBS News) add emotional force and poignancy to the scene. Such details are included

for a Popieluszko, but not for four American women murdered by a U.S. client state. (Chomsky 62)

I read the newspapers that Chomsky referred to in his study about the American church women and noticed that the content of the articles lacked detail about how the women were murdered. Most of the articles started out talking about the women but then shifted their focus to the war in El Salvador. During the week that the women were killed, only three articles about them appeared in *The New York Times* and only two articles in *Time*. For my analysis of the media coverage of the Jesuit priests, I adapted the model Chomsky's used for his analysis of the media coverage of the four American church women

The United Nations Truth Commission Report is my historical source and was used to compare what the media reported to what actually happened. Out of all of the newspaper publications, *The New York Times* provided the most complete coverage of the murders of the priests, with 73 articles written from November 16, 1989 to November 16, 1990. In the middle of the year, the story about the priests was not major news but *The New York Times* had very small articles ranging from 30 to 60 words, reminding people of the murders. Not all of the newspapers had the murders on the front page, but most of the articles were located in the first section of the paper for the first week. The first two days after the murders *The New York Times* reported that the rebels could have been responsible for the murders of the Jesuit priests but by the third day their articles reported that the Salvadoran army was responsible. The content of the articles was consistent with the *United Nations Truth Commission Report*, which stated that the Salvadoran army was responsible for the murders. The

television transcripts I read from CBS, ABC, and PBS also were consistent with the *United Nations Truth Commission Report*. (See Appendix A.) The content was similar to the news articles when it came to assigning blame for the murders on the Salvadoran army.

*Radio Vecercemos* was a FLMN-operated radio station that broadcasted from the front-lines of the war. From the outset, *Radio Vecercemos* broadcasts reported that the army was responsible for the murders of the priests. Since the radio station was run by rebels, it was not surprising that they blamed the army. More surprising were the news articles and the broadcasts from the United States blaming the army for the murders. After I conducted more research about how the United States media covered the Jesuit priests' murders, I learned that the media reports supported the information obtained from people I interviewed.

While in El Salvador, I conducted interviews with people who were between the ages of 18 to 35 when the Civil War occurred. When conducting the interviews in El Salvador, I assumed that what the people were telling me was not known by the United States media. I asked questions that referred to the media coverage of the murders of the Jesuit priests and the American church women. I asked why they believed the Jesuit priests were murdered and most said because the Salvadoran army believed that the priests were working with the FMLN.

The reason that they killed them was for the same reason they killed Father Romero. They were on the side of the poor and needy and for that reason they were defamed, they were persecuted and assassinated (Hernandez).

I also asked how they learned about the murders of the American church

women and the priests, and most said that they learned of the murders through radio broadcasts. I learned that during the time of the civil war, people living in the city had limited access to electricity and even less electricity was accessible in the countryside. Because of the lack of electricity, television as a source of news was not an option for most people. At the time of the civil war, the literacy rate was low, so the best way for people to receive their news was through battery operated radios. All of the people I interviewed mentioned how there was a big difference between the commercial radio stations and the FMLN-run radio stations. "At the time there weren't that many different radio stations, and they were pretty much controlled by the economic powers of the government" (Hernandez).

The commercial radio stations were highly controlled and censored by the Salvadoran government.

We listened to mainly guerilla stations because the commercial radio stations were under the big pressure by the government to say the [their] truth. They were passing information by the army and the government. It was by law. If they don't do this the government would be repressive. (Alegria)

According to some of those interviewed, the commercially run stations gave a lot of misleading information. "There was a lot of what they call disinformation going on. But the rebel radio, *Radio Vecercemos* gave a lot of news that you couldn't get anywhere else" (Starr).

From those interviews, I learned about life during the time of the civil war and how the media in El Salvador covered it. Civilians recognized the difference between the way the commercial radio stations covered events during the civil war compared to the non-commercial radio stations.



The Salvadoran government had a big influence on the information that the commercial radio stations reported. Most civilians listened to the non-commercial radio stations because they trusted the information that was reported.

My research did not support my initial hypothesis. My hypothesis was that there was not a lot of U.S. media coverage of the murders of the Jesuit priests. During my research I changed the focus from “were the murders of the Jesuit priests covered,” to “how were the murders of the priests covered by the media” and “did media bias occur.” Though my

initial hypothesis was not supported, I did notice bias in the articles and the broadcasts from the United States, but it did not pertain to coverage of the priests. *Mediawatch.org* stated that the United States media was biased in favor of the Jesuit priests and failed to mention the murders of Salvadoran government officials after the priests’ murders. They felt that the United States media paid more attention to the priests because they were church clergy and at the time, American citizens were protesting the United States government sending aid (Media Research Center).

Media bias presents a certain view point of a story and determines what is newsworthy. When we watch, read, or listen to any type of media, we have to keep in mind that there is always more than one side to a story. Though some media organizations try to be objective, some bias may still come though in their coverage. It is up to the people to find out what is going on, and it may take looking at three or more sources to get an objective idea about a story.

## Appendix A

Name of periodicals used and dates

*New York Times*

November 1989, December 1989, January 1990, February 1990, April 1990, May 1990, June 1990, July 1990, August 1990, September 1990, October 1990, November 1990

*San Francisco Times*

November 1989, December 1989, May 1990, September 1990, November 1990

*St. Louis Post-Dispatch*

November 1989, December 1989, January 1990, March 1990, May 1990, June 1990, September 1990, November 1990

*St. Petersburg Times (Florida)*

November 1989, December 1989, January 1990, February 1990, March 1990, May 1990, September 1990, November 1990

*Washington Post*

November 1989, December 1989, January 1990, February 1990, March 1990, April 1990, May 1990, June 1990, August 1990, September 1990, October 1990

## Appendix B

Name of Sources	Number of Articles	Average Word Length of Article
New York Times	73	762
St. Louis Post-Dispatch	43	832
Washington Post	34	735
St. Petersburg Times (Florida)	19	899
San Francisco Chronicle	11	740

## Appendix C.

*The United Nations' Truth Report, From Madness to Hope: The 12-Year War in El Salvador*

In the early hours of 16 November 1989, a group of soldiers from the Atlacatl Battalion entered the campus of José Simeón Cañas Central American University (UCA) in San Salvador. They made their way to the Pastoral Centre, which was the residence of Jesuit priests Ignacio Ellacuría, Rector of the University; Ignacio Martín-Baró, Vice-Rector; Segundo Montes, Director of the Human Rights Institute; and Amando López, Joaquín López y López and Juan Ramón Moreno, all teachers at UCA.

The soldiers tried to force their way into the Pastoral Centre. When the priests realized what was happening, they let the soldiers in voluntarily. The soldiers searched the building and ordered the priests to go out into the back garden and lie face down on the ground.

The lieutenant in command, José Ricardo Espinoza Guerra, gave the order to kill the priests. Fathers Ellacuría, Martín-Baró and Montes were shot and killed by Private Oscar Mariano Amaya Grimaldi, Fathers López and Moreno by Deputy Sergeant Antonio Ramiro Avalos Vargas. Shortly afterwards, the soldiers, including Corporal Angel Pérez Vásquez, found Father Joaquín López y López inside the residence and killed him. Deputy Sergeant Tomás Zarpate Castillo shot Julia Elva Ramos, who was working in the residence, and her 16-year-old daughter, Celina Mariceth Ramos. Private José Alberto Sierra Ascencio shot them again, finishing them off.

The soldiers took a small suitcase belonging to the priests, with photographs, documents and \$5,000.

They fired a machine gun at the façade of the residence and launched rockets and grenades. Before leaving, they wrote on a piece of cardboard: "FMLN executed those who informed on it. Victory or death, FMLN."

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# Confronting the Concept of Intersectionality: The Legacy of Audre Lorde and Contemporary Feminist Organizations



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## ABSTRACT

*Audre Lorde was one of many women to criticize second wave feminism for overlooking issues of intersectionality. This paper examines the ways in which Lorde introduced intersectionality into feminist discourse and how feminist organizations embrace this concept today. Five organizations are examined (National Organization for Women, Grand Valley State University Women's Center, Ms. Foundation, Third Wave Foundation, and Guerilla Girls) by interviewing representatives and/or evaluating websites to assess organizational mission, vision, values and practices. Analyses reveal that all five organizations have specific policy statements addressing intersectionality. This research can conclusively say that intersectionality is at least considered by all of the organizations. Determining whether or not the current intervention strategies are effective for women experiencing overlapping oppressions is beyond the scope of this study. The different rhetoric used by each organization to address the intersectional issue, however, suggests that intersectionality is "applied" or put into practice differently by different organizations.*

## Introduction

Feminist organizations play a pivotal role in the survival of the feminist movement. They are central sites for creating activism and furthering feminist praxis (Baumgardner 2005). As such they can demonstrate to the researcher how important theoretical concepts, such as intersectionality, actually manifest when put into practice. This research defines intersectionality as a tool for analysis, advocacy and policy development that addresses multiple discriminations and helps us understand how different sets of identities impact access to rights and opportunities.<sup>1</sup> This brings us to the question at the center of this research: have feminist organizations confronted the concept of intersectionality within their work? In other words, do they account for the multidimensionality of women's lives while fighting for economic, political and social equality? Furthermore, has confronting intersectionality become a central tenet of feminist organizing? These are the guiding questions of this research because they help to assess whether this particular concept has gone from the margin to the center of the mainstream feminist radar. These questions also bring us closer to an understanding of how concepts deemed important by a small group can become permanently relevant within feminism and by extension within society.

Audre Lorde, perhaps better than anyone else, articulated an experience of overlapping oppressions and generated scholarship that helped make feminism pay attention to these issues. She was a self-defined Black, lesbian, feminist, mother and poet warrior who refused to live a single-issue life and therefore called for a multi-issued feminist movement (Lorde 1984). This research uses Lorde as a representative voice for



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<sup>1</sup> This particular definition was taken from the Association for Women's Rights in Development, *Women's Rights and Economic Change: Intersectionality a Tool for Gender and Economic Justice*, by Alison Symington (2004). After synthesizing many definitions of this concept, the above definition seemed to most accurately capture the concept as it is meant in this research.

all women who articulated comparable positions (such as Gloria Anzaldua, Cherrie Moraga and Barbara Smith) on the need within feminism to confront intersectionality. She is isolated because her life and works help to focus feminist discussion around the complexity of identity thus providing potent examples of why intersectionality is an important feminist issue.<sup>2</sup>

All of Audre Lorde's published materials are consulted to explore the ways in which she conceptualized her status as an "outsider" and critiqued feminism for overlooking intersectional issues. Additionally, important works about Lorde that are written or edited by other authors are examined. Next, the research attempts to assess Lorde's legacy on feminist organizing. The point is not to theorize an explicit nexus between current feminist practice and Lorde's influence. Instead, the point is to explore whether or not feminism has been responsive to critiques about the oversight in intersectional issues and to offer an example of someone who was among the first to purpose their significance in the late 20<sup>th</sup> century.<sup>3</sup>

The following feminist organizations were examined: National Organization for Women (NOW), Grand Valley State University Women's Center, Ms. Foundation, Third Wave Foundation, and Guerilla Girls. There is a specific logic to this sample that reflects a desire for diverse and esteemed representation while also being cognizant of time and resource constraints.<sup>4</sup>

#### *Audre Lorde's Legacy*

Black feminist scholar, Kimberly Crenshaw explains intersectionality as, "a means of capturing both the

structural and dynamic (e.g., active) aspects of multiple discrimination, thus affecting both theory and practice" (Morgan 2003 p46). This requires looking at interactive discriminatory structures that set the grounds for more active displays of marginalization. Or as Crenshaw puts it, "[h]ow discrimination is structured and how it works" (Morgan 2003 p46). For example, a Black, female, single, welfare-recipient is crippled by power hierarchies that privilege the White, male, married, middle class experience over hers. She is also vulnerable to specific policies that enforce and compound her domination. Using the metaphor of an intersection is useful in illustrating how these different oppressive identity markers are not mutually exclusive (Morgan 2003). Feminism as a truly inclusive and liberatory movement must reach the multiply oppressed and learn from them about the complexity of their circumstances. Crenshaw uses the specific example of a traffic intersection to explain the various dimensions of intersectionality. For example, she says,

Staying with our metaphor of intersections and traffic, it's crucial to understand that the 'ambulances' and 'EMS personnel' necessary to aid the victims of these collisions—constituent communities, liberation movements, progressive activists—often don't reach the collision victims on time, or at all, or may be insufficiently equipped to make the right diagnosis for full rescue and remedy.  
(Morgan 2003 p. 50)

Whether feminist organizations have learned to be effective 'ambulances'

and 'EMS personnel' is the purpose of this research.

Within the historical development of feminism, intersectionality is a concept that was deeply examined in the second wave (Kolmer, Bartkowski 2005). The second wave refers to an era of feminism occurring between the early 1960s to the early 80s (Pilcher, Whelehan 2004). It addressed issues like reproductive freedom, abortion rights, access to jobs, equal pay for equal work, and the personal as political. This era of feminism was largely seen as a suburban white women's movement. Women of color—Black, Latina, Native American and Asian women—were often very critical of what has commonly been referred to as the "mainstream, White women's movement" (2004).<sup>5</sup> However, women like feminist scholar Benita Roth would kindly remind us that women of color had feminist movements of their own that were occurring simultaneously. So it was not as if women of color were begging entry into this mainstream movement. They were often participating in their own separate forms of feminism. Still, women of color did feel marginalized by the lack of attention paid to issues like race, class, and sexual orientation within the white women's movement.

One of the most prolific and important women to emerge as a second wave critic was Audre Lorde. It is important to isolate her from the chorus of women of color critics for four key reasons: 1) Lorde was a figurehead for Black lesbian feminism; 2) she left an accessible canon; 3) she explicitly celebrated difference; and 4) she was marginalized in multiple ways.

<sup>2</sup> Lorde was also selected because her identity markers are similar to those of the researcher and the personal has always served as an interesting and legitimate starting point for feminist scholarship.

<sup>3</sup> Women like Sojourner Truth did this work in the 19th century (see Kolmar)

<sup>4</sup> The logic of selecting each organization will be further explained later (see section on Methods)

<sup>5</sup> It is important to note that the term "women of color" has recently come under scrutiny because it conflates all of these complex identities/histories into one and assumes that women of color belong together just because there is oppression in common. This is a point articulated by Analouise Keating in *Women Reading Women Writing: Self-Invention in Paula Gunn Allen, Gloria Anzaldua and Audre Lorde* (1996).



Audre Lorde was renowned as the figurehead for black lesbian feminism and by extension it is safe to say women of color lesbian feminism. For example, in 1983 when the National Coalition of Black Gays wanted to include a gay/lesbian speaker at the March on Washington for Jobs Peace and Freedom they turned to Audre Lorde (De Veaux 2004). Her name and image are inextricably woven with black lesbian feminism.

She also left us with an accessible and profound canon of poetry, an autobiography, and prose. As she might have said herself, she turned the silence surrounding intersectionality into language and action and left a rubric of articulate thought for future generations to follow.

Within her writings she put forth a theory of difference. This theory is most clearly articulated in *Sister Outsider*, a collection of her essays and speeches. Simply put, the theory explains a celebration of difference as necessary for a healthy society. For example, when referring to racism, sexism, heterosexism, and homophobia she says:

These forms of human blindness stem from the same root—an inability to recognize difference as a dynamic human force, one which is enriching rather than threatening to the defined self, when there are shared goals. (Lorde 1984 p. 45)

or later in the same book, different essay:

You do not have to be me in order for us to fight along side each other. I do not have to be you to recognize that our wars are the same. What we must do is commit ourselves to some future that can include each other and to work toward that future with the particular strengths of our individual identities. And in order to do this we must allow each other our differences at the same

time as we recognize our sameness. (Lorde 1984 p. 142)

Lorde argued that women needed to bring their whole selves to the movement and she believed that difference, diversity and inclusion should be the lifeblood of the feminist movement (and for that matter any movement).

The final reason for isolating Lorde is the extremity of her marginalization. She was *the* outsider. She was born in the 30s to Caribbean working-class immigrant parents, she was myopic and considered blind at birth, she was Black, woman and lesbian-identified. She made confronting these intersections a theme throughout her work.

For instance in the late 70s/early 80s there was a rash of brutal rapes and murders of Black women—mostly in the Boston area. There were thirteen total murders in a relatively short period of time. Black males in the community were framing this as a race issue (De Veaux). Lorde reminded us that people were not only victimized because of their race but because of their sex as well (De Veaux). In the following excerpt from *Need: A Chorale of Black Women's Voices* (Lorde 1997) she articulates the intersectionality of race and sex in the victim's experience:

Dead Black women haunt the Black  
maled streets  
paying the cities secret and familiar  
tithe of blood  
burn blood beat blood cut blood  
seven year old child rape victim  
blood  
blood of a sodomized grandmother  
blood  
blood on the hands of my brother  
blood  
and his blood clotting in the teeth  
of strangers  
as women we were meant to bleed  
but not this useless blood  
my blood every month a memorial

to my unspoken sisters falling  
like red drops to the asphalt  
I am not satisfied to bleed  
as a quiet symbol for no one's  
redemption  
why is it our blood  
that keeps these cities fertile?

Lorde's poetry speaks to what it is like to belong to two groups that are victimized. She is talking about being Black and woman. Lorde, however, did not really feel like she belonged to any one group entirely. This is demonstrated, for example in a poem called *Between Ourselves* (Lorde 1997) where she muses on not belonging to the black community because of her sexual orientation:

Once when I walked into a room  
my eyes would seek out the one or  
two black faces  
for contact or reassurance or a sign  
I was not alone  
now walking into rooms full of  
black faces  
that would destroy me for any  
difference  
where shall my eyes look?  
Once it was easy to know who were  
my people

Lorde stood on the fringes of society and was therefore able to see injustices more clearly. She also stood on the outskirts of the white women's movement and was able to critique it in a way that held it accountable and called it on its broadest and truest ideals - the thinking being (and in her own words), "There is no such thing as a single-issue struggle because we do not lead single-issue lives" (Lorde 1984).

All of this is a synthesis of the literature review and the second part of the research attempts to look at how successful women like Lorde were in re-shaping feminism to include intersectionality as a central tenet.

## Methods

Performing this research involved establishing criteria for determining what qualifies as a feminist organization. Feminist scholar bell hooks' definition of feminism was adopted for this project. She defines feminism as, "[a] movement to end sexism, sexist exploitation and oppression" (hooks 2000 p1). With this in mind, the research qualifies a feminist organization as one that adheres to all three dimension of hooks' definition. This means that, in this research, feminist organizations are defined as those that actively work to eliminate sexism, sexist exploitation, and oppression. Additionally, the organizations examined are all self-avowedly feminist. This method of defining separates organizations that may simply work with women or have "women" in their title from those that are grounded in feminist principles. After establishing this criteria, there was a specific logic to each organization selected.<sup>6</sup>

## Logic of Sample

The logic of selecting The National Organization for Women (NOW) is that it is positioned as one of the oldest and largest feminist organizations in the country, and this allows it to set the feminist agenda in many ways. It also has a history of marginalizing women who were not white, straight, and middle-class. Seeing NOW addressing intersectional issues is pretty sound evidence that the feminist movement has been responsive to critiques by women like Lorde.

The logic of selecting the Grand Valley State University Women's Center (GVWC) is manifold. The GVWC is an example of a localized feminist action center and helps to embody the feminist ideal of allowing students/community members to think globally and act locally. It is housed within a mid-sized university

and is likely similar to hundreds of feminist organizations across the country. These centers are important because they help to sustain the movement by providing fodder for young activists to grow. Seeing intersectional issues confronted here could mean that it is a concept that emerging student activists will continue to keep relevant.

The logic of selecting The Ms. Foundation is that it is a major endowment source for many smaller feminist efforts. It helps to keep feminist movement alive financially. The importance of addressing intersectionality will be reflected in terms of who receives Ms. Foundation monies.

The logic of selecting The Third Wave Foundation is that it is a multi-issued social justice organization that mainly deals with grooming emerging activists between the ages of 15-30. As an organization built on dealing with third wave feminist issues, it is an important group for defining the third wave and creating a third wave agenda. The logic behind selecting this organization is that it allows us to determine whether or not confronting intersectionality is an organizing principle of the third wave of feminism. We can then say that women like Lorde were successful in bringing this issue into the forefront.

The logic of selecting The Guerilla Girls is that they are a group of activists that fight discrimination in the art world and represent the continuing legacy of giving voice to women artists like Audre Lorde. They are also the only organization founded explicitly on addressing the intersectional issues of race and gender representation within the art world.

## Evaluations

To evaluate these feminist organizations an eleven-question interview was designed that asked general questions

about mission, vision, values and more specific questions about programming, services and funding. The intent of every question was to prompt the interviewer to discuss intersectional approaches and also to see how thoroughly the concept was integrated (assessing the integration of the concept had to do with gauging adherence to the mission, vision and values of the organizations). Through this method, one phone interview with the CEO of the Ms. Foundation, Sara Gould, was conducted and one person-to-person interview with Marlene Kawalski-Braun, director of Grand Valley State University's Women's Center was conducted. For the other three organizations, where representatives were not available, website assessments were performed. These assessments involved reading every available page and link and also doing additional Internet research to cross-reference some of the names and phenomena mentioned on these websites. Each analysis took between 3-15 hours of website perusal.

The original idea was to interview representatives from each organization in the sample. However, this proved impossible as some organizations did not respond to requests or denied them entirely.<sup>7</sup> As a result, under the council of project mentors (Marshall Battani Ph.D. and Dennis Malaret Ph.D.), it was decided that website evaluations were a legitimate way to gauge the integration of intersectionality. While connecting with a representative helps to determine internal politics in a way that is impossible in evaluating websites alone, websites control for interviewer bias and provide similar information that interview questions attempt to access.<sup>8</sup>

## Results

A blanket and uniform approach to confronting intersectionality did not

<sup>6</sup> Ideas for determining the logic of the research sample came from *What Is a Case?: Exploring the Foundations of Social Inquiry* by Ragin and Becker (1992)

<sup>7</sup> Some organizations seemed to view me as an agitator or interloper and would not grant an interview. I got the distinct feeling that my lack of credentials was a significant factor in at least one denied interview.

<sup>8</sup> See Appendix 2: Website Evaluation Rubric

emerge in this research. Approaches are varied and distinct to the specific aims of each organizational mission. The findings lend themselves most readily to a qualitative interpretation.

*National Organization for Women (NOW)*  
NOW's mission reads as follows:

Since its founding in 1966, NOW's goal has been to take action to bring about equality for all women. NOW works to eliminate discrimination and harassment in the workplace, schools, the justice system, and all other sectors of society; secure abortion, birth control and reproductive rights for all women; end all forms of violence against women; eradicate racism, sexism and homophobia; and promote equality and justice in our society (National Organization for Women 2006).

In another section of their website there is a statement that recognizes the interconnectedness of oppressive forces more explicitly and expresses a commitment to combating them. It reads:

NOW is one of the few multi-issue progressive organizations in the United States. NOW stands against all oppression, recognizing that racism, sexism and homophobia are interrelated, that other forms of oppression such as classism and ableism work together with these three to keep power and privilege concentrated in the hands of a few. (National Organization for Women 2006)

In adherence to the above statement, NOW takes a few important actions. They do political advocacy of candidates at the local and national levels who give attention to intersectional issues in their platform; for example, they

endorsed presidential hopeful Carol Moseley Braun in 2000. Also, they encourage and organize direct mass action that attempts to protest and otherwise dismantle racism, classism, and heterosexism. Lastly, they have policy statements like the one above that include acknowledgement of multiply oppressed peoples.

*Grand Valley State University Women's Center (GVWC)*

GVWC's mission statement reads as follows: "Creating a Grand Valley State University community that promotes and supports the present and future success of women students" (Grand Valley State University Women's Center 2006). There is also an emphasis on the importance of diversity reflected in the following excerpt from the GVWC's values statement (Grand Valley State University Women's Center 2006):

The GVSU Women's Center strives to create a place for women to achieve their full educational, personal and career potential in a safe and fun environment. This begins with recognition of the diversity among women (i.e. ethnicity, race, religion, disability, sexual orientation, age, and socio-economic status) and the need for communication, learning, and equality among them.

To this end, the GVWC takes a few important actions. They have an annual program examining the impact of class and race on women's lives. They produce an annual unofficial publication called "In Our Own Words: A Journal About Women." The journal often deals with the impact of having multiple oppressive identity markers. For example, a poem entitled "Say It Loud... African-American Woman and Proud" by Harriet Singleton gives voice to the pressure Black women often feel

to create an identity hierarchy in terms of race and sex. She says,

"I never knew what came first,  
Being Woman or Being Black at Birth."

Additionally, they attempt to embed diversity into the overall atmosphere of the women's center. For example, library books by authors such as Gloria Anzaldua and bell hooks, art reflecting a multiracial women's perspective and furniture with upholstery from around the world. Lastly, they invite women who represent traditionally marginalized groups to an all-expense paid annual retreat.

*Ms. Foundation*

The mission of the Ms. Foundation as stated on their website reads as follows:

The Ms. Foundation supports the efforts of women and girls to govern their own lives and influence the world around them. Through its leadership, expertise and financial support, the Foundation champions an equitable society by effecting change in public consciousness, law, philanthropy and social policy (Ms. Foundation 2006)

Their beliefs and values speak more directly to the importance of confronting multiple oppressions:

Our work is guided by our vision of a just and safe world where power and possibility are not limited by gender, race, class, sexual orientation, disability or age. We believe that equity and inclusion are the cornerstones of a true democracy in which the worth and dignity of every person are valued (Ms. Foundation 2006)

In a phone interview with Ms. Foundation President, Sara Gould, various methods of exploring

intersectionality that coincide with their mission and value statement were explained. She mentioned that internal work on strategic diversity questions was being conducted in order to make the organization more able to embrace difference of all kinds. She also said that the organization injected the issue of gender into the race, class discussion surrounding Hurricane Katrina. Additionally the organization started the Katrina Women's Response, raised over one million dollars and granted these funds in an intersectional way. Gould also mentioned that the guidelines for various grant-making programs are always compared to the organization's mission, belief and value statements. Lastly the organization attempts to deepen the analysis of how to reach women who are marginalized the most.

#### *Third Wave Foundation*

An abbreviated version of the Third Wave mission statement, as it appears on their website, recognizes the interconnected nature of gender, race, social and economic oppression. It reads as follows:

The Third Wave Foundation is a feminist, activist foundation working nationally to support young women and transgender youth ages 15 to 30. Through financial resources, public education, and relationship building, Third Wave helps support and strengthen young women, transgender youth and their allies working for gender, racial, social, and economic justice.

Third Wave is led by a board of young women, men, and transgender activists striving to combat inequalities that we ourselves face as a result of our age, gender, race, sexual orientation, economic status, or level of education. By empowering

young women and transgender youth nationwide, Third Wave is building a lasting foundation for young women's activism around the countr[y] (Third Wave Foundation 2006)

The Third Wave value statements recognize the necessity for an intersectional analysis of feminist affairs. For example, one of many value statements reads "Third Wave Foundation's feminism is explicitly connected to issues of race, class, gender identity, heterosexism, and other justice movements" (Third Wave Foundation 2006). The organization takes a few important actions in adherence to their mission and values.

First, they provide a brief biographical sketch of each founder and each member serving on the board of directors. The sketch includes how privilege and oppression may overlap in their own lives; thus demonstrating the personal impact of the intersectional issues at hand and knowledge of the complicated interplay of oppressive forces. For example, the website says,

Board Member Beth George is a 24 year-old white lesbian who comes from a working-class family in South Carolina. She is currently at Fenton Communications, a national strategic communications firm, where she creates communications strategies for such human rights and social justice campaign, including women's rights and health care. George began her communications career by serving as the inaugural Public Education Fellow at the American Civil Liberties Union (ACLU). She is a researcher and contributing writer for the book "Too High A Price: The Case Against Restricting Gay Parenting" (Third Wave Foundation 2006)

Next, they supply grants for young women working for racial, economic, social, reproductive, gender justice. Also, they provide resources, scholarships and fellowships to lesbian/gay and transgender youth of color. They also link all initiatives to broader social justice movements in an attempt to demonstrate the interconnected nature of oppression. Lastly, they promote multi-issue social justice events for young activists that deal with confronting intersectionality. For example, at the time of print there was a hip-hop conference that critically analyzed hip-hop and the intersections of gender and sexuality.

#### *The Guerrilla Girls*

The following quote from the Guerrilla Girl's website explains how the Guerrilla Girl's define themselves and their tactical approach to confronting the intersections of art, race, and sex:

We're a bunch of anonymous females who take the names of dead women artists as pseudonyms and appear in public wearing gorilla masks. We have produced posters, stickers, books, printed projects, and actions that expose sexism and racism in politics, the art world, film and the culture at large. We use humor to convey information, provoke discussion, and show that feminists can be funny. We wear gorilla masks to focus on the issues rather than our personalities. Dubbing ourselves the conscience of culture, we declare ourselves feminist counterparts to the mostly male tradition of anonymous do-gooders like Robin Hood, Batman, and the Lone Ranger. Our work has been passed around the world by kindred spirits who we are proud to have as supporters. It has also appeared in The New York Times, The Nation, Bitch and Bust; on TV and radio, including

NPR, the BBC and CBC; and in countless art and feminist texts. The mystery surrounding our identities has attracted attention. We could be anyone; we are everywhere (Guerilla Girls 2006)

In order to confront the intersections of race, sex, and art etc., the Guerrilla Girl's use several, often humorous, tactics. They distinguish between themselves while in costume by addressing one another by codenames. These codenames represent dead women artists (often women of color) and this is done to secure these women artists a historical presence and protect the anonymity of the actual Guerilla Girls. For example, one Guerilla Girl uses the codename Zora Neal Hurston.

Another tactic for confronting intersectionality is the use of humorous posters, billboards, and bus ads that often embarrass the people/institutions responsible for actively perpetuating racism and sexism. They also send letters to offenders within the art/entertainment world who devalue the work of women artists or don't include women and men of color in art shows. They send "apologist of the year" awards to women in positions of power within the art world who don't stand for up-and-coming women artists and artists of color. They encourage women to develop additional unconventional tactics to expose the racism and sexism in their own artistic communities/college campuses. Lastly, they publish books that attempt to re-write art history from a less White, male and western perspective (Guerilla Girls 1998, 2004).

#### *Discussion/Conclusion*

It is clear that Audre Lorde helped to initiate dialogue about intersectionality

within feminism. The organizations I examined continue to participate in this discussion, and they have done work to incorporate more marginalized voices into feminist organizing. All of the organizations unquestioningly have a complex understanding of structural inequalities and how they play out in women's lives. However, given the limitations of this research, it is difficult to say whether the constituents/members of these organizations feel adequately supported. Future research will have to examine the responses of women who utilize the services of these organizations. This will have to be done in order to accurately gauge the success or failure of the policies and actions these organizations take to confront intersectionality. Until then, the conclusions must be drawn from the data.

Based on the data collected, every organization is making some attempt through policy and action to address the needs of women dealing with intersectional inequalities. Though intersectional approaches may differ from organization to organization, a commitment to confronting intersectionality is the common denominator. There is a set of nine discernable similarities that exist among the organizations. 1) Every organization has a policy statement that acknowledges overlapping oppressions and vows to act against them. 2) Every organization takes multiple and varied approaches to confronting intersectionality. 3) Every organization has members who personally experience overlapping oppressions serving in key leadership positions. 4) Four out of five organizations are multi-issued (NOW, Grand Valley Women's Center, Ms. Foundation and the Third Wave

Foundation).<sup>9</sup> 5) Every organization supports external feminist efforts dealing with intersectionality (via funding, co-programming, scholarships, promoting community events, endorsing of political candidates, housing library books, selling merchandise, etc.). 6) Every organization has diversity initiatives. 7) Every organization has a structure that allows for the incorporation of marginalized voices into decision making (steering committees, all-expense paid retreats, leadership positions, collecting feedback on programming/services). 8) Three out of five organizations (Grand Valley State University Women's Center, Third Wave Foundation, and the Guerilla Girls) were founded after women like Audre Lorde called for a more intersectional approach to feminist practice.<sup>10</sup> 9) Every organization takes steps to ensure the continuation of intersectional analysis.

Given the above data, it is still difficult to make a direct connection between policy statements and supporting actions; this is especially so for organizations where website perusal was the only tool of analysis. How do policies translate *directly* into action? In recognizing that racism, homophobia, classism, ableism, etc. are all linked, what *specific* actions are taken to confront them all and to properly treat victims? These questions have not been made clear by this research. However, this research can conclusively say that intersectionality is being confronted by the examined feminist organizations. These findings suggest a correlative relationship between the work of Audre Lorde and current attention to intersectionality in contemporary feminist organizations.

<sup>9</sup> The Guerrilla Girl's deal specifically with the intersections of race, sex and art. Of the organizations examined they are the only one dealing explicitly with intersectionality.

<sup>10</sup> The other organizations, NOW and the Ms. Foundation were founded in the second wave. They have adapted policy since inception to address intersectional issues.



## **Appendix 1: Interview Questions**

### *Background questions*

1. Would you consider this a feminist organization?
2. How is power within the organization set up?
3. How many people does the organization employ?
4. Is the organization classified as a non-profit?
5. Is there a board of directors or a steering committee? If so, who comprises it?
6. What are the organization's sources of funding?

### *Prompts*

1. What would you say are the strengths and weaknesses of this organization?
2. What is the most recent success story?
3. What are the major programs/services offered? Has programming always been this way?
4. How do you think the organization's programs/services reflect the mission of the organization?
5. Does the organization have a measure for adherence to mission, vision, values?
6. What is the most often used service? What is the most highly attended program?
7. Do you have a way of collecting statistics on participants?
8. What are the biggest obstacles the organization faces?
9. Do you have any diversity initiatives?
10. Is there anything the organization does to deal specifically with issues like race, class, sexual orientation etc. or to otherwise reach out to groups who have traditionally felt marginalized by the women's movement?
11. What would the organization consider the most pressing issues facing the women's movement today?

## **Appendix 2: Website Evaluation Rubric**

### *Steps*

1. Read every page of website
2. Cross-reference content
3. Retrieve published literature mentioned on website when possible

### *Questions*

1. Does the website explicitly mention the term "intersectionality?"
2. Does the website offer biographical sketches of the organizations leaders?
3. Does the website mention the elimination of multiple oppressions in the mission, vision and/or value statements?
4. Does the website mention diversity initiatives?
5. Does the website disclose the organization's funding sources?
6. Does the website disclose organization structure? How is power set up?
7. Does the website express the organizations main interests?
8. Does the website mention feminist influences such as Audre Lorde?
9. Does the website mention programs/services offered?



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# Presidential Rhetoric: How John Adams and George W. Bush Used Religion to Effectively Communicate with Their Respective Constituency



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## ABSTRACT

*President George W. Bush's affiliation with the conservative and political Christian right helped him win the presidential elections of 2000 and 2004. During the past six years, Bush has courted this vast voting public by referencing Christian doctrine in his speeches. John Adams, this nation's second president, was of Puritan ancestry. Yet Adams, an eloquent writer, carefully crafted his communiqués to avoid overt religiosity. An analysis of the public communications of these two presidents will show how allusions to Christianity have been used as a rhetorical and political tool to facilitate national unity for their agendas.*

How American presidents have influenced the voting public has been a controversial topic since the signing of the Constitution in 1787. The founding fathers of this nation wanted to form a new government, unlike England, the mother country, which was a monarchy. Some adherents to the English rule wanted to retain a weak-central government, as described in the Articles of Confederation. The Articles were written to help the newly emerging government rule the United States but, in effect, they were not a long-term solution. To amend this problem, the Constitution was drafted. John Adams, a delegate from Massachusetts, pushed for a strong executive government with a system of checks and balances so that no single party could become more powerful than another. Adams had ideas for a better, and hopefully, stronger government.

Adams believed all men were subject to passions and emotions that had to be disciplined and controlled. For this reason, government was essential and laws must be made and enforced to protect the rights of all individuals and to help guide each person in his growth toward mature citizenship. (Brown 24)

Adams was passionate about citizenship; he wanted each citizen to have individual freedom, but he also wanted this freedom to be something that was within reasonable limits.

He believed in service to the newly formed United States, and he proved himself by being her representative in France. His European mission was to gain funds for the flourishing new democracy. In 1796, Adams, the nation's second president, knew his greatest challenge was to keep his fragile country together. The United States was recovering from the War of



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Independence. Individual states were still delicately balanced between forming a union or fragmenting into separate, independent nations.

Between 1796 and 1800 the United States teetered on the brink of an internal revolution that, regardless of its ultimate outcome, would certainly have changed the political structure of the nation and might have dissolved the union that had been forged by the War of Independence. (Brown 14)

The ultimate consolidation of the union saw another forty-one presidents entrusted with keeping the centralized government strong. George W. Bush, the forty-third president, like Adams, saw his country embroiled in international conflict. Prior to his inauguration, the chief worry Bush had for his country was the conflict with Iraq. At first, he avoided discussing the Middle East problem during his presidential campaign, but after his election to the presidency in 2000, he was determined to advance the United States into war with Iraq. According to Peter Singer, President Bush ignored the advice of Pope John Paul II as well as United States Army General Tommy Franks that the Iraqi war would cause civilian casualties. Pope John Paul, through his envoy Cardinal Pio Laghi, stated, "A war with Iraq would be illegal, cause civilian casualties, deepen the gulf between the Christian and Muslim world, and would not make things better" (144). The president replied, "a war with Iraq *would* make things better" (Singer 144). He did not state exactly who would benefit from the war, but the implications were clear: the United States would benefit by having more control of Iraqi oil distribution.

War often destroys the country in which it is fought. As the leading country going into the Iraqi War, the United States is responsible for repairing the damage.

Many American businesses would benefit from being hired by the United States government, and many of those businesses were tangentially connected to Bush. Halliburton Energy Services, is a major oil construction company where Vice President Dick Cheney was Chief Executive Officer for five years. Cheney retired from Halliburton to enter the 2000 presidential campaign as Bush's running mate. Bechtel Group Incorporated, is an international construction and engineering company concerned with former Secretary of State George Shultz. Shultz is on Bechtel's board of directors and one of Bechtel's upper management members. "CEO Riley Bechtel was appointed in February 2003 to the President's Export Council, which advises the president on programs to improve trade" (*Windfalls of War*). Parsons Corporation, a global design and engineering firm, has several military ties to the United States government. CEO James McNulty served in the United States Army for twenty four years and was the head of the Pentagon's Strategic Defense Initiative "Star Wars." As the newly elected president, Bush had the power and influence to push for the Iraqi conflict, as well as to have a voice in which companies would help rebuild Iraq.

The United States president is arguably the most powerful person in the world. Similarly, the president has the advantage or disadvantage of being one of the most well known, and lately, the most often quoted person in the United States. The president is constantly being critiqued, criticized, and analyzed by the American public, the media, and other nations. It is because of this attention that he has a readily available audience.

It can safely be argued that a speechwriter's words, even if unaltered by the president who uses them, acquire presidential gravitas through being uttered by the president. They appear

on center stage; they go under the microscope; they become the subject of discussion and minute scrutiny, as they would not if they remained only the words of someone less in the spotlight than the president. (Metcalf 80)

It is with this advantageous publicity that the president can influence the voting public in favor of his political policies. I will analyze speeches and writings by John Adams and George W. Bush to determine whether they used two popular subjects, religion and national unity, to influence the voting public.

A major consideration as to how each man developed his respective political beliefs and strategies is the familiarization with their lives before they were elected president. Adams came from a farming family with Puritan ancestry in Braintree, Massachusetts. His parents valued education even though neither of them was formally educated. He was an intelligent, studious scholar at Harvard University. After graduation in 1755, he taught school for three years before beginning a career as a lawyer in Braintree. During this time, he was constantly writing letters, newspaper articles, and essays. His political career began with his election to the Continental Congress in 1774. Adams was thought to be "perhaps the most original and, with [James] Madison, the best read in constitutional history and law of all the Founders" (Brown 8). During the next four years he served on more than eighty committees of the Continental Congress. He chaired twenty-five of these committees. In 1778, Adams was sent as a representative of the United States to France. The United States needed to secure funds due to its severance from Great Britain. At the time, the country was recovering from the War of Independence. A year later, he returned to the United States and began writing

a constitution for Massachusetts. After he completed the constitution, he spent the next ten years traveling to Europe seeking funds and peacemaking for the newly formed colonies. He was again elected to the Continental Congress upon his return to the States.

Adams was elected vice president in 1789, and he served two terms as vice president under George Washington. At the time, there were two specific duties of the vice president: wait for the president to die and preside over the Senate. After his two terms as vice president, he was elected president in 1796 (Ellis 166). During Adams' time, political careers were developed through personal relationships and friendships.

Politics, even at the highest level in early republic, remained a face-to-face affair in which the contestants, even those who were locked in political battles to the death, were forced to negotiate the emotional affinities and shared intimacies produced by frequent personal interactions. (Ellis 17)

Bush's ascension to the Oval Office was precipitated by riding on the coattails of his father, George H. W. Bush, forty-first president of the United States. He attended Yale University and graduated in 1968 with a Bachelor of Arts degree. After graduation, he joined the Texas Air National Guard. He eventually acquired an MBA in 1975 from Harvard Business School. He unsuccessfully ran for U.S. House of Representatives in 1978. During this time, Bush was CEO of his own oil company, Arbusto, later to be renamed Bush Exploration. After oil prices began to decline in the early 1980s, Bush Exploration was bought out by Spectrum 7, another oil drilling company. Bush became the chairman of the combined companies and later arranged to inexpensively sell his company to Harken Energy Corporation

at which point he again served on the board. Bush has been criticized for his abrupt sale of Harken stock.

An SEC [Securities and Exchange Commission] investigation, conducted while Bush's father was President of the United States, declared "the investigation has been terminated as to the conduct of Mr. [George W.] Bush, and that, at this time, no enforcement action is contemplated with respect to him." But the investigation's termination "must in no way be construed as indicating that the party has been exonerated or that no action may ultimately result." As President, [George W.] Bush has refused to authorize the SEC to release its full report on the investigation. (Nationsonline.org)

He invested in the Texas Rangers in 1988 and profited handsomely after a lucrative buyout by private shareholders ten years later. He successfully ran for governor of Texas in 1994. In 1999, he declared his decision to run for president of the United States, stating that "he had been 'called' to seek a higher office," and he was elected president in November of 2000. (Singer 99)

Bush's success, many believe, was a result of his identification with, and courting of, the Christian right wing. Bush's born-again Christianity has become a major platform in his political career. Pundits wonder how Bush, in his strong religious beliefs, justifies his sense of right and wrong, good and evil. According to Singer, "For Bush, faith in God leads to faith in America" (XI). Bush connects his convictions with his country. His faith in his country is strong. Is it because his patriotism is intensely rooted in his ability to rule the country as president? It appears that Bush firmly believes his God favors the United States, as opposed to other

nations, who might not be on his (Bush) God's side. "God is not only on the side of any nation, yet we know He is on the side of justice. And it is the deepest strength of America that from the hour of our founding, we have chosen justice as our goal." (Singer XI)

Bush purports to know what the founding fathers were thinking when they drafted the Constitution. He appears to have special insight that few, if any, have.

It seems that he confuses justice with religion, and more specifically, God. He implies that God is the one who controls justice. If, as Bush believes, God is responsible for justice, then a court system in America would be pointless. Appeals would have to be made before God or a representative of God, instead of judges. Bush's indirect certainty is that he already knows God will deal with justice and punishment; the American court system is just a formality. Bush favors God's sense of justice, and by leaving the justice in God's hands, he shows his belief in God's existence, voiding all other religions and their "Supreme Being(s)."

While Bush's allusions to religious piety touch the heart of the voting public, Adams, on the other hand, did not need to announce his religious beliefs. Adams addressed freedom of religion while drafting the Massachusetts Constitution in 1779. Adams wrote,

While it [the constitution] did not guarantee freedom of religion, it affirmed the duty of all people to worship The Supreme Being, the great creator and preserver of the universe, and that no one was to be hurt, molested, or restrained in his person, liberty, or estate for worshipping God in the manner most agreeable to the dictates of his own conscience, provided he did not disturb the public peace. (McCullough 222)

Growing up in a Puritan community, Adams knew the importance of religious freedom.

While Bush talks of religion and freedom, his speeches are more like inspirational testimonies than actual plans to lead his country.

We ought not to worry about faith in our society. We ought to welcome it into our programs. We ought to welcome it in the welfare system. We ought to recognize the healing power of faith in society. (Singer 111)

So if we do not believe as Bush believes, we might not benefit from government assistance as fully as those who subscribe to Bush's theology. Bush seems to be overlooking the separation of church and state. Instead, he blends both to the point that one cannot be mentioned without the other.

Adams, on the other hand, rarely used religious references. He preferred to use his intelligence and creativity. He posited his opinions on many subjects, but few contain religious overtones. According to Ellis, Adams returned regularly to his outspokenly critical attitude toward popular [religious] movement.

If not restrained by law, evangelical Christians in America would 'whip and crop. And pillory and roast' just as they did throughout European history. "The multitude and diversity of them, You will Say, is our Security against them all. God grant it," he [Adams] acknowledged. But the same emotional forces that propelled religious fanatics to commit unspeakable acts against humanity operated with equivalent ferocity in the political arena. (*Passionate Sage* 123)

It was Adams' continuous and critical writing and thinking that brought

about his ability to influence. He was a skilled author and debater and used those talents to his advantage. Although he was well known for his political prowess, Adams was disliked by many of his political partners for his ability to effectively debate any issue, and at certain times, for hours. Some of his associates, Thomas Jefferson, Alexander Hamilton, James Madison, and Theodore Sedgwick at one time or another feuded with Adams. Adams did not let these feuds affect his ability to lead his country or maintain his professional and personal relationships with these men.

If revolutionary credentials were the major criteria, Adams was virtually unbeatable. His career, indeed his entire life, was made by the American Revolution; and he, in turn, had made American independence his life's project. (Ellis 164)

During the debate over the possibility of war with France, Adams' antiwar stance was unwavering. Many of his cabinet members, Thomas Jefferson included, wanted to pursue war. At the time, Adams and Jefferson, the vice president, feuded publicly. Jefferson criticized Adams' pacifism. Adams knew that his country did not have the funds, or the ability to form a successful, battle-ready military.

The president was steadily pursuing a single goal. He did not want war with France, and he did not want an alliance with Britain. He believed, however, that the people must understand the seriousness of the situation with France, that his country must be prepared in the event that war came. If, as he came to believe, France wanted enough naval strength to prevent such dominance. Equally aware of the pro-French attitude of most Jeffersonians and of the

schisms within his own party, John Adams used words and logic, the only means at his command, to encourage unity, defiance toward French control, harmony within the country, and the support of those measures of defense that he believed essential. (Brown 131)

Adams, ever the astute politician, decided to deftly maneuver his cabinet to agree to a treaty with France. He called the members to a meeting at his home in Quincy, Massachusetts. After some deliberation, they agreed to the terms for a treaty.

Adams had finally pressed through the commission to establish peace with France, but it had cost him the enmity of influential men in his cabinet and in the ranks of the Federalist party. It might cost him his reelection. This Adams realized full well. (Brown 113)

A war with France may have catapulted Adams into public favor; however, he chose to keep his country from encroaching further into debt.

John Adams considered peace with France the greatest achievement of a long and eventful life. (Brown 174)

Unlike a careful Adams, Bush does not seem to be concerned with keeping peace. He is more concerned with his ability to control his political environment. His lack of political effectiveness may fuel his desire for power. He thinks more like a businessman than a presidential leader. "One of his favorite phrases is 'I'm not willing to negotiate with myself'" (Singer IX). His apparent stubbornness is his strategy for leadership. In his 2003 State of the Union address, Bush stated Saddam Hussein attempted to



buy fissionable yellow cake uranium from Niger to build weapons of mass destruction. Later, it was discovered the information was false, but Bush did not pay much attention to falsified information. He wanted a war with Iraq. Even false or weak information was enough for him to push for war. His smug attitude toward United States hegemony discredits his leadership abilities. When asked if he thought the attacks on Iraq without the United Nations authorization were necessary, Bush stated, "I'm confident the American people understand that when it comes to our security, if we need to act, we will act, and we really don't need United Nations approval to do so[...]" (Singer 162).

Ron Goodman, Discipleship and Administration Pastor at Stutsmanville Chapel in Harbor Springs, Michigan recently stated in an interview concerning Bush's attitude:

What I am saying is that my perception of his public persona is arrogant and that he might believe he is delivering a kind of prophetic truth and righteousness to the world. Clearly, he is an advocate of power politics in the world, and to bring truth to the world by military might. The Bible warned that "those who live by the sword will die by the sword", and I fear we have multiplied our enemies a hundred fold and more during his presidency, while not making very many friends. It is one thing to fight a "holy war" protecting the world from totalitarianism as we did in WW II. This is not the same. We are fighting a much different kind of enemy—but clearly there is an enemy who is a threat to America and democracy and a safe world—there are those who would establish Islamic rule and destroy us. My point is that it

seems to me that we have done more to empower their cause, than hinder it. (Goodman)

Bush cannot and will not compromise his political agenda. The decisions he makes as president directly affect the American republic. Whether he considers the needs of his citizens or not is still debated.

John Adams was a firm believer in the responsibility of citizenship. He felt it was the duty of the elected leaders to make decisions for the citizens of the United States.

Adams believed all men were subject to passions and emotions that had to be disciplined and controlled. For this reason, government was essential and laws must be made and enforced to protect the rights of all individuals and to help guide each person in his growth toward mature citizenship. (Brown 24)

An informed electorate was duty bound to choose the ones who were able to govern the country, draft the laws, and protect citizens' rights. Adams

felt that he was the advocate and counselor for all the people; that, within the framework of the law, he must lead, communicate with, educate, guard, and protect all Americans. (Brown 24)

The decisions he made as president were to protect his people.

During Adams' presidency, the Alien and Sedition Acts were fiercely debated topics. An Act Concerning Aliens gave the

president authorization to deport aliens when they were considered dangerous to the peace and safety of the nation. (Brown 122)

No jury trial would be made available. There would be no explanation for the deportation. The Sedition Act was "designed to silence criticism of public officials and their actions" (Brown 122). Congress hurriedly passed both acts. Adams was criticized for not taking an active part in these decisions. The criticism stemmed largely from the Jeffersonian party. Ralph Adams Brown presents the facts,

The president never opposed the passage of this legislation, and he did not kill the acts with a veto as he might have tried to do. (124)

After his presidency, Adams wrote, "I knew there was need enough of both, and therefore I consented to them" (McCullough 505). It was a moment in Adams' presidency when he made a decision he may not have agreed with. Yet, he approved the Alien and Sedition Acts because they were in the best interest of his country. A possibility of war with France loomed large, and a high number of French immigrants lived in the United States. Many of Adams' colleagues feared the French would attack from within the United States. Many criticized Adams, but in the end, protecting the citizens of his country was the most important concern for the president.

To become the leader of the most successful republican experiment is a difficult task. One must consider the needs of the citizens and the government they own. Adams and Bush came into their presidencies at difficult times. Adams followed George Washington, the "Father of the Nation" and because of that, "whoever followed Washington was probably doomed to failure" (Ellis 185). Adams knew what was necessary to lead his country, but because of his predecessor, he was limited to mere greatness. He was a founding father who encouraged

and pushed for a republic nation. He wanted separation of church and state, and he was a firm believer in freedom of religion. He attempted to unite his nation, not with religious testimonies, but with dedication, brotherhood, and national pride.

Bush came into the presidency with the Iraqi War on the heels of his election. He used unsubstantiated information as well as heightened scare tactics to justify the United States' progression into war. He blatantly ignored the United Nations' decision to continue with inspections of Iraq for weapons of mass destruction.

George H.W. Bush created a successful unity of other countries when it came to the Persian Gulf War, which was a cooperation of nations for the benefit of all. Whereas these same nations fighting the Iraqi War begrudgingly sent troops to assist the United States. George W. Bush isolated the United States from

these countries when he campaigned for the Iraqi War. His use of religion in an attempt to unite his country after 9/11, as well as the possibility of another attack, helped him successfully launch his war efforts.

The religiosity of the Bush administration, as well as George W. Bush himself, appear to be more like watching an early Sunday morning televangelical program as opposed to a national address. In his attempt to unify the nation, Bush ultimately alienates non-Christian religions because of his Machiavellian statements. This country should not be based on an "us against them" policy. Instead, Bush should look back to the successes of earlier national leaders; George Washington, John Adams, Thomas Jefferson, and try to find a way to successfully lead his nation.

Many questions generated from this research are still left unanswered.

Some of these questions could be researched in the future and developed further. What is the history of religion in Colonial America? When did it progress from absolute freedom to selective freedom? What was the freedom of dissent during Adams' presidency? Is there suspected treason during Bush's presidency? During Bush's presidency, what is the religious opposition of politics? What are the "six degrees of separation" in Bush's cabinet and Adams's cabinet; how can the cabinet members be connected to each president; and how did they choose the members? Who takes the blame for Bush's ignorance or mistakes? What kind of lessons can be learned from these men's political successes and failures? By researching these topics, a more informed opinion can be realized concerning the myriad components of political rhetoric.

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# Nookaler ambitions: a social-psychological analysis of persuasive speech



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## ABSTRACT

*This study proposes a general model of persuasion based in social-psychology and cognitive information processing theory and is composed of an ideal listener/speaker/environment interaction. Drawing upon research conducted by Lowenthal and Guterman (1950), Erich Hoffer (1952), and Prakanis and Aranson (1992), the model is oriented towards post-911 presidential communications for testing. Presidential rhetoric is organized into seventeen themes, and these themes are analyzed so as to determine what effect, if any, said persuasive trends have on the individual listener. Insight into the characteristics and effects of persuasive communiqués is essential to the development of rational, critical psyches within persuasively-dense environments.*

## Introduction

Does a general framework for analyzing persuasive speech techniques exist? Utilizing this general framework, can either traditional or modern social-psychological theory effectively demonstrate the persuasive techniques of presidential speech? What type of listener is most susceptible to persuasive speech techniques?

The aim of the paper is not to single out George W. Bush for unabashed critique. I do not wish to debate the authenticity of various facts and figures, of motive and reason. Rather, my paper will address presidential speech between September 12, 2001 and April 10, 2006 and apply social-psychological theory to said speech. The analytical framework I am using can be applied to various forms of persuasive speech—including religious leaders, media figures, etc.

The worth of such research is paramount—we live within a nation that has collectively decided to utilize a democratic system of government. As such, we elect leaders, create policy, and engage in hostilities when a given individual persuades us to do so. Thus, persuasion plays a central role in the day-to-day activities of our republic. Democracy requires informed choice. It then becomes essential that the citizen develop, hone, and invest in his or her analytical and critical tools of diagnoses. If social-psychological theory can provide a theoretical impetus for the effectiveness of Presidential persuasive speech, then research such as mine can help to alert and make aware the type of listener most susceptible to the psychological tricks employed. At best, such research helps to create the critical and analytical individual who is able to ask “why and for whom?” in the face of any persuasive speech.

My paper addresses those communications made by President Bush after September 11<sup>th</sup> through both traditional and modern social-psychological lenses. I focus on social-



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psychological theory developed in the early 20<sup>th</sup> century and cognitive information processing theory developed later in the 20<sup>th</sup> century. Ultimately, my research attempts to categorize the communications made by the president and apply social-psychological theory which demonstrates why such statements are effective to a particular type of listener. In doing this, I will also outline the type of individual most susceptible to presidential persuasive speech and ultimately, create a general framework which may be utilized in analysis of other types of persuasive speech. In its totality, my empirical research depicts an ideal-type relationship composed of the ideal listener and the ideal speaker (Weber, 1949)—both of whom are presumably immersed in an ideal environment.

## Section I

### *The Issues*

#### *Literature Review*

In 1949, *Prophets of Deceit*, a work created by Leo Lowenthal and Norbert Guterman described an ideal-type of social agitator. Dealing specifically with anti-Semitic rhetoric, Max Horkheimer states that the authors sought to understand “ideologies and ideological manifestations...as qualities, as meaningful structural units” (Lowenthal and Guterman 1949, p. xi). Their research led to the identification of thirty thematic trends utilized by a persuasive speaker who wishes to move a given listener to support (Lowenthal & Guterman). They identified the ideal listener as one suffering from general social atrophy and malaise—this atrophy being both temporally and spatially particular. This ideal listener is composed of an unstable emotional substratum which effectively worked to alienate, confuse, and enrage the individual at various psychic levels (Lowenthal & Guterman).

Having identified the type of listener most susceptible to agitating and persuasive speech, the authors then identified the specific themes utilized by the agitating and persuasive speaker. The speaker in question first creates a context for his or her persuasive message through the identification of a problem and proposes a course of corrective action (Lowenthal & Guterman, 1949). This context was based upon illustrative depictions of a coming Armageddon which in turn entailed the identification of enemy ideologies and forces (Lowenthal & Guterman). Lowenthal and Guterman then crafted rhetorical categorizations which illustrated the communicative trends employed by the agitating and persuasive speaker. In doing so, the authors relied upon traditional psycho-analytic theory to describe the psychic effects such agitating and persuasive speech has on the listener—essentially providing demonstrable evidence as to why the anti-Semitic speech in question was able to persuade many listeners to support a given ideology or perspective. Thus, *Prophets of Deceit* represents a milestone in social-psychological propaganda analysis—in combining macroscopic communications with microscopic psychic effects, Lowenthal and Guterman were able to represent an entire spectrum of persuasive communicative phenomena.

*True Believer*, written in 1951 by Eric Hoffer, added to the work of Lowenthal and Guterman. Rather than concentrate on a single persuasive or agitating speaker, on a type of agitating dialogue or a persecuted group, Hoffer identified broader and more applicable themes contained within persuasive speech. Hoffer identified the ideal listener as one who is emotionally apathetic and discontented, similar to the character portrait described by Lowenthal and Guterman. His work then identified thirty seven thematic trends contained

within successful persuasive speech. Just as Lowenthal and Guterman had done, Hoffer identified the successful persuasive and agitating speaker as one who identifies a problem and an enemy, and then proposes a corrective course of action. Making use of the emotional apathy and confusion present in the ideal listener, the persuasive speaker then utilizes various themes which work to motivate the listener into support.

*Age of Propaganda*, (Pratkanis & Aronson, 1992), identified persuasive techniques and themes as they are rooted in modern social-psychological theory and in particular, cognitive information processing theory. Pratkanis and Aronson's work dealt with all forms of persuasive techniques utilized by a persuasive individual or organization. Drawing upon experimental social-psychology, Pratkanis and Aronson found evidence which indirectly supported the findings of Lowenthal and Guterman and Hoffer. In a much more generalized sense, *Age of Propaganda* essentially applied experimental testing to the specific themes identified in the two earlier works: the effectiveness of collective action manifested through the identification of common enemies, the need to reduce feelings of guilt and cognitive dissonance that may result from the persecution of enemies, and the necessity of initial contextual framing or pre-persuasion. Moreover, Pratkanis and Aronson identified the ideal listener as the individual in modern society who is inundated with persuasive messages and seeks to conserve psychic energy through the use of uncritical peripheral message analysis—this cognitive miser represents an additional characteristic of the ideal listener.

## Critique and Suggestion

What each work lacked, however, was a specific synthesis—an integration of



both traditional theory and modern theory. This synthesis could then be tested through the targeting of a particular persuasive speaker. The specificity of the themes devised by Lowenthal and Guterman (1949) and Hoffer (1951) could be placed within a more general framework indirectly created by *Age of Propaganda*. This model could then work to analyze not just agitating persuasive speech but other forms of persuasive speech as well. This becomes the strength of my research—its synthesis of previous research and its ability to conform to various target samples.

My research will modify the themes contained in *Prophets of Deceit* and *True Believer*. As a general framework of analysis, I will modify the running schematic contained in *Age of Propaganda* and allocate three main constructs: contextual framing and pre-persuasion, motivation, and guilt and cognitive dissonance reduction. These three constructs are utilized to define and interpret my data (thematic content). Through the use of the three constructs, my research is able to maintain a steady focus as well as provide a theoretical framework upon which further research may be constructed.

Before we address the models I have created for this research, we must first concern ourselves with one last theoretical construct: the ideal audience and listener (Weber, 1949). This theoretical audience is required so as to complete the ideal relationship (Weber) between listener and speaker—thus, the ideal environment. The theoretical audience essentially simplifies the incredibly complex spectrum of individual characteristics so as to allow generalizations to be made.

### **Theoretical Audience and the Ideal Listener**

#### *The Cognitive Miser*

We are a nation and a population immersed in persuasion. Given that an individual watches approximately thirty hours of television per week, he or she is besieged by 38,000 persuasive advertisements each year (Pratkanis & Aronson, 1992). The typical American watches over 1,550 hours of television, listens to 1,160 hours of radio and spends 180 hours reading over 94 pounds of newspaper (Pratkanis & Aronson). Our government spends nearly \$400 million on favorable propaganda and employs over 8,000 workers (Pratkanis & Aronson). As an aggregate total, more than half of our conscious, waking moments are spent processing influential information. (Pratkanis & Aronson).

Within the context of such a persuasive bombardment, it becomes essential that a communication appears as distinct and attention getting. Moreover, the communication must adhere to the mantra of KISS: keep it simple, stupid (Pratkanis & Aronson, 1992). Successful and persuasive political speech does just that—such rhetoric makes use of expressive, colorful language and presents one-sided debate through puffery and binary explanations. Evidence as to the effectiveness of simple and attention-getting persuasive messages abounds: scantily clad women peddling beer, attractive men and women wearing designer watches.

Ultimately, a persuasive communication must overcome the two main obstacles identified by cognitive information processing theory: firstly, the tendency for an individual, inundated by persuasive communications, to become a cognitive miser. secondly, the persuasive communication must proceed through a processing route defined as periphery as opposed to central.

### **D) Cognitive Misers Defined**

Human beings possess limited information processing capability (Fiske & Taylor, 1991). Our finite mental power results in an effort to “conserve our cognitive energy” (Fiske & Taylor). Such conservation results in the processing of information and persuasive techniques in the most efficient manner possible. Unfortunately, such a tactic results in un-invested, often uncritical acceptance of a persuasive communication so long as supporting cognitive devices exist. Cognitive misers do not accept messages mindlessly—rather, this tendency makes an individual more likely to accept a persuasive communication when the said communication is supported by other persuasive mechanisms.

One of the easiest ways to overcome the obstacles presented by cognitive misers is to present the issue at hand in vivid and colorful terms. President Bush makes ample use of such techniques when, on September 12, 2001 he refers to Iraqis and terrorists as “evil”, “despicable” and representative of the “very worst of human nature”. Their acts represent “unprecedented danger” (George Bush, public presentation, January 29, 2002) and this conflict is one of “good versus evil” wherein “good will prevail” (September 12<sup>th</sup>, 2001)

The imagery evoked by the President is cosmic and incredibly large—his illustrations point towards a great battle, not merely of an earthly scale but one of galactic proportions. Such descriptions immediately grab the listener’s attention and compel the listener to perceive this communication and those to come as uncommon and important—as communications distinctly different from those the listener is exposed to each day regarding consumer goods, economics, treaties, and international business. This communication appears urgent and urgency requires no cognitive investment at all.

### Peripheral vs. Central Processing

The cognitive miser utilizes a route of information processing deemed “peripheral” (Fiske & Taylor, 1991) wherein the message is given “little attention and effort” (Pratkanis & Aronson, p. 35). Processing through the peripheral route equates to a rather uncritical, un-analytical interpretation of the persuasive communication. Persuasion depends upon this type of information processing. We may juxtapose the peripheral route to the central route. In the latter, information is confronted with scrutiny and “careful and thoughtful consideration of the true merits of the information presented” (Pratkanis & Aronson 1992, p. 35). Such an analysis is quick to pick out the contradiction, falsities, and missing logic inherent to modern persuasive speech.

Experimentation performed by Petty and Cacioppo (1981) found that the involvement of the message recipient helps to determine the route by which the information is processed. The more direct the listeners involvement, the more likely the message will be processed centrally with great thought. The less likely the participation or involvement, the more likely the message will be processed peripherally. What does such a cognitive phenomenon amount to? It provides to the well-informed persuasive speaker a framework in which he or she should frame a given communication.

President Bush utilizes this theory when he speaks vaguely about somewhere-out-there descriptions of terrorist and fundamentalist activity. Comments such as “Our war on terror is only just beginning...” and “dangerous killers, schooled in the methods of murder...” who are “arming to threaten the peace of the world” (George Bush, public presentation, January 29, 2002) draw the listener’s attention but in no way demand direct action from the listener. At most, the average listener

may only support the President’s policies and actions through subtle action or overt inaction. The term “dangerous killers” describes virtually nothing despite the accompanying imagery while “arming to threaten the peace of the world” sounds rather negative but again, is overly vague. Who is arming to threaten the peace? How is he, she, or some group doing so? How are we defining peace? Are we not also arming to threaten the peace of the world?

Vague and nebulous statements, which ask the listener to respond with a modicum of involvement and investment, rely upon peripheral processing so as to evade critical detection and analysis. Such analysis and detection quickly erodes the poorly constructed walls of linguistic barricades presented by persuasive speech.

Thus, our first section leads us to what we may call the effective dilemma of modern democracy (Pratkanis & Aronson, 1992). We value democracy and, consequently, influential statements; yet it is these very influential statements which help to create the cognitive miser who does not critically evaluate those persuasive communications.

### Contextual Setting and Pre-persuasion

Once the cognitive miser’s attention has been oriented towards the speaker, and the preliminary persuasive tactics have effectively channeled the listener’s “cognitive responses concerning communication” (Pratkanis & Aronson 1992, p. 72), the persuasive speaker must move quickly to secure said attention and cognitive faculties. As noted previously, the listener is constantly being inundated by persuasive communications, and his or her attention is fleeting.

Thus, the necessary task becomes one of explanation and definition—in short, the persuasive speaker must first explain and define the problem at hand through the creation of context. In presenting to the

listener a problem that warrants immediate attention, the persuasive speaker must elaborate on why existing procedure and protocol are no longer adequate in the face of this “new problem”. Lastly, and most importantly, the persuasive speaker must then offer a solution, which is couched in vague language and is logically unobtainable. The promise of this solution, and its ultimately nebulous nature, serve to motivate the listener to believe in further solutions.

## Section II

### Analytical Methods

My research is an empirical analysis of the rhetorical content present in presidential persuasive speech. My target sampling material consists of thirty-one televised speeches and three radio addresses. The thirty-four presidential communications occurred between September 12, 2001 and April 10, 2006. Each communication was accessed from the official Presidential speech website at [www.whitehouse.gov](http://www.whitehouse.gov).

**Question 1:** Does a general framework for analyzing persuasive speech techniques exist? This question is addressed through *General Persuasion Framework* (see Model 1).

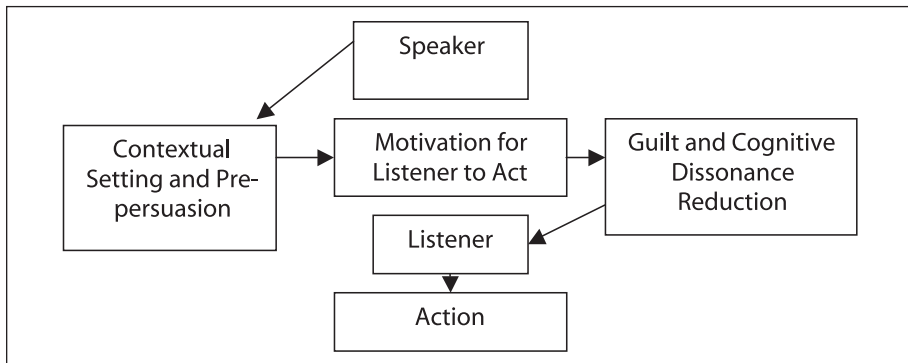
**Question 2:** Utilizing this general framework, can either traditional or modern social-psychological theory effectively demonstrate the persuasive techniques of presidential speech?

This question is addressed through *Target Specific Framework for Presidential Persuasive Speech* (see Model 1.1) which integrates the seventeen persuasive themes I have identified in presidential speech into the previous framework:

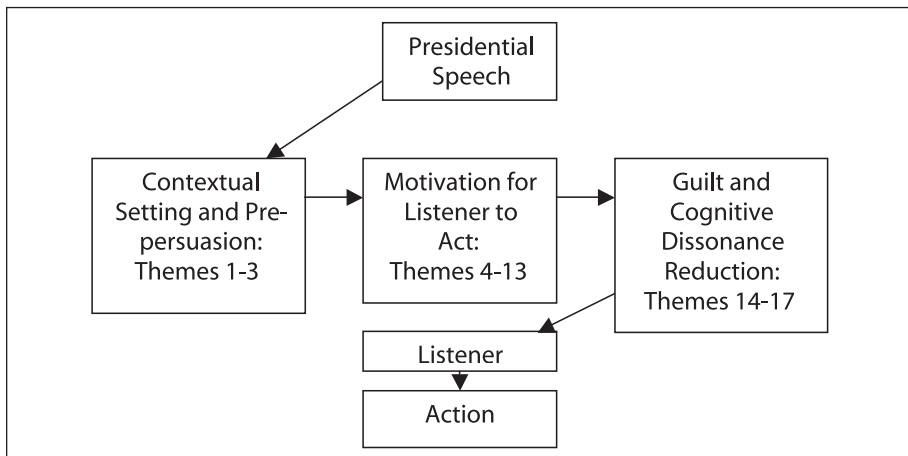
**Question 3:** What type of listener is most susceptible to presidential persuasive speech techniques?

This question is addressed through *Target Specific Persuasive Framework with Ideal-Type Listener* (see Model 1.2).

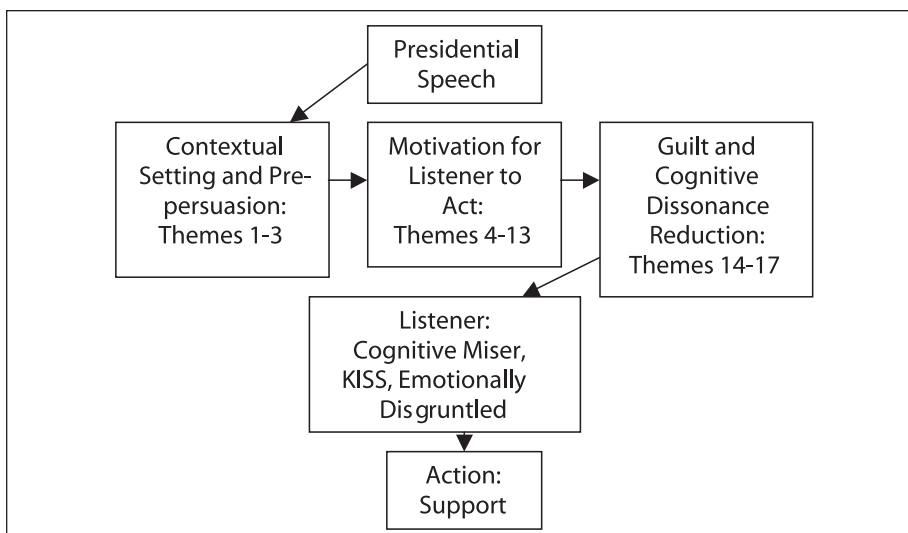
**Model 1:** *General Persuasion Framework*



**Model 1.1:** *Target Specific Framework for Presidential Persuasive Speech*



**Model 1.2:** *Target Specific Persuasive Framework with Ideal-Type Listener*



into the framework of question 2:

### Strengths and Weaknesses of the Models

Regarding model 1, the most obvious strength is the ambiguous nature of the framework. The three stages which are defined can be applied to various forms of persuasive speech contained in activities such as consumer advertising and the promotion of religion. It is the last stage that may require alteration when specific targets are selected. All forms of persuasion require the creation of a contextual back-drop followed by the presentation of motivational factors.

Model 1.1 implements my research specific target and the rhetorical themes I have identified. While researcher bias is a threat when performing qualitative analysis, such threats have been reduced to a modicum through the utilization of direct presidential quotations.

Model 1.2 introduces the ideal and theoretical audience. It became apparent to the researcher that a proper analysis of presidential persuasive speech required the creation of an ideal-type listener so as to represent a holistic relationship. In being theoretical, my ideal-type audience is a working hypothesis and subject to modification and change.

Lastly, all three models are depicted

as progressing in a linear manner; were these not ideal-types interacting in an ideal-type environment, I would expect the courses of progression to be most non-linear. For instance, a persuasive speaker or institution may skip the last stage (guilt reduction) and utilize only the first two stages.

### Section III

#### *Descriptive Results of Data*

This graph illustrates the seventeen thematic trends I have identified (See model 1.1) as they fit within the three larger general stages of persuasion and as they are in proportion to one another.

The motivational construct possesses a monopoly over the other two constructs merely because the themes contained therein are highly varied and often entirely unrelated. They are employed with and without the aid of other similar themes and most likely, with and without discretion.

Guilt and cognitive dissonance reduction possess the second greatest share of construct habitat. This may be a consequence of the particular aims the target persuasive speaker has—namely, aggression and conflict. Were this study concerned with the persuasive techniques of a laundry detergent company, the author would expect this construct to be the smallest of the three.

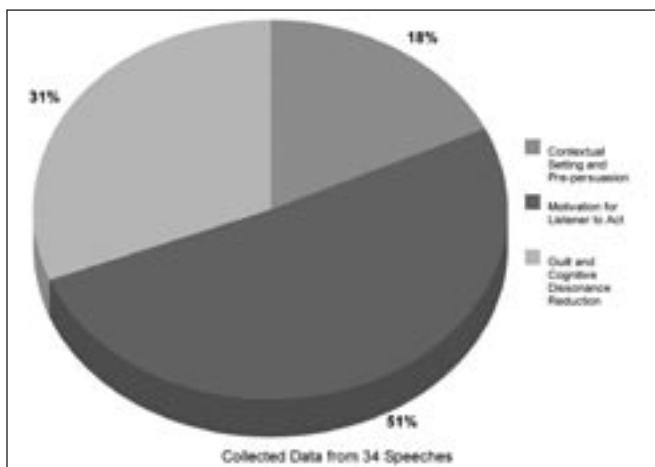
Contextual setting and pre-persuasion occupy a modicum of the graph. The author had begun this endeavor with the expectation that this particular general construct would be highly represented amongst the themes. This discrepancy is possibly due to an improper recognition of contextual setting and pre-persuasion, i.e. the grouping of contextual setting and pre-persuasion characteristics with the motivational construct. Factor analysis could prove quite useful in remedying this discrepancy.

This graph depicts the aggregate frequencies of all seventeen themes as they occurred within all thirty-four speeches. The five most frequent themes are: the call to the hunt, de-humanization of the enemy, rationalization traps and antonyms, self-fulfilling prophecies, and the offering of a solution to the contextual problem presented by the president.

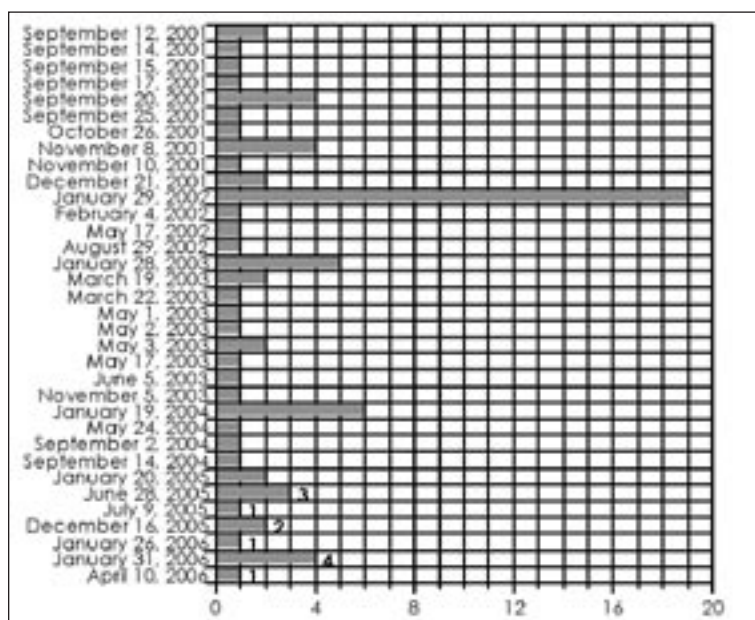
The call-to the hunt (theme seventeen) represents a closing statement made by the president wherein he both invites the listener to support aggressive governmental action and, thus, release certain emotional frustrations and implicitly reassures the listener that the hunt is legitimate and in process. Theme seventeen is both the end of my persuasive model and the foundational offering for further persuasive communications. It may represent the emergence of a new contextual definition wherein the decision to support aggression and conflict has already been made—what remains are the decisions regarding the intensity and frequency of said violence.

Theme sixteen represents an integral component of persuasive speech as identified in *True Believe* (Hoffer, 1951) and *Prophets of Deceit* (Lowenthal and Guterman, 1949). The de-humanization of the enemy precedes theme seventeen in what appears to be a purposeful manner—calling one to hunt fellow human beings may yield an

**Graph 1:** *Three General Stages of Persuasion: Percentage of Thematic Content*



**Graph 2:** *Aggregate Thematic Content in Sampled Speeches*



unfavorable response but when one's fellow is removed from the general human condition, such a call is entirely acceptable. I would expect these two themes to be mutually inclusive and moreover, to occur throughout all types of persuasive speech that seeks to illicit support for aggressive and violent action against other human beings.

Theme ten, the rationalization trap and the use of categorical antonyms, does not appear as an overt, explicit attempt at garnering support for political actions. Rather, theme ten appears as a basic characteristic of general persuasion. Utilizing such language tricks and ploys is quite plainly a component of all argumentative and persuasive interactions—a child will resort to black and white definitions of a situation when a toy is desired as will a disgruntled consumer speaking with the organization at fault.

The use of the self-fulfilling prophecy (theme five) is done in a manner quite similar to the use of theme ten. While the use of theme five may appear as explicit and quite purposeful, the author believes it to be a natural component

of persuasion and not a theme or trend specific to presidential persuasive speech.

Theme three, the offering of a solution to the contextual problem created by the president, is essential to the effectiveness of the greater persuasive endeavor. The solution must be vague enough to sustain multiple setbacks and injury while simultaneously possessing enough form and function so as to be visible and tangible. This theme is entirely purposeful and very specific to the target of this research.

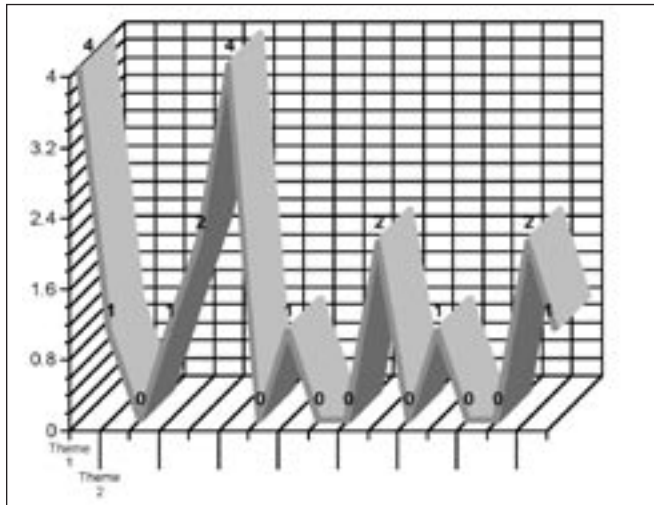
I have included graph two so as to demonstrate that the themes I have identified are not merely the consequence of common-sense persuasive tactics, which manifest themselves indirectly and without overt control of the speaker. The graph depicts the total amount of thematic content within each of the thirty-four presidential speeches I analyzed. Were the usage of persuasive characteristics purely arbitrary or part and parcel to the use of rhetoric and debate, then one would expect a relatively stable distribution of thematic content across all thirty-four speeches.

However, such a stable distribution of thematic content does not occur. We find quite the opposite: those speeches which draw the largest audiences, which are trusted and most esteemed by the general public, and those speeches which are by their very title a definition of this nation's ambitions and goals, possess far greater thematic frequencies. On January 29, 2002, the first State of the Union Address in the United States after September 11 was delivered by President Bush. This speech contained approximately five times the average amount of rhetorical and thematic content. The 2003 State of the Union Address was delivered on January 28 and contains five thematic themes—roughly two and one half times the amount contained in lesser viewed and esteemed presidential speeches. On January 19, the 2004 State of the Union Address was delivered and this communication contained approximately three times the amount of other lesser viewed Presidential speeches. The average thematic content of all the speeches analyzed, sans the three State of the Union addresses, is approximately one and one half. This is in comparison to the average thematic content of the three States of the Union communications: ten. This discrepancy is not consequence of communicative length—the 2002 State of the Union Address is approximately double the page length (seven vs. three) of the lesser viewed presidential speeches yet contains six and one half times the average thematic content.

Lastly, I have illustrated the thematic content of the 2002 State of the Union Address so as to depict its organization and presumably, its intent. The State of the Union Address is essentially the sole communication made between the president and the populace and done so at great length. This speech sets forth the agenda of the nation and informs the listener of potential



**Graph 3: Thematic Content of 2002 State of the Union Speech**



problems and solutions; it defines both country and listener.

As such, we find the 2002 State of the Union Address presenting to the listener a contextual definition of the problems facing the nation and individual (theme one), and a definition of who the listener is and what he or she stands for (theme five). These two themes exist in double the proportion of any other theme contained within the speech. Thus, the 2002 State of the Union Address effectively constructs and defines a certain context which the listener, having already been told what he or she is and stands for, may pursue certain avenues of action.

#### Section IV

##### *Rhetorical Content and Analysis*

This paper, for the sake of brevity, will discuss only three of the seventeen thematic patterns I identified throughout the course of my research. For more detailed thematic information, please see the work in its entirety as published in the Michigan Sociological Review, Volume 18. Themes two, ten, and fourteen belong to the contextual, motivational, and cognitive dissonance reduction stages of the general model,

respectively. The reader is advised to refer to models 1.1 and 1.2 contained in Section II so as to properly visualize the location of each theme as it pertains to the most general persuasive speech framework (model 1). As illustrated in model 1, section III also includes brief introductions concerning the progressive stages of general persuasive speech.

#### **Theme 2: Denounce Existing Order and Protocol**

##### *Data*

The president, after capturing the attention of the cognitive miser through vivid depictions of hell on earth, must move to demonstrate to the listener why current managerial and administrative tools are no longer adequate in the face of an emergent "axis of evil" (George Bush, public presentation, January 29, 2002). The perceived failure of the United Nations has made it "clear that the future of freedom and peace depend on the actions of America" (George Bush, public presentation, January 29, 2002). The considerate and rational pace of international investigation, procedure, and punishment are an inadequate response to "...the carnage of September the 11" (George Bush,

public presentation, January 19, 2004). The president states that "it is not enough to serve our enemies with legal papers" (George Bush, public presentation, January 19, 2004). Not only is the United Nations an ineffective and inadequate group, but it menaces the security of the United States with its demands for deliberate and thoughtful action: "...America will never seek a permission slip to defend the security of our country" (George Bush, public presentation, January 20, 2004).

#### **Analysis**

The discrediting of existing institutions and protocol serves to reinforce the president's statements that this threat is of a new variety and type. The "hunger for faith" (Hoffer 1951, p. 139) and need for security present in the listener is multiplied by the stated ineffectualness and even danger posed by the existing order of things. In initially separating the listener from the rest of the global community, the President is also creating both in-groups and out-groups. Such a process effectively furthers the listeners' sense of isolation and dependency and channels these feelings towards the President who promptly offers a solution.

#### **Theme 10**

##### *Rationalization Traps and Antonyms*

##### *Data*

President Bush often presents possible perspectives in a binary manner: "This is the fight of all who believe in progress and pluralism, tolerance and freedom." (George Bush, public presentation, September 20, 2001). As an American, the listener "...will bring freedom to others..." (George Bush, public presentation, March 19, 2003), and knows "... that freedom is the right of every person and the future of every nation." (George Bush, public presentation, January 28, 2003). The president states that the listener



does not accept the "...existence of permanent tyranny because..." and he or she does "...not accept the possibility of permanent slavery." (George Bush, public presentation, January 20, 2005). If the listener accepts that the "...right to life cannot be granted or denied by government..." (George Bush, public presentation, November 5, 2003), he or she is compelled to support conflict against Iraq, Iran, terrorism, and North Korea. Supporting the actions of the President prove that "America is a strong nation, and honorable in the use of our strength." (George Bush, public presentation, January 28, 2003).

### Analysis

The president's language utilizes a lack of modality to present an agenda which is based on the use of antonyms. In making "little use of modal verbs, such as *could*, *would*, *might*, etc., which tend to nuance one's statements and provide for the possibility that one might be mistaken..." (Tanja and Collet 2005, p. 17), the president implies that he possesses an absolute Truth. This lack of modality creates an effect of "categoriality" (Butt, Lukin & Matthiessen, 2004).

After implying to the listener that he possesses an absolute Truth, grounded in sound deliberation, the president utilizes antonyms to present two possible avenues of action, which the listener and his or her nation must take—one presented as virtuous, positive, and beneficiary and the other presented as the exact opposite. The listener may be part of the in-group or part of the out-group, right or wrong, for justice or cruelty, protective of the innocent or apathetic towards the guilty, on the side of good or on the side of evil.

The lack of modality and the utilization of grammatical antonyms create a rationalization trap, which is the effective culmination of the tactic. Part

of reducing cognitive dissonance—the separation between ideal-self and actual-self—the rationalization trap is activated when the listener is presented with two antonymous adjectives wherein he or she must decide which adjective they esteem and which adjective is to be avoided. In depicting the listener and his or her support for the current conflict as pertaining to a love of freedom, the president gives the listener a categorical choice: do I support freedom or do I hate freedom like the enemy? Am I pro-life or anti-life? The use of words that have categorically limited antonyms guides the listener down a path of agreement by default.

### Theme 14

*Precision Weapons: Lasers, GPS, and Flux Capacitors*

*Data*

The president often refers to the highly sophisticated nature of American weaponry: "With new tactics and precision weapons, we can achieve military objectives without directing violence against civilians." (George Bush, public presentation, May 2, 2003). Our involvement in Iraq has "...proved that in this first phase that expensive precision weapons not only defeat the enemy, but spare innocent lives" (George Bush, public presentation, February 4, 2002). Our technology, the president implies, is enemy specific and highly particular about its targets: "Operation Iraqi Freedom was carried out with a combination of precision and speed and boldness the enemy did not expect, and the world had not seen before...we sent planes and missiles that could destroy an enemy division, or strike a single bunker" (George Bush, public presentation, May 1, 2003). The President pleads with his audience to understand "the care...the humanity that goes into" our bombing raids in Iraq and Afghanistan. The President also states that "at least two-thirds of the bombs used by coalition

forces in Iraq were precision-guided by lasers or global-positioning satellites, compared with just 13 percent of the bombs we used in the 1991 Gulf War." (George Bush, public presentation, May 17, 2003).

### Analysis

The references to laser-guided bombs which can effectively distinguish between enemy and innocent play upon modern society's fascination with technology and our belief that said technology is an end-all-be-all. The use of technological catch-words—terminology invented for the purpose of conflict—dazzles the individual listener with notions of space-based lasers guiding million dollar bombs onto the heads of guilty men and women. The deaths of uninvolved individuals are deemed "collateral damage".

The president also implies that warfare itself has become cleaner, more sterile. The constant mentioning of precision weapons helps to combat historical atrocities such as the fire-bombing of Dresden, Germany in WWII where un-technical bombs guided without the aid of lasers and satellites killed hundreds of thousands of civilians. This war is clean, purposeful, and selective. The listener, despite supporting conflict which inevitably brings suffering and death, is reassured that technology has in fact saved the day and protected the innocent.

### Concluding Remarks

Let us begin by addressing the initial questions of this paper.

Does a general persuasive framework exist? Yes, while the framework must be adapted and modified to the target in question, the essential qualities of Model 1 should remain the same. As stated previously, the avenues of progression may change significantly from those depicted in Model 1 but ultimately, the author believes that the

three basic constructs of the model would become manifest.

Can this general framework be applied to the speech of President Bush and does it help to analyze said communications? Yes, the model has proved quite effective in guiding the analysis of presidential speech. The three general persuasive constructs established in Model 1 were implemented in Model 1.1 and demonstrated both reliability and validity. A factor analysis would prove beneficial so as to garner a better interpretation of the divides between the three general constructs depicted in Model 1.

What type of listener is most susceptible to presidential persuasive speech? Model 1.2 integrated the ideal-listener into the existing ideal-interaction. The ideal-listener is a hybrid consequence of both traditional emotional frustrations and immersion in modern society which is message dense and persuasively rich. It would be expected that my ideal-listener is equally susceptible to the persuasive techniques of car manufacturers or detergent commercials.

Throughout this research, I continually found myself struggling to view the interactions and relationships contained in Models 1, 1.1, and 1.2 as illustrative of a persuasive process—in particular, a politically persuasive process. However, it has become apparent that the processes depicted throughout this paper represent a relationship other than that of citizen and politic. The relationships I have established are those of producer and consumer, of production and commodity,

of commodity and consumption.

In documenting and analyzing presidential political rhetoric and persuasion, I became witness to the creation of a mythology of sorts. This emergent mythology has its own gods and goddesses, its own history, present, and future—it differs from previous political mythologies only in content.

It is a mythology based on consumption. The consumer/citizen is given an opportunity to entertain himself or herself through the consumption of a commodity—this commodity being political involvement, the witnessing of far-away adventures, and sadomasochistic enjoyment of domination, power, and death. In exchange for these goods and services, the governing body in question receives apathetic support.

At its essence, this political mythology presents itself as a purchasable good—designed not for persuasion, motivation, nor enlightenment. Rather, it is designed with the sole intention of being consumed and thus destroyed, leaving the listener in question longing for more consumption and, in the process, either directly or indirectly supporting the producers of the mythology.

Viewed in this light, several notions emerge. Firstly, that we may expect Samuel Huntington's impending clash of civilizations (1996) will in fact take place. Not as the result of differing cultural ideals or beliefs, but rather, to fuel the consumptive hungers of the Western individual. More and more, this political mythology will diverge

from reality and from the human experience—much like a vast simulacra (Baudrillard, 1981), the realm of human experience and emotion will be incorporated into political mythology and used to satiate the consumer citizen who desires televised violence, conflict, and domination.

As the individual continues to be mounted by his or her own social construct, the need to witness destruction and purge anger, confusion, and hatred will increase. With this increase will come the desire for consumption of goods, of politic, of one's fellow, and of one's self.

As Erich Fromm once noted in *On Disobedience* (1981) There are so many things in contemporary society that I dislike that it is difficult to decide with which particular complaint to begin...the first dislike...is the fact that everything and almost everybody is *for sale*. Not only commodities and services, but ideas, arts, books, persons, convictions, a feeling, a smile -- they all have been transferred into commodities. And so is the whole of man, with all his facilities and potentialities." (p. 54)

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# Inducing The Holy Spirit through the Pentecostal Message



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## ABSTRACT

*Pentecostalism (PC) is the most prolific branch of American evangelical Christianity (Jacobsen 2003) as it has been able to provide to its adherents, subcultures and collective identities that bestow meaning and belonging (Smith 1998). PC arose from Methodist and Baptist branches of Christianity at the end of the 19<sup>th</sup> century (Blumhofer 1993) and was involved in adjusting millions of migrants to U.S. city life (Synan 1997). Because PC has “straddled the race line in ways that most other American religious movements did not” (Jacobsen 2003: 260), it is significant to consider its wide appeal by analyzing how it manifests itself in local ways. Furthermore, if PC can distinguish itself while directly engaging the cultures it interacts with (Robbins 2004), how does it become appealing to the five million Latinos in the U.S. who consider themselves pentecostal (Sanchez 2003)?*

*My attempt is to ascertain the type and extent of influence that Latino culture exerts on the general pentecostal model by considering the language, traditions, concepts, and practices of a local congregation mostly composed of first-generation migrants from Guatemala, Mexico, and various other Spanish-speaking nations. I seek to understand how PC transforms along different contexts while focusing on the relation of religion and culture through two pressing themes: Latino culture and gender.*



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Faculty Mentor

## Methodology

I collected data over a five-month period and followed the methodology of Wright and Rawls (2005): (1) 130 hours of participant observation during services, prayer and youth-group meetings, fundraisers, and bible studies; (2) personal interviews; and (3) literature review. In part guided by the congregation's two pastors, Juan and Veronica, a snowball sampling method facilitated interviews and other interactions used for analysis. The names of all congregants were changed to protect their identities.

## Findings

PC has had a substantial impact among Latinos in the U.S. precisely because it has employed Spanish in the evangelization of recent immigrants (Espinosa 1999). In reflecting upon the linguistic structures<sup>1</sup> of this congregation's Spanish, I discovered that Mexican cultural standards influenced spoken Spanish. Generally, three fundamental themes characterize the culture of this congregation: language, tradition, and migrant status. My analysis considers how the linguistic structures, cultural traditions, and concepts of identity have shifted in this PC context.

Certain suffixes in Spanish make words diminutive, with *ito* being the most common (Stewart 1999); diminutives are used to gently mock or make something seem less significant. When describing the experience of praise as special, Pastor Juan told the congregation to refrain from singing mere *coritos* [little choruses]. The ending of *coritos* suggests that establishing parameters of appropriate praise was important since the congregants created the *culto* [service] and were responsible for keeping it balanced. The balance in praise meant keeping such praise free from music “of the world”, that is, music that was unreasonably loud or fast.

Although the use of diminutives is obvious in statements like this: “*no servimos a un diosito, nuestro Dios es grande*” [we do not serve a little god, our God is grand], in subtler ways, like when the insignificance of a worldly life was explained, diminutives were also employed. A worldly life included a person’s everyday work and family activities. In the following statement, jobs were made less significant to perhaps accentuate notions of God: “*Tenemos nuestros trabajos, pero sin Dios no tenemos nada*” [We have our little jobs, but without God we have nothing]. Abstract concepts such as perfection also called for the use of diminutives. In this example: “*la perfección no es de los diositos, ni de la gente que se convierte en santito*” [perfection is not of the little Gods, or of people who convert into little saints] perfection is solely attributed to a true God, while *santitos* refers to Catholic saints or “little Gods.” Spanish language conventions belittle Catholic traditions while they introduce and define PC religious conceptions.

A study by Hidalgo (1996) concluded that Mexico had established a Standard Mexican Spanish (SMS). SMS, instantiated by the Spanish spoken in the city, was assessed as “the most prestigious variety of the Spanish-speaking world (Hidalgo 1996: 68).” Furthermore, the pastors, who were from a rural area of Northern Mexico, extemporaneously introduced new words throughout the services. When preaching about asking God for direction and advice, Pastor Juan told the congregation: “*Se mayordomo de tu vida*.” [Be a manager of your life]. The word *mayordomo*, although foreign to SMS, also developed linguistic rules in this sentence: “*La eternidad es tu galardón por la buena mayordomía*” [Eternity is your trophy for good apprenticeship]. The word *Mayordomo* is used as a verb and then conjugated to fit the sentence. But why is the word *mayordomo*, along with its new conjugations, significant?

In rural parts of Mexico, annual celebrations are held for the village saint and arranged by “*la mayordomía*”—a committee that collects what is needed for such festivities (Webster 1989). In this PC context, being a *mayordomo* could mean having the responsibility or ability to administer one’s life. However, its definition closely draws from specific rural Mexican traditions that, although common to the Pastor’s hometown, both urban Mexicans and non-Mexican congregants are likely unfamiliar with.

New words were also created when Pastor Juan described how sin was utilized by Satan to destroy the congregation. When there was sin, there was much *carnalidad* and *mundanidad* [roughly translated as carnality and worldliness], which weakened the spiritual unity of the church. The word *mundanidad*, a non-existent word in SMS, was likely invented from the word *mundo* [world] and an *idad* ending to make the noun *mundo* a condition or verb. Thus *mundanidad* comes to mean “of the world” as in “not divine.” Here, PC’s capability of flourishing “on difference, engagement, tension, conflict, and threat” (Smith 1998: 121) is reinforced by the linguistic fabrication of words and conventions of these in the Spanish language.

Despite the Latino and Spanish cultural and linguistic ancestry that all church congregants shared, not all Latino cultures are the same. Nonetheless, Mexican culture, in particular, constituted the hegemonic standard; the culture of non-Mexican Latinos was often compared against Mexican culture. Seemingly, everything that was Mexican became the norm through styles of music, dress, idioms, references to holidays, and examples used during sermons. Through language, congregants who spoke dialects were ridiculed. In an example used in a sermon, a Guatemalan congregant had lied about being Mexican at work and

denied his ability to speak his native dialect. The pastor assured this person that it was acceptable to not be Mexican, but that being uncivilized was not. Even if someone came from the most remote village, one was not prevented from acquiring the cultural lessons that are necessary to live comfortably in the U.S. Apparently, professing to be Mexican was often a way for non-Mexican congregants to claim a more civilized status in American society.

Finally, language played a crucial part in PC prayer because through it, God could hear the congregation. Like praise, prayer had also established parameters of adequateness; short prayers lasting about 1-2 minutes were undesirable. Prayer did not need to be complex, methodical, or dogmatic but if it sounded like mere human talk, then it was not sufficient to reach God. Consequently, the prayers God heard were spontaneous and profound; ones that functioned like incantations. The success of personal prayers was dependent on the real necessities of the congregant’s lives; prayers which mainly demonstrated a need for God. As the congregation is almost solely Spanish-speaking, individual and collective prayer unavoidably happened through the employment of Spanish linguistic conventions and structures. Spanish, entangled with the congregant’s needs and a private connection to God through prayer, enabled precise definitions of PC religious practice and experience.

The cultural traditions included in examples used during preaching supported and maintained certain values. There was a strong emphasis on the well-being of the family, of mothers or females caring for children, of fathers or males providing financially, and of finding it discouraging that children lose their customs whilst adjusting to life in the U.S. However, in a PC context, Latino culture became most relevant when it came to evangelizing



or *ganarse* [win over] other Latinos with language, culture, and physical appearance. Various groups organized to evangelize different neighborhoods once every week. Therefore this engagement in “being” Latino through culture necessarily allowed these congregants to bring others like them to PC<sup>2</sup>.

In the value placed on family, Latino culture also differs from Anglo-American culture. When speaking of the gifts of God, it was professed that the homes and families of the congregation would be taken care of. Ideas about the love of Christ and notions of corruption referred to the family's security although Christ's love was enabled only when the church functioned like a family. As for corruption, it couldn't plague “*el verdadero pueblo de Dios*” [the true people of God]. While the congregant's families remained in their native countries, a valuing of *el pueblo* required conceiving of the congregation as a family.

The church achieved a religious “family” union through belief and faith. Furthermore, notions that the devil constantly spread propaganda to damage such unison were prevalent. Media, parties, dances, idols, and other “paradigms of adolescence” such as the *ritmos satánicos* [Satanic rhythms] of reggae, rap, salsa, merengue, and reggaeton, destroyed unity. Given that salsa, merengue, and reggaeton are music forms invented in the Spanish/Latino culture it could be that as such, certain aspects of Latino culture and PC are incompatible and deemed as noxious. Accordingly, breaking away from these gave the congregants a new religious family whose values functioned within the congregation. As in a family, congregants looked after each other for “*La iglesia tiene que satisfacer, contentar, dignar; como tu familia*” [the church has to satisfy, make content, dignify; like your family].

Similarly, Latin American cultural characteristics have sprung from Catholicism (Stevens-Arroyo 1998); its role in cultivating a PC religious identity was obvious in this congregation. The Catholic practice of confessing sins to a priest functioned to explain PC notions of God's negotiations with sinners, as he is the necessary and official mediator of an individual and God. However, these references could efficiently emphasize PC teachings only because the congregants were familiar with Catholic traditions of confession. In another instance, it was said that one could not “praise or make any claims to Benedict the Pope or Juan Diego. The only way toward salvation is through Jesus Christ.” The most relevant point here is the mention of Juan Diego, a Mexican cultural icon and saint. Juan Diego was the indigenous man to which *La Virgen de Guadalupe* appeared on the Mt. of Tepeyac in Mexico (Zires 1994). The Juan Diego reference aimed towards a Mexican audience familiar with this story.

Through specifically Mexican and Catholic references used to promote and explain the PC message, this congregation created a type of symbolic space, where tradition, in general, and pentecostalism, more specifically, co-existed at a type of crisscrossing of meaning<sup>3</sup>. Furthermore, the Mexican references used in explaining the PC message are conceptually and symbolically creating within this congregation, a type of cultural and religious chasm through which congregants are able to create, conceive, and thus realize their own religious and cultural norms.

Latino PC is tied to a search for community that is itself linked to the creation of a religious identity (Sanchez 2003). Because this church reaches out to adherents not just as migrants but as people who wish to be renewed, I have employed Paul Tillich's conceptions of

religion and culture to reconcile a PC religious identity with a migrant identity (Tillich 1959). Tillich proposes that when faith becomes an act of ultimate concern “in which both the rational and the nonrational elements of...being are transcended (Tillich 1957: 7),” religion and secular culture can combine. The process of how a cultural and religious identity could potentially intertwine borrows from Tillich's suggestion that religion must play a role at every moment of an individual's secular life.

In April of 2006, there were opportunities to engage in political action regarding changes in immigration legislation during a local 15,000 person march. But in a tamal-making session at a woman's home, a group of female congregants agreed that in certain situations God took full control. *The Tamal Committee* who through cooking, discourse, and dialogue acquired financial rewards for the church considered that the march was something that they and the congregation should not participate in.

Social and political involvement, then, seemed unnecessary, and perhaps even wrong, when notions of God taking full control of the congregation's social and spiritual lives were strong. In addition, because these *tamaladas* took place every week, their status as significant social events should be remarked (de La Peña 1981). Moreover, some scholars have noted that through shared action during culinary activities like the *tamaladas*, a common sense of identity, interests, and values is bolstered as Latinas in the U.S. have often “relied on one another and on their faith ... [and] religious practices permeated everyday routines” (Ruiz 1998: 26). Although the congregation could be simply disinterested in politics because of their own citizenship status (Sanchez 2003), the *tamalada* example challenges conclusions that regard PC as a mere process that preserves the cultural identity of its adherents within

a threatening cultural context (Vasquez 1999). A PC identity, because it has been composed through the linking of migrant-cultural identity and God's will, can be enacted by Latino congregants in alternative ways<sup>4</sup>.

Still, the actual condition of living an uncertain legal status in the U.S. remained important. Often it was said that "*No existe el temor*," [fear does not exist]. But exemplified by the fear of deportation, such fear changed for while "*el estatus migratorio esta resuelto para los fieles*" [the migratory status is resolved for the faithful] this congregation continued to seek tranquility through the notion that the word of God was their own. In this way, fear became something that was only present in "*las amenazas espirituales, estan en las falsas doctrinas o religiones. Los extremos son las amenazas*" [the spiritual threats are in the false doctrines or religions. The extremes are the threats].

Obtaining legal status in the U.S., although a vital issue for the congregants of this church, was not the ultimate trepidation. Even if an uncertain legal status, especially while working, was an imminently powerful threat faced by most congregants, they opted for the belief that the status of a spiritual afterlife was far more important. Along with these beliefs, comments such as "you are not an accident," "there are always exits," and "there is always hope" were introduced frequently. Such notions correspond to claims that Latin American variations of PC help immigrant congregants gain self-worth through feelings of acceptance from the congregation (Ramirez 1999). This is also compatible with conclusions of PC as paradoxical because the congregation is able to encompass multiple beliefs about their actual life situations (Droogers 1991).

Perhaps adding to the paradoxical quality of PC, is the way in which it answered the congregation's prayers

through gaining legal status in the U.S. A spiritual life was of utmost concern and the fruits of faith and PC identity creation and maintenance were expected to principally come through obtaining residency or citizenship in the U.S. Overall, PC conceptions of God's purpose were inescapably tied to every stage of the congregants' secular lives, especially when it came to migrating to the U.S.; "*No existen los accidentes ni las coincidencias con Dios*" [Accidents and coincidences do not exist with God]. Even when some pronounced that "*a mi ni la migra me hecha de aqui*" [Not even the immigration patrol can take me out], it was God who willed each individual's future in the U.S. Thus, some aspects of ethnicity, such as language and tradition, remain strong for the congregation. However, other aspects are not compatible with PC, such as the expressive musical forms of merengue and salsa. It could be that ultimately, such conflict, along with an actual legal uncertainty in the U.S., contributes to the congregants' ethnic ambivalence.

Along with culture, gender has also played a key part in the process of constructing concepts within a context of migration (Parrado 2005). However, previous work examining the role and definition of gender among migrant PC congregations has yielded ambiguous conclusions. PC has both prevented and allowed the maintenance of traditional gender attitudes and roles (Vasquez and Williams 2005). In her detailed study of PC Latino identity, Sanchez found that for women the process of shaping a PC identity required a type of "responsibility, discipline, and submission to authority (2003: 116)," which at the same time often became powerfully enabling. These conclusions make it necessary to question how gender relations unfold in the religious PC context of this particular church. I focus on the subtle ways that women have redefined traditional gender

concepts through a PC framework, and I provide examples and analyses throughout my discussion.

During a youth meeting, unsupervised conversations between members of the opposite sex were said to not be good in the eyes of God. But the casual context in which this statement was uttered indicates that the male youth leader holds strong tendencies against interactions that have not even become actual behavior. In other situations, the church expressed the need to find its members marriage partners. For instance, Karen, a young woman, was told by pastor Juan that she would find a good and *fiel* [faithful] man to marry. Similarly, he told a man of 30 that a woman of a certain color, height, and size appeared at his side. God appeared to know the future marriage partners for all the young people of the church and only if they remained on the "*proposito de Dios*" [the purpose of God].

With the lacing of the most private aspects of the congregants' lives into the preaching, the services directly attach the power of God to the lives and fundamental needs of the individuals in the church. In the Karen example, the perfect man was faithful, which suggests that certain expectations exist for Latino PC men. Regarding the role of religion in ethnic identity and the relationship of religion and gender, Chesnut (1997) found that PC generally provides emotional comfort to women who come to redefine common gender-related cultural crises as literal sicknesses; among these were alcoholism, domestic violence, and adultery or unfaithfulness. Thus, it is important that pastor Juan guarantees Karen that her potential partner will be "healthy" (i.e. faithful) and free from cultural sickness if she remains in the purpose of God.

Expectations that males were more willing to actively participate during bible studies were also apparent. Pastor Juan asked volunteers to explain a bible

verse. After only males raised their hands, he chose a young girl named Erika. The day of the lesson, Erika had a male assistant. As she attempted to speak, the pastor noted her shyness and found her a microphone while she stood silently. The voice of her male helper did not need amplification. Interestingly, other women who answered questions were asked to raise their voices. Squinted eyes accompanied suggestions to raise the voice of the women; suggestions often made even before the voices were actually heard.

Erika's response can raise issues about how women reshape their roles in religious settings. Ebaugh and Chafetz (1999) conclude that a passive resistance of women, realized through silence, could help women like Erika achieve a sense of freedom and liberation in this PC religious context. Precisely because of situations like these, we must attempt to find if silence is the only way that these women redefine gender.

Luce Irigaray, in *The Invisible of the Flesh* (1993), attempts to rediscover the maternal-feminine in the understandings of speech, language, and thought. In bringing this approach to language, Irigaray seeks to reclaim for thought, the "power to signify, a birth of meaning (Irigaray 1993: 184)." Most importantly, Irigaray explains that between the words of a language and their meaning, there must be "openness." To her, language is unable to completely fulfill the *ideal* quality of ideas, leaving an opening between the two. This opening is symbolized and interpreted by the concept of a maternal-feminine flesh of the world, a flesh which unites language and meaning and through which their relation is necessarily possible.

Irigaray's insight provides a way to raise issues about the nature of gender relations in this congregation. The words *hombres* [men] and *hermanos* [brothers] were used by pastor Juan and Veronica to address the congregation most of the

time. Also, when introducing praise leaders, men did not call women sisters; pastor Juan was always introduced as *nuestro pastor* [our pastor], and pastor Veronica was identified as *querida hermana* [beloved sister]. Consequently, we must consider that in the realms of language and action, gender issues could potentially arise. In the interactions of this church, the exclusion of men and women seemed to occur simultaneously in language and in ostensibly implicit actions like eye contact and body language. It could also be that through language and both direct and indirect action, a type of spiritual exclusion through gender difference is ensuing.

The *hermanos* of this congregation are united by a common father Jesus while women, as they are not their *hermanas*, are not part of this unity. But couldn't it be that through such language, this congregation, rather than excluding women and men from each other, is actually just enacting a more general difference of gender<sup>5</sup>? Various examples can elucidate how women continually redefine the concept of gender as well as the consequences that these reconstructions and enactments of difference could have for the men in the congregation. As a start, the women referred to each other as *hermanas*. Thus, similar to scholars who have examined how linguistic labels serve to elevate and both restrict PC women (Wacker 2001), I examine how, by becoming *hermanas* on the levels of language and action, women come to include themselves—along with the *hermanos*—in a realm of spiritual openness that has been created in this congregation.

Concerning this issue, praise becomes a crucial parcel in the discussion of how women recognize each other as *hermanas*. The congregation's three-person band featured a woman as the electric bassist, and during each song, their music, along with the powerpoint projections<sup>6</sup> and singer improvisations,

resulted in much stage performance tension. In moments when the singer and band did not correspond tonally and rhythmically, they were accompanied by phrases of seemingly desperate *Gloria's* or *Aleluya's* from the congregation. Perhaps because "*La musica es fundamental en el culto de Dios*" [Music is fundamental to the praise of God], the congregation and band frenziedly attempted to bring order to and prevent musical discord during the praise. The responses from the band members and congregation during times when the singing and music were not in sync indicate certain inclinations toward spontaneity. In particular, the women mainly perpetrated the order and tension in their embodiment as singers and musicians during praise. Here is a brief story:

Lupita approached the front and briefly glanced at the congregation, shut her eyes, raised her arms, and thanked the pastors. Without any help from lyrics or guides, she soon had a back-up singer harmonizing with her voice. Conversely, when men would sing in front, they would not have "assistants".

Akin to the bible studies, women had assistants while praising. However, in singing, assistance came strictly from other women congregants. While this could substantiate claims that women are less adroit in symbolically reaching the spiritual realm through thought or theology than through physical or emotional praise<sup>7</sup>, PC worship generally points towards a candid expression of emotion (Wacker 2001). The woman-led praise on stage points to an always-assisted expression of religious emotion.

Because the praise portions of PC emphasize emotional expression and the quality of apparent unpredictability, it is important to acknowledge that such matters still require a type of order

(Wacker 2001). When apparent disorder occurred during praise, restrictions were enacted through singers, music, and the responses of the congregants. These women, although not explicitly inculcated to be so by the pastors, were vociferous and physically vibrant during the average service; they were exceptionally loud during the collective singing of services and bible studies. Their hands went up while their bodies moved to the praise music, as their voices faded in with the others.

It seems that gender expectations and modes of operation for the women congregants have become implicitly linked to their somewhat peripheral, yet not any less significant actions. Not solely in language, nor in direct action, but *through* these, as necessarily linked by seemingly unnoticed and unconscious actions, women engage their PC identity by being potent creators and shapers of gender notions. Through subtle action during praise, the women shift conceptions of gender. Such shifts proceed in the realms of language as well.

A lively spiritual life was often described through *el fuego en el corazon* [the fire in the heart], a metaphor which during a service pastor Juan explained by making allusions to wives cooking meals for their husbands. He said that as with cooking, slow spiritual fires did not work well; one could not be *tibio* [lukewarm] with the fire of God. The pastor's statements, enlightened with typical attitudes of machismo in Latin American culture, were clearly directed towards an audience who recognized and perhaps condoned traditional cultural expectations that women are to cook for their husbands. My claim is that the meaning of the *fuego* metaphor is reversed through the women's *Tamal Committee* which is composed of around 11 women who socialized while cooking tamales every week. Instead of being mere wives cooking for a husband, these

young, single, and working women re-defined their roles as active contributors to the financial maintenance and improvement of the PC church mission as hundreds of tamales were sold weekly around the neighborhood.

In this case, women are first excluded from the spiritual fire through metaphors plagued with machismo that equated a spiritual fire with a cooking fire. But women seem to subtly reclaim their position in the congregation's spiritual notions through the action of employing and creating precisely with this *fuego* or fire that yields tamales, and most importantly, brings women into the language, spirit, and action realms of this congregation. Thus, *The Tamal Committee* reclaims a pentecostal spiritual fire through specifically cultural means.

The *hermanas* have redefined notions of gender in very subtle and almost indiscernible ways<sup>8</sup>, and I suggest that these slight actions have been the most powerful in the restructuring of gender dynamics for this congregation. But perhaps the most obvious way that gender conceptions were redefined was through pastor Veronica's preaching. When she would preach, she gave disclaimers of not being good enough, even as her preaching seemed well-reasoned and structured—contrary to claims that consider that PC has been disastrous to the life of the mind and thus leaves PC unable to engage people intellectually (Noll 1994). Unlike the style of male preachers, hers rarely invited the congregation to raise the hands or say hallelujah. During an interview, she mentioned her wish for people to “reason” along with her interpretation of the word. Pastor Veronica's approach attempted to simply explain, study, and closely read the bible to potentially understand, along with feeling the word of God as true. One of Pastor Veronica's statements perhaps best demonstrates the potential to shift

concepts through her preaching: “*La busqueda hace la diferencia, tienes que buscar a Dios si no te quedas en el mismo nivel*” [the search makes the difference, you have to seek God, if not, you stay on the same level].

Although not always on stage, but always among themselves, the women of this congregation become spiritual *hermanas* through language and action. Most importantly, the entire congregation engages in this process of becoming *hermanas*, as the men also participate in the praise that the women lead. Hence, the congregants are able to create a realm in which spiritual matters are dealt with through language, action, and the redefining of gender notions and other concepts. The concept of gender as difference<sup>9</sup>, and not as mere exclusion, grants the women of this congregation the potential of reshaping gender notions in a PC context through cultural means. As this reshaping happens on collective levels during praise and services with pastor Veronica's preaching for instance, the entire congregation is involved in the creation of such concepts. Pastor Veronica's embodiment as the bible study/theological notion-bringer, and the women congregants involved peripherally through praise action and directly through *The Tamal Committee* and singing, are relentlessly stirring the power of difference that is necessary for any group of people to remain in the process of changing and revitalizing thought, language, action, and spirit.

## Conclusions and Discussion

Latin American pentecostals arrive at new conceptions of their individual and social identities through their engagement and experience as Latinos in the U.S. (Stoll 1990). Most precisely, it is through the intertwining of religion and culture that the PC message is able to proceed (Tillich 1959). Latino PC is tied to the search

for community (Sanchez 2003) and, in turn, this community is often framed by language, traditions, and the potential of constructing and reshaping concepts like culture, identity, and gender. Although the diverse cultural and ethnic makeup of the U.S. has made Latino versions of PC an inevitability (Sanchez 2003), it seems that local congregations such as House of Espiritu, Inc. preserve a relative connection to the more general PC model that values the free expression of emotion. Such emotion

perhaps has taken up “its culturally pluralistic environment to socially construct subcultural distinction, engagement, and tension” which concurrently is able to infuse PC with vitality (Smith 1998: 121).

But practice, experience, and emotional expression alone do not determine PC since in the basic urge to understand one’s individual and social condition along with notions of God, certain beliefs and practices begin to take more definite forms (Jacobsen

2003). Ultimately, along with its vast subcultural manifestations (Blumhofer 1993), PC provides its adherents “(even if in isolation or expulsion) ... a content for ...ultimate concern (Tillich 1957: 27);” a concern which is not necessarily sequestered from secular or cultural life (Tillich 1959) but works through and with it by virtue of a recognition and valuing of the difference that exists not only in the ethnicity and culture of all people, but also in their thought, language, and potential action.

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<sup>1</sup> Defined as the social product of our language abilities (de Saussure 1983).

<sup>2</sup> It was said that God had made the congregants in a certain way just so they could evangelize other Latinos. The group who evangelized for instance included girls who wore bracelets displaying their nation’s flag and young men who placed flag decals on their cars.

<sup>3</sup> This interpretation is influenced by Bourdieu’s insights (1991) and various works on religious and cultural production (Leon 1999).

<sup>4</sup> Therefore allowing the congregants to abstain from enacting or in this case “reacting” a Latino identity by solely engaging in local protests and marches within a threatening legal context. Latino or cultural identity, when linked to PC identity, results in alternative ways of interacting with the surrounding environment.

<sup>5</sup> It would be unfounded to merely grant that the women of this congregation are powerless in the realms of thought, language, and action.

<sup>6</sup> which changed as song lyrics were switched, spellings corrected, and often re- misspelled.

<sup>7</sup> Both Blumhofer (1993) and Wacker (2001) have made comparable assertions about women and PC.

<sup>8</sup> Through traditions (tamal-cooking), peripheral actions (emotional expression during praise), and language (referring each other as hermanas).

<sup>9</sup> My analyses are influenced by various notions advanced by Irigaray (2004).



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## Exploring Important Protein Interactions in the Mammalian Diaphanous-related Formins: A Closer Look at the Relationship between the Intracellular Skeletal Network and a Single Amino Acid Residue



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### ABSTRACT

*The Diaphanous-related formin protein family plays a key role in intracellular cytoskeletal regulation. Due to their far-reaching importance, these proteins must be highly regulated themselves. With recent exploration of regulatory processes of mDia2, a formin protein found in mammals, the established mechanism of control appears to be more complex than previously thought. This project examines the possibility of phosphorylation at critical sites near the protein regions that regulate formin function. Here, we outline our initial screen for discovering these specific residues within mDia2 and their potential for phosphorylation using site-directed mutagenesis.*

Diaphanous-related formins (DRFs) interact with the cellular cytoskeleton through their ability to serve as “molecular switching” signals contributing to the formation and stabilization of actin fibers and microtubules. This conserved protein family thus plays a large role in the regulation and control of cytoskeletal process such as cellular division, maintenance of cell shape, and cell movement (1). Due to their far-reaching importance, these proteins must be highly regulated themselves else such human disorders such as deafness and malignant cancers can occur.

The diaphanous inhibitory domain (DID) and the diaphanous autoregulatory domain (DAD), two regions on opposite ends of the protein, play a strong role in mediating the autoregulation of DRFs. In the inactive state, DID and DAD bind through intramolecular interactions to fold in half or “close” the protein (left side, Fig 1). An activated form of Rho-GTPase must bind to the protein’s GTPase binding domain (GBD) to “open” the protein (Fig. 1, right side) by disrupting the intramolecular DID-DAD interaction. This exposes the inner domains to the cytosol, allowing these domains to send signals and activate other cellular pathways.

In several mammalian Diaphanous-related formins such as mDia1, mDia2, and mDia3, DID and DAD regions are highly conserved. During the summers of 2004 and 2005, our lab discovered specific residues in DAD important in DID-DAD binding (2). While at that time, specific DID residues functioning in this interaction were unknown, three independent research laboratories recently determined the DID structure (3-5). These groups also found when certain amino acid residues in the DID region (A256 and I259) are replaced with negatively charged residues, the DID-DAD binding interaction significantly decreases. More importantly, a serine residue lays adjacent to these residues



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in mDia1, mDia2 and mDia3 (Fig. 2). When phosphorylated, serine residues become negatively charged. The conserved presence of serine so close to these residues suggests the mechanism of mDia regulation may have something to do with this serine residue becoming phosphorylated (negatively charged), which would disrupt the intramolecular forces between DID and DAD, thereby ‘opening’ the protein. Phosphorylation is a very common method in which many cellular proteins are regulated. A bioinformatics computer program independently identified this specific serine residue to be a possible phosphorylation site. In addition, the serine’s physical orientation in DID positions the phosphorylation face toward the location where DAD binds to DID.

While preliminary results from our laboratory display promising results at this residue (S272), the potential of similar, undiscovered sites of activity within the mDia protein family that are involved in both regulation and sub-cellular localization capacities may exist. In this study, we compared the genetic sequence of the three mDia isoforms to locate conserved amino acid residues with a high probability of interacting with other proteins. Ironically, every residue discovered in this search displays potential for phosphorylation by another protein. The initial screen results indicate phosphorylation and subsequent activation of mDia2 may occur at a few select regions, specifically S56, S150/S154, S177/S181, S329/T330, and T1061. For the purposes of this study, T1061 was investigated for any role in the autoregulation of mDia2 (DID-DAD binding).

## Materials and Methods

**Site-Directed Mutagenesis** – Primers were designed by our laboratory and manufactured by Integrated DNA Technologies. The site-directed

mutagenesis technique mostly followed the protocol by Stratagene (QuikChange XL II kit). Using polymerase chain reaction (PCR), the mutation-containing plasmids were amplified and transformed into ultracompetent XL-10 Gold *E. coli* cells (Stratagene). After colonization on an LB-ampicillin (100 µg/ml) plate, the resulting colonies were grown in 5 mL cultures at 37°C for 18 h and the plasmid subsequently extracted using the Promega Plasmid Miniprep kit. After the extracted DNA was sequenced at the Van Andel Institute DNA sequencing facility to ensure correct mutagenesis, the bacteria were re-grown in 200 mL cultures and the DNA extracted using the Promega Plasmid Midiprep kit. The midipreped plasmid DNA was used for microinjection.

**Microinjection and Fluorescent Image Acquisition** – Mouse fibroblasts (NIH3T3) cells were maintained in Dulbecco’s Modified Essential Medium (DMEM; Gibco) containing 10% (v/v) fetal bovine serum (FBS; Gibco) and plated on glass coverslips. Twenty-four h before microinjection, the cells were transferred to DMEM containing 0.1% (v/v) FBS. Coverslips were independently microinjected with wildtype mDia2, T1061G, and T1061E plasmids at a concentration of 100 ng/µL. The cells expressed the injected plasmid for 4 h, followed by fixation with 3.7% formaldehyde for 5 min. A subsequent 1X PBS washing and permeabilization of the cells with Triton X-100 for 5 min prior to 45 min incubation with 1:300 Alexa 488-phalloidin/PBS allows visualization of F-actin. After incubation and 1X PBS washing, the coverslips were mounted on microscope slides using gelvatol as a sealant. All images were acquired on a Olympus BX51 upright research microscope using either a 66X or 100X oil objective.

## Results

**Mutant T1061 mDia2 has been successfully expressed in mouse fibroblasts** – Successful

microinjection of specific mDia2 mutants into mouse fibroblasts have been shown to sufficiently disrupt DID-DAD binding to the point of significantly changing the cell’s phenotype as compared to fibroblasts injected with normal, ‘inactive’ mDia2. We were also able to microinject fibroblasts with the two mutants of T1061 (T1061G and T1061E) as well as the normal-type mDia2 (Fig. 3). While the data from this initial screen show limited phenotypic changes, more experimentation needs to be done to more fully understand and determine T1061’s role in mDia regulation.

In this experiment, we would expect to see activation of mDia2 with the T1061E mutation, similar to S272D (Fig. 3). If phosphorylation occurs, a cell microinjected with T1061E would be expected undergo vast changes in physiology. Unfortunately, the technique we used here has limitations; there are still biochemical assays to be performed to more fully understand T1061’s role in mDia2.

## Discussion

The DNA sequence of mDia2 was scanned in the online database MotifScan to determine the probability of potential protein interaction sites. The resulting scores and their locations in mDia2 were then compared against the aligned sequences of mDia1 and mDia3 in order to determine the overall level of residue conservation. To further refine the search, the sites were then located in the known protein crystal structure for judging if the site had the potential to interact with another protein.

Several factors contributed to the selection of T1061 for further analysis. Of the five chosen protein sites, only this one appears in the DAD region. This is significant when put into context with experiments performed by Higgs (7). His work suggests that GTPase binding may not be the only signal

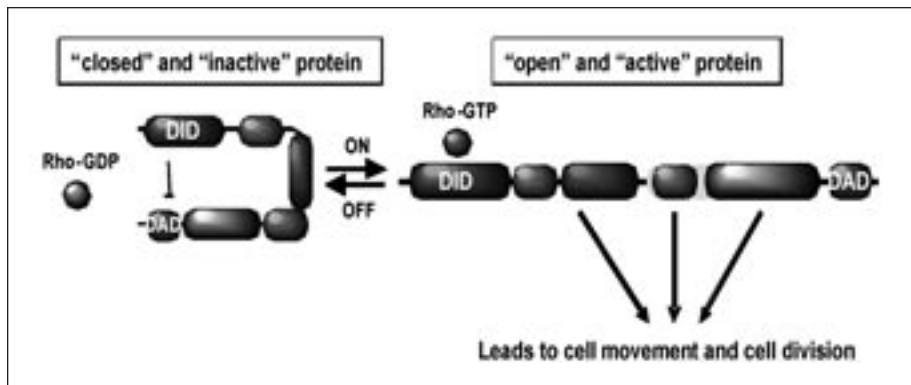
present in mDia regulation. Based on his results and evidence of phosphorylation within mDia, we propose that GTPase binding may be the catalyst for the *initial* disruption of DID-DAD binding while a second signal, through means of a phosphorylation event somewhere near the DID and DAD regions, is necessary to prolong the duration of mDia activation. T1061, in the DAD region, appears a likely site for this event to occur with the GTPase “activating” signal being bound in the DID region.

The potential kinases likely to cause this phosphorylation event at T1061 contribute to this site’s selection as well. Some of these kinases have been found at the tips of actively elongating actin filaments similar to where activated mDia2 localizes. With successful microinjection of GFP-labeled mDia2 mutants designed specifically to test the possibility of phosphorylation, we should see a signal at the growing ends of actin filaments.

The amino acid mutants chosen imitate both non-phosphorylated (glycine; G) and phosphorylated (glutamic acid; E) variants of threonine. Mutants like these eliminate the ability of the cell to utilize phosphorylation as signaling switch. Now the protein has been “hardwired” into either a mimicked phosphorylated (T1061E) or non-phosphorylated (T1061G) state, thereby bypassing any potential signaling pathways present in the cell.

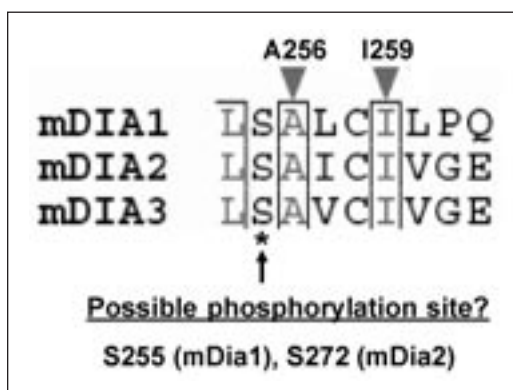
**Figure 1.** Regulation of the Diaphanous-related Formins

Two regions, DID and DAD, account for the formins' ability to autoregulate themselves. These two domains on opposite ends of the protein bind together in the "inactive" form. This is the natural protein conformation. When an active Rho-GTPase binds to DID, the DID-DAD binding interaction disassociates, thereby opening the protein and exposing the inner domains to the cytosol where they mediate cytoskeletal processes.



**Figure 2.** Conserved Serine Residue in DID

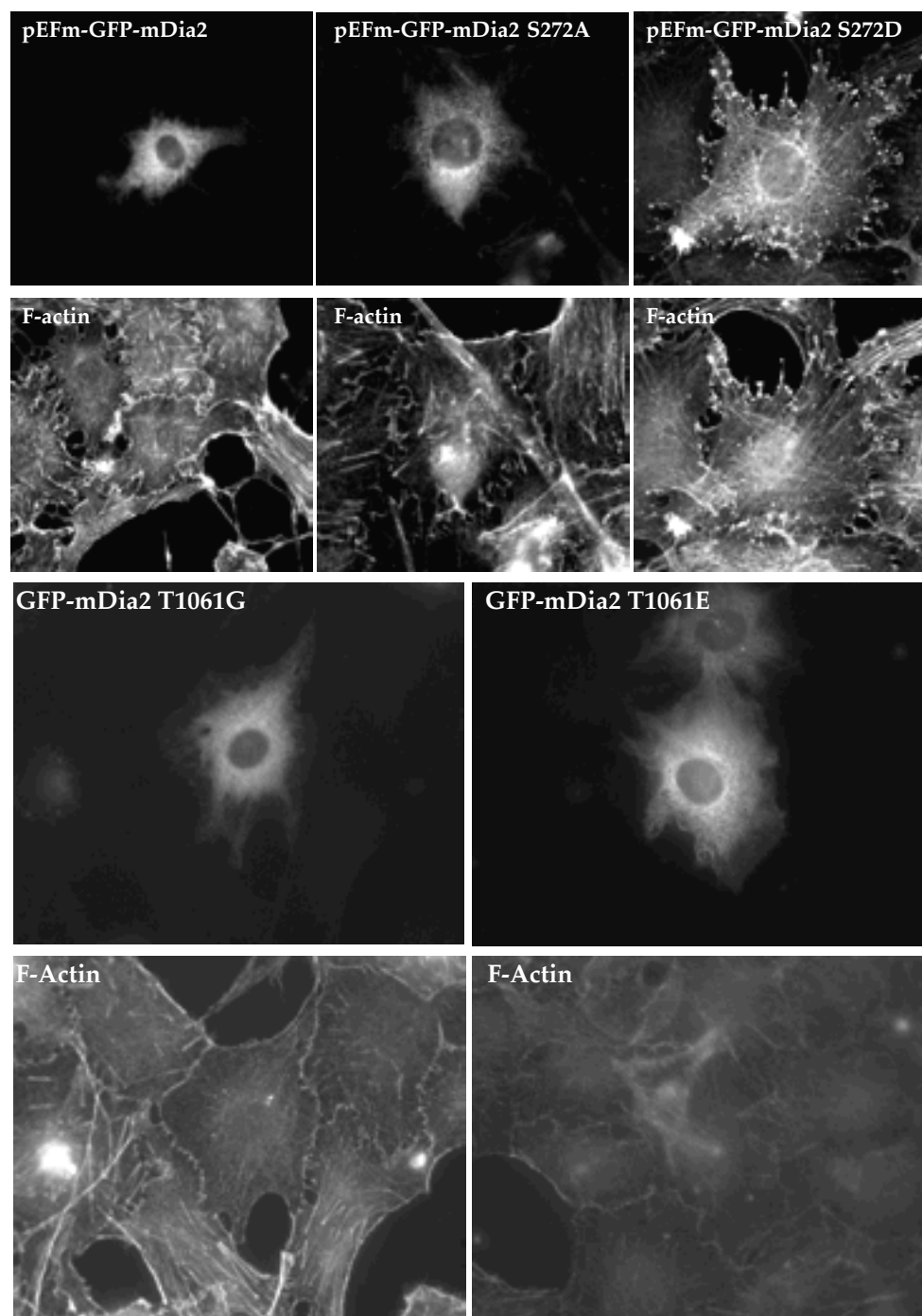
Two conserved residues demonstrated as very important to DID-DAD binding (A256 and I259) also have a neighboring serine residue found across all three isoforms of mDia as well. When A256 and I259 are replaced with negatively charged residues, the binding interaction drastically decreases. This serine appears to be a convenient place for a phosphorylation event to occur, an event where the cell can selectively add and remove a large, negatively charged phosphate group.





### Figure 3. Results

Wild-type mDia2 labeled with GFP localizes in the cytoplasm with no marked changes in cell morphology; it's inactive. We expect and see the same for S272A (lab results obtained 2005) and in T1061G, as these mutations mimic a constantly non-phosphorylated state. In S272D, the cell morphology undergoes wide changes. Filipodia and other such protrusions emanate from the cell. mDia2 localizes at the tips of these protrusions and large amounts of actin can be found there as well. In T1061E, we don't see much change from T1061G, but this technique is only one tool available, with all its advantages and limitations, to determine if phosphorylation can occur. More experiments need to be run to more fully understand the relationship between T1061 and phosphorylation.



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# Advanced High Temperature Semiconductor Packaging Material Based on PBO Foam Technologies



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## ABSTRACT

*The lack of qualified packing systems above +250°C is a major obstacle in fully realizing the potential of advanced high performance semiconductor materials in military and commercial systems. It is therefore necessary to produce a packaging material able to withstand higher operating temperatures and increased thermomechanical capability with the semiconductor substrate. In attempt to do this, a novel foam material produced via the synthesis of PBO (poly(p-phenylene-2,6-benzobisoxazole)) was developed. Examination of the resulting foam demonstrates lightweight, non-flammable, non-toxic, shock resistant foam with thermal stability from -260°C to +600°C.*

**Keywords** semiconductor, PBO, polybenzoxazoles, polymeric foam

## Introduction

Semiconductors are materials with an electrical conductivity that increases with increasing temperature. Also, their conductivity is an intermediate between that of an insulator and a metal. Semiconductors are found in a variety of places and are at the core of electronics. Any device that is computerized or uses radio waves depends greatly on semiconductors. The most common material used in semiconductors is silicon.

The use of silicon and other current technologies in semiconductors are relatively effective; however, critical obstacles have prevented the full realization of advanced high performance semiconductor materials in military and commercial systems. The most significant obstacle that has limited this full realization is the lack of qualified packaging materials above +250°C. This study attempts to address the issue of increasing operating temperatures by concentrating on two main tasks: (1) alleviating thermal stressor thus allowing packaging material to withstand higher operating temperatures and (2) increasing thermomechanical capability with the semiconductor substrate, for example thermal shock resistance.

A semiconductor works as a complete system and is only as effective as its weakest component.<sup>1</sup> Currently the weakest component in the semiconductor system is the packaging material which leads to the purpose of this particular study. This study attempted to produce a low density porous material to address the limitations facing current semiconductor technology. Low density porous materials, otherwise known as foams, were first developed in the United States in the mid 1930's. Despite the outstanding properties of polymeric foams, such as excellent thermal and acoustic properties, high



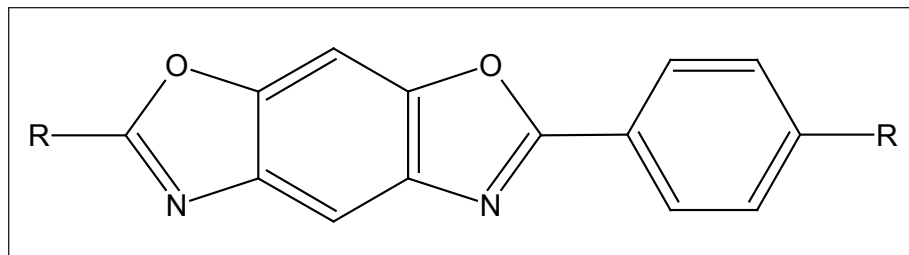
**Robert Smart, Ph.D.**  
Faculty Mentor

weight-to-strength ratios, and cost effectiveness, these materials suffer from certain disadvantages. Early polymeric foams have been limited in their use by temperature constraints, poor fire resistance, toxic fume generation, thermal aging and degradation, friability, and susceptibility to thermal cycling and ultra violet light.<sup>2</sup>

Ultimately this study attempted to produce an advanced high temperature semiconductor packaging material based on PBO technologies. Polybenzoxazoles (PBOs) are rod-like polymers with extended chain conformations. These polymers, like aromatic polyimides, have excellent thermal and oxidative stability as well as good hydrolytic and solvent resistance.<sup>3, 5-8</sup> PBOs are widely used as high performance polymers and molecular composites due to their superior stability and mechanical properties.<sup>4</sup> The origin of PBO is rooted in the pursuit to develop a novel plastic material with the same performance as metals while maintaining the ductility of non-metallic materials by the scientist at the Polymers Branch of the US Air Force Materials Directorate Laboratories in Dayton, Ohio. This new material was designed to be an alternative to graphite fiber in the areas of low weight-to-strength ratio, stiffness, environmental resistance, and better elongation and radar transparency. After many years of basic research, it was found that rigid rod polymers had the desired physical and chemical parameters. Thus, PBO was successfully synthesized.<sup>4,14</sup>

At present PBO is only found in fiber form where it is used in bulletproof vests, protective suits for firefighters, lightweight armor for military personnel, and rip cords of parachutes. The fiber is classified as "high performance" and is unique in that it has both superior thermal and tensile properties greatly desired in many aerospace and electronic applications.<sup>4,14</sup> The resonance stabilization allotted by the

**Figure 1.** Chemical structure of (poly(p-phenylene-2,6-benzobisoxazole)).



aromatic structure of PBO lends itself to an increase in bond strength which contributes directly to its heat resistance. Solubility is yet another characteristic where PBO displays superiority. PBO is insoluble in most all solvents and is in fact only soluble in polyphosphoric acids. This feature adds to the overall mechanical strength of PBO; however, it also makes for difficult processing and limits commercial applications.<sup>4,14</sup> For this reason PBO was produced in situ for this study.

## EXPERIMENTAL

### Nitration of Bisphenol A

Bisphenol A (10.290g) was dissolved in acetone (50.0mL) at room temperature in a 250mL Erlenmeyer flask with stirring. The mixture was then cooled to 0°C. HNO<sub>3</sub> (8.5mL) was added drop wise over a time period of 30 minutes. The mixture was then allowed to stir and warm to room temperature for one hour while a yellow/orange precipitate formed. Afterward distilled water (25mL) was slowly added to mixture. The resulting solid was collected by vacuum filtration and washed with 3:1 mixture of acetone: DI water. The solid was allowed to air dry for approximately 24 hours. After drying the solid was examined by Infrared (IR) and Nuclear Magnetic Resonance (NMR) spectroscopy (10.883g, 78.04% yield).

<sup>13</sup>C NMR:  $\delta$  = 30.4, 42.1, 120.3, 121.9, 133.1, 137.0, 141.8, 153.8

<sup>1</sup>H NMR:  $\delta$  = 10.51 (s, 2H), 8.03 (d, J=2.46 Hz, 2H), 7.32 (dd, J=8.79 and 2.49 Hz, 2H), 7.06 (d, J=8.79 Hz, 2H),

1.65 (s, 6H)

IR: R-NO<sub>2</sub> peaks 1530cm<sup>-1</sup> and 1322cm<sup>-1</sup>

Mp: 132.9°C – 133.6°C

### Reduction of Bis(o-nitrophenol)

Bis(o-nitrophenol) (7.180g) was dissolved in 5%NaOH (400mL) with stirring in a 1000mL Erlenmeyer flask. Solution was then heated. Once hot Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub> (45.573g) was added SLOWLY to solution. The solution was then neutralized with glacial acetic acid. Once neutralized the mixture was cooled to room temperature then placed in ice bath. Crystals formed and were filtered by vacuum filtration and washed with cold water. After drying approximately 24 hours the crystals were examined by IR and NMR spectroscopy. This process of nitration and reduction was repeated with various starting products to produce four distinct diamine monomer products (4.878g, 83.70% yield).

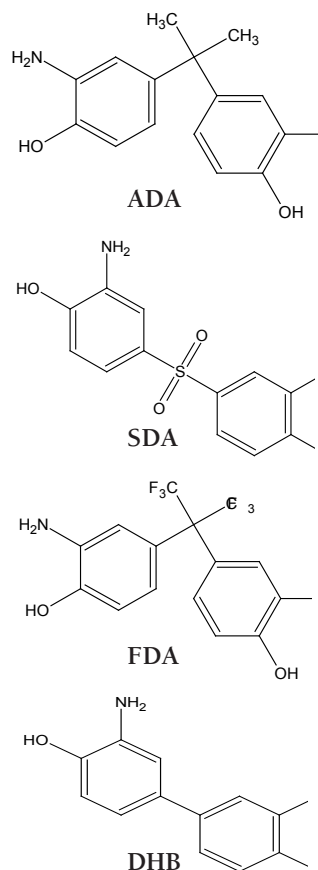
<sup>13</sup>C NMR: 31.6, 41.5, 114.02, 114.05, 114.7, 136.1, 142.2, 148.8

<sup>1</sup>H NMR: 8.74 (s, 2H), 6.49 (d, J=7.98 Hz, 2H), 6.39 (d, J=2.46 Hz, 2H), 6.29 (dd, J=8.22 and 2.20 Hz, 2H), 4.33 (s, 4H), 1.44 (s, 6H)

IR: R-NH<sub>2</sub> peaks 3411cm<sup>-1</sup> and 3325cm<sup>-1</sup>

Mp: ###.°C - ###.°C

**Figure 2: Synthesized Diamine Monomers**

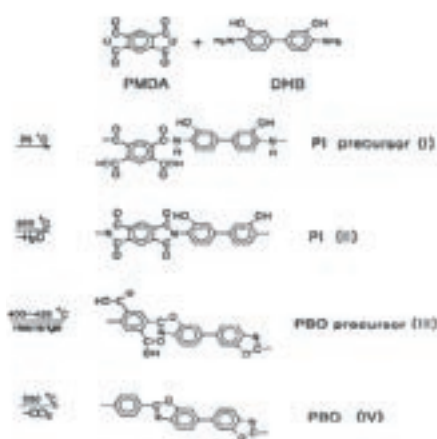


#### Production of PBO foam

In an aluminum reactor ADA (42.57g), ODA (33.0g), and ODPA (48.36g) were added. THF (252.0g) and methanol (64.0g) were then added to the mixture and stirred for two hours at  $60^\circ\text{C}$ . After two hours ODPA-TA (60.31g) was added to the mixture and the temperature was raised to  $85^\circ\text{C}$  in order to concentrate the sample. Mixture was allowed to stir for an additional hour. At the conclusion of this process the resultant dialkylester-diacid diamine salt solid was ground into powder and heated at  $125^\circ\text{C}$  for 15 minutes. Powder was then heated again at  $126^\circ\text{C}$  to form friable balloons. These balloons were produced from a variety of monomer combinations

and then sifted for uniformity to an average size of  $50\text{-}300\mu\text{m}$ . Once sifted balloons were then placed into a mold for further heat treatment. Various reaction times and temperatures were investigated to produce the most thermally stable foam article.

**Figure 3: General Reaction Scheme for PBO Production**



**Figure 4: IR Spectroscopy of ADA Foam Sample**

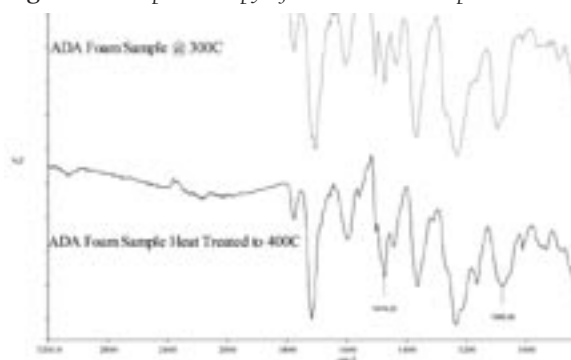


Figure 5: ADA Comparison by Thermogravimetric Analysis (TGA)

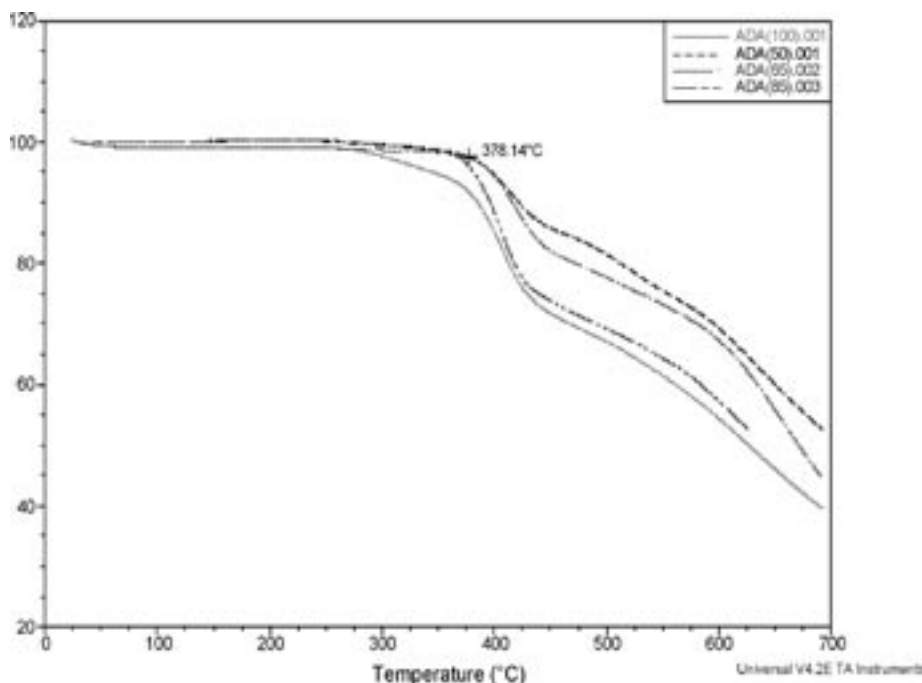
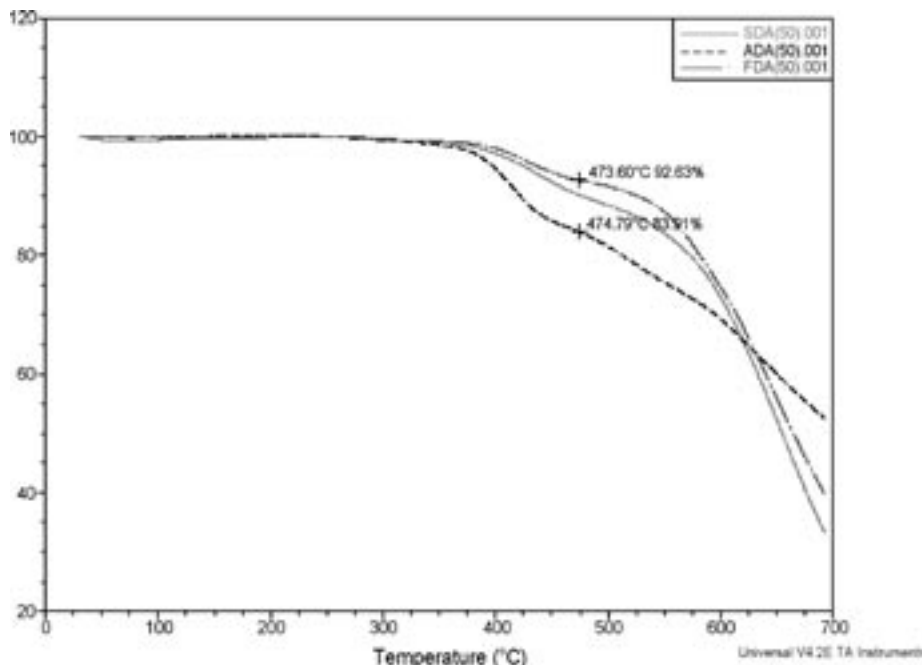


Figure 6: TGA Monomer Comparison of FDA, SDA, and ADA



## Results and Discussion

The thermal conversion from PBO precursor to PBO by way of polyhydroxyimide was confirmed by IR spectroscopy. By examining the foam product in its polyhydroxyimide stage and then in its suspected polybenzoxazole stage, we were able to see the difference that takes place due to thermal conversion at 400°C. The results of the polybenzoxazole stage showed clear peaks at  $\sim 1470\text{cm}^{-1}$  and  $\sim 1080\text{cm}^{-1}$ , which is consistent with previous literature values of PBO formation.

Further testing was administered to analyze weight percent composition and temperature using Thermogravimetric Analysis (TGA). Using various combinations of ADA we expected a decrease in weight composition at  $\sim 400^\circ\text{C}$  due to the thermal conversion to PBO which is marked by the loss of  $\text{CO}_2$ . Results were consistent with expectations, showing thermal rearrangement at  $378.14^\circ\text{C}$ . However, all ratios of ADA showed further weight decomposition beyond  $400^\circ\text{C}$ .

With the continued weight decomposition beyond  $400^\circ\text{C}$  in all ADA samples further investigation of alternate synthesized diamine monomer products was warranted. Using Thermogravimetric Analysis samples of FDA, SDA, and ADA were analyzed to compare thermal stability. As in previous TGA analysis weight percent composition was measured as a function of temperature. The results showed a thermal rearrangement to PBO at  $\sim 400^\circ\text{C}$ ; however, SDA and FDA continued to be thermally stable more so than the ADA samples. FDA displayed the greatest thermal stability, possessing 92.63% composition at a temperature of  $473.60^\circ\text{C}$ .

## Conclusion

This study, in accordance with previous research, confirms that PBO forms at approximately  $400^\circ\text{C} \pm 20^\circ\text{C}$ . However, unlike our predecessors



we were able to successfully produce PBO as a foam article. Using various monomer combinations it was concluded that ADA showed thermal decomposition over 400°C. Also SDA and FDA showed thermal stability at 500°C with FDA being the most thermally stable overall. This finding has inspired further investigation of the FDA monomer as a possible starting material for PBO production.

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# The Enlightenment and Its Effects on the Haitian Revolution of 1789-1804



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Throughout history, revolutions have started because of new ideas that change thinking and disrupt the status quo. The Haitian Revolution of 1789-1804 is no exception. The Enlightenment ideas of equality for men and representative government were crucial to the insurrection. However, how did Enlightenment philosophy make its way to the Caribbean and influence the people to free themselves from their colonizer, France? One slave in particular was strongly influenced by Enlightenment ideas: Toussaint L'Ouverture, the leader of the revolution. Ultimately, the Enlightenment inspired a successful slave revolt in Haiti. While traditional scholarship has depicted the slaves in the revolt as brutes blindly following their cynical leader, in fact L'Ouverture actively used the ideas of European philosophy, which empowered them to become agents.

Several historians have analyzed the Haitian Revolution of 1789-1804. There are three authors, T. Lothrop Stoddard, Thomas Ott, and C.L.R. James, who wrote extensively on the subject. Stoddard's book gives an excellent in-depth overview of the revolution, but it has an obvious racist interpretation. Ott's book has a basic outline of the revolution, but gives a view concentrating primarily on the slaves. James's book is a great source of information on L'Ouverture and the revolution, but it has a racist interpretation as well.

Stoddard's 1914 book, *The French Revolution in San Domingo*, is an excellent source of information dealing directly with the revolution. It is a narrative about the events during the revolution. Stoddard's book gives a detailed account of the revolution that other books do not have. The book explains the beginning of the slave insurrection. Stoddard has an in-depth description of the August 22-23 uprising in the northern section of the country among the enslaved Africans. That is the date that most historians agree the Haitian Revolution began. Stoddard argues that the insurrection by the slaves caught the colonists unprepared.<sup>1</sup> After hearing about the slave uprising in the North Province, colonists elsewhere on the island began to take up arms at an astonishing speed.<sup>2</sup> The insurrection had two leaders, Boukman and Jeannot, both were killed near the beginning and were replaced by Jean-François and Biassou.<sup>3</sup> Toussaint L'Ouverture joined the army lead by Biassou. The slaves used guerilla warfare tactics; they never attacked the whites openly, unless their numbers overwhelmed the colony's militia.<sup>4</sup>

Stoddard also describes an uprising that began in the West Province of the island by the free mulattoes. In other



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<sup>1</sup> T. Lothrop Stoddard, *The French Revolution in San Domingo* (Honolulu: University Press of the Pacific, 2003, reprint), 128.

<sup>2</sup> Stoddard, 134.

<sup>3</sup> Stoddard, 137.

<sup>4</sup> Stoddard, 138.

books, this insurrection was mentioned only in passing. The mulattoes rose against whites for refusing to implement the Decree of May 15. This decree was made in response to the Decree of March 8, 1790 that stated all property owning men, who had paid taxes for two years, and had attained the age of twenty-one had the ability to vote. The Decree of May 15 revoked the right to vote to most of the second caste, mulattoes and free blacks. It allowed only a small number of the second caste the ability to vote. The cause for alarm among the whites rested with the Rewbell amendment. It stated, "...[T]hat the people of color born of free father and mother shall be admitted to all the future parish and Colonial Assemblies, if in other respects possessed of the required qualifications."<sup>5</sup> Once the Decree of May 15 became a law, the cause of mulattoes was won, at least morally.<sup>6</sup>

Stoddard's writing had obvious racist leanings. "The negro women made no resistance. They lacked the European ideal of chastity, and they had strong reasons for welcoming their master's favor."<sup>7</sup> This was a typical sentence found within Stoddard's book. It is obvious that he was influenced by the scientific data of his day, which was that there was a natural hierarchy between the different races with Anglo-Saxons being the most intelligent and Africans the least. Stoddard's book was an excellent source of information on the different key aspects of the revolution, but only offered the view of the white planters.

Another historian, Thomas O. Ott argues that the groundwork for the revolution lay in the social structure of the island. There were three distinct social castes: whites; *gens de couleur*, which consisted of mulattoes and free blacks; and the slaves.<sup>8</sup> The whites and *gens de couleur* held slaves. The *gens de couleur* were sometimes harsher to their slaves than the whites were because they felt that they had something to prove.<sup>9</sup>

The question that many historians have raised, according to Ott, is why did the slaves join the Haitian Revolution? The author gives many plausible explanations regarding the reasons and causes. First, and perhaps the most obvious, is the French Revolution. The enslaved Africans were inspired by the ideology of the French Revolution.<sup>10</sup> The slaves heard about the ideas of equality of all men through the pamphlets the *Amis des Noirs* group passed out in Saint Domingue as well as the conversations of their masters regarding France.<sup>11</sup> The pamphlets written by Abbé Grégoire had wide circulation among the mulattoes and eventually filtered down to the slaves themselves; the basic theme was emancipation of all slaves in the French West Indies.<sup>12</sup> According to Ott, the slaves often construed the idea of emancipation to fit their own frame of reference, defining freedom from slavery as meaning freedom from work, a problem that continually plagued Toussaint Louverture.<sup>13</sup> Ott further states, "By 1789 Saint-Domingue was on the verge of a social upheaval. White

disunity, exploitation of the *gens de couleur*, maltreatment of the slave, and the abolition movements all contributed to the explosive situation. Yet violence might never have erupted had it not been for the social shock waves of the French Revolution."<sup>14</sup> Second, slaves felt an intense hatred toward their slave masters. On one occasion, a planter bought nine slaves and before he could return home, all had committed suicide. Last, many slaves had a reverence for Louis XVI and viewed him as father figure and wanted to see him reinstated to the throne.<sup>15</sup> Ironically, the king represented the Old Regime, which approved slavery. Many revolutionary writers made the charge that the Royalists incited the slaves to revolt in the hope of frightening the colonists back to the Old Régime because among the enslaved Africans the cry of "God and the King" rose throughout the ranks.<sup>16</sup> In addition, the Royalist insignia was assumed by the slaves, and the clergy were often spared from the violence.<sup>17</sup>

For all of the useful information that Ott had on the Haitian Revolution, his analysis focuses primarily on the slaves and their condition. Although the Haitian Revolution was a successful slave revolt, the *gens de couleur* and the whites were important to the revolution. In a letter to the People of Verrettes in March 1795 he wrote, "The French are brothers; the English, the Spanish, and the royalists are ferocious beasts..."<sup>18</sup> It can be inferred from his argument that the Enlightenment philosophy from France affected the slaves. Ott argues that the slaves were mostly deeply

<sup>5</sup> Stoddard, 122.

<sup>6</sup> Stoddard, 143.

<sup>7</sup> Stoddard, 37.

<sup>8</sup> Thomas O. Ott, *The Haitian Revolution 1789-1804* (Knoxville: The University of Tennessee Press, 1973), 9.

<sup>9</sup> Ott, 13.

<sup>10</sup> Ott, 40.

<sup>11</sup> Ott, 41.

<sup>12</sup> Ott, 41.

<sup>13</sup> Ott, 41.

<sup>14</sup> Ott, 21.

<sup>15</sup> Ott, 41-42.

<sup>16</sup> Stoddard, 140.

<sup>17</sup> Stoddard, 140.

<sup>18</sup> Katharine J. Lualdi, *Sources of The Making of the West: Peoples and Cultures Volume II: Since 1560* (Boston: Bedford/St. Martin's, 2001), 59.

influenced by the French Revolution. He does not, however, discuss how the slaves and the *gens de couleur* heard of the ideas. Many of the slaves, including Toussaint L'Ouverture, approved of the Republican government, which existed because of the Enlightenment ideas from the *philosophes*.

An important article, *The International Repercussions of the Haitian Revolution* by John Baur demonstrates that the Haitian Revolution was influential in many ways. There were several international repercussions because of the revolution. "In the French lesser Antilles, a minor rebellion called the Brigands' War, led by Victor Hugues, a mulatto and former St. Domingue merchant, attempted to free the slaves of the smaller French and British islands à la St. Domingue."<sup>19</sup> In Columbia, Simón Bolívar was influenced by Haiti's rebellion. "The Liberator received from Pétion four thousand guns and fifteen thousand pounds of powder, some lead, and the promise of a printing press to diffuse patriotic propaganda."<sup>20</sup> That shows that other countries in Latin America were aided by the victorious Haitians. The Haitians were willing to help others who were in their former situation because they knew the evils of slavery first-hand.

Baur states that many of the mulattoes who left Saint Domingue for fear of their lives moved to the United States, specifically in the region of Louisiana. Their presence brought the question of slavery to the forefront when the United States purchased the territory from Napoleon, who had to sell the land

because France was in debt due to the large-scale war that they had lost against their former slaves.<sup>21</sup> Many people in the United States feared that another Haiti was going to happen because of the influx of mulattoes and enslaved Africans from Saint Domingue. In South Carolina, during the revolution in Haiti, the state forbade free Blacks from the West Indies and Africa to enter the state until 1803; in 1794, North Carolina forbade the slave trade and imposed a fine on importing people from the rebellious region.<sup>22</sup>

Baur states that the Haitian Revolution inspired the slaves in the United States of America to rise against their masters. Due to its influence, there were two slave insurrections in the United States; both were unsuccessful. Gabriel Prosser led one in 1800, and the other was commanded by Denmark Vesey.<sup>23</sup> Vesey was literate and often quoted scripture stating that the slaves in the United States were like the Israelites of the book of Exodus.<sup>24</sup> In both cases, a slave betrayed the leader, Vesey and Prosser, and each leader was executed.<sup>25</sup>

C.L.R. James focuses on the leadership of Toussaint L'Ouverture. Toussaint L'Ouverture read Abbé Raynal and believed that he was the courageous chief. He also read *Caesar's Commentaries*, which gave him some idea of politics and the military art and the connection between them.<sup>26</sup> His policies helped to lay the foundation for the Haitian state today.<sup>27</sup> Toussaint, however, always remained loyal to the revolutionary ideas of France. He

viewed France as his mother country. He would remain loyal to France as long as France remained loyal to blacks. After the British were defeated, Toussaint took control of the island. The French representative was a puppet for him and did not question him. L'Ouverture, however, always kept the governor informed of what he was doing. The ultimate guarantee of freedom was the success of agriculture. In Toussaint's new government, personal industry, social morality, public education, religious toleration, free trade, civic pride, and racial equality, were the foundation for the new state.<sup>28</sup> Toussaint received his power from the black laborers.<sup>29</sup> They remained loyal to him, even though he forced them to go back to their previous plantations.

James's account is an important contribution, as it was one of the first written by an African American author about the importance of Toussaint L'Ouverture. His analysis remedies the racism of scholars such as Stoddard, but he has racist overtones against the whites. It is obvious throughout the book that his tone is one of disdain for white planters. He praises the actions of the slaves when they returned torture with equal cruelty. His interpretation, like Ott's, was one-dimensional. His sympathy for the enslaved Africans detracts from the work as an objective view of the revolution.

A review of several of the important historians on the subject makes it clear that none specifically examined the importance of the European

<sup>19</sup> John E. Baur, "International Repercussions of the Haitian Revolution" *The Americas* 26, no. 4 (1970): 405.

<sup>20</sup> Baur, 410.

<sup>21</sup> Baur, 411.

<sup>22</sup> Baur, 412.

<sup>23</sup> Baur, 417.

<sup>24</sup> Baur, 417.

<sup>25</sup> Baur, 417.

<sup>26</sup> C.L.R. James, *The Black Jacobins: Toussaint L'Ouverture and the San Domingo Revolution* (New York: Vintage Books, 1989), 91.

<sup>27</sup> James, 91.

<sup>28</sup> James, 247.

<sup>29</sup> James, 255.

Enlightenment in inspiring the slaves of Haiti to strive for the liberation of the Haitian people. This paper will first, briefly describe the Enlightenment then, demonstrate that the leaders of the Haitian Revolution—Toussaint L'Ouverture, Vincent Ogé, and Julien Raimond—were steeped in Enlightenment philosophy. Further, it will attempt to discuss the role of the Enlightenment among important figures in the uprising and show a new type of leadership that emerges from this insurrection.

The Enlightenment, which is also termed “The Age of Reason,” began in the 1680s as a movement against religious intolerance and arbitrary rule, but nearly a century later, it was an agenda for reform, threatening courts, princes, lay and clerical oligarchies.<sup>30</sup> The movement consisted of many ideas, including the equality of all men and representative government, which are important to this paper. Several important writers emerged during this period including John Locke, Jean-Jacques Rousseau, Immanuel Kant, the Abbé Grégoire, and the Abbé Raynal.

John Locke wrote at length regarding the education of men. Locke believed that a good education was the only way to gain influence and powerful men achieved their position due to the education they had received.<sup>31</sup> His writings were primarily for the upper and middle merchant classes, but some of the lower classes took his writings and applied them to their children's

situation. That is important because in Saint Domingue, Haiti, the people allowed an education were the *grands* and *petits blancs*, rich and poor whites respectively, and those who had a mixed European and African ancestry; the enslaved Africans were not allowed to attend school.

Rousseau wrote a significant amount on the idea of human rights. In his essay, *The Social Contract*, he wrote, “Man is born free...but everywhere he is in chains.”<sup>32</sup> That statement is extremely important to the Haitian Revolution because those who rebelled against the common system were men and women held in bondage. In that essay, Rousseau also wrote at length about liberty. He stated liberty is twofold. First, there is natural liberty, which is the duty of man to provide for his own perseverance; and second civil liberty, which consists of the freedoms people relinquish and allows other people to govern and maintain order.

Kant, a German philosopher, answered the question, *What is Enlightenment?*, an article he wrote for a contest in Germany. In it Kant stated, that the motto of the Enlightenment was *Sapere Aude*, which is translated to Dare to Know. He also wrote that if freedom was attained, then enlightenment was inevitable. Kant's essay provides a critique of the slaves' thoughts. Kant wrote, “Perhaps a revolution can overthrow autocratic despotism and profiteering or power-grabbing oppression, but it can never truly reform a manner of thinking;

instead, new prejudices just like the old ones they replace, will serve as a leash for the great unthinking mass.”<sup>33</sup> In the case of the slaves, that happened. Once freedom was gained, the former slaves committed genocide on the island because they believed that they were superior to the whites who had run the island.

Grégoire wrote several pamphlets and essays relating to the Haitian Revolution of 1789-1804. His actions toward the revolution were in three parts.<sup>34</sup> Grégoire, at first, defended before the Constitutional Assembly the voting rights of mulattoes and free blacks. Second, he fought for the abolition of the slave trade and slavery. “For him and his abolitionist friends, the most important objective was not the immediate abolition of slavery, but of the slave trade. It was the commerce of human beings—the trafficking in human flesh—that seemed the most revolting to them.”<sup>35</sup> Last, he tried to unite Saint Domingue with France's constitutional Church.<sup>36</sup>

Raynal had perhaps the greatest influence on L'Ouverture. His work, *Histoire des deux Indes*, had perhaps the greatest Enlightenment impact on abolition.<sup>37</sup> His book forced his exile in 1781 because of its radical tone.<sup>38</sup> Although Raynal wrote a significant portion of the book, some speculate Denis Diderot wrote a third of collection.<sup>39</sup> The work contained three main ideas: the invalidity of slavery, the freedom of will, and sympathy towards a violent revolution.

<sup>30</sup> Margaret Jacob, *The Enlightenment: A Brief History with Documents*, (Boston: Bedford/St. Martin's, 2001), 3.

<sup>31</sup> Jacob, 75.

<sup>32</sup> Jacob, 178.

<sup>33</sup> University of Pennsylvania, “An Answer to the Question: What is Enlightenment?,” University of Pennsylvania, <http://www.english.upenn.edu/~mgamer/Etexts/kant.html> (accessed March 27, 2006).

<sup>34</sup> Jean-François Brière, “Abbé Grégoire and Haitian Independence,” *Research in African Literatures* (35:2), 35.

<sup>35</sup> Brière, 36.

<sup>36</sup> Brière, 37.

<sup>37</sup> Ott, 20.”

<sup>38</sup> “Guillaume Thomas François Raynal”, [www.freedictionary.com](http://www.freedictionary.com) (accessed August 27, 2006).

<sup>39</sup> “Guillaume Thomas François Raynal”.



L'Ouverture read it before the outbreak of violence in Saint Domingue.<sup>40</sup>

Having briefly discussed the Enlightenment, this paper will now explain how the ideas from the Age of Reason were disseminated, first in Europe, then in Haiti. Rousseau's ideas were often discussed among people. Three of the most significant ways were coffeehouses, education, and pamphlets.

One of the discussion of the revolutionary ideas lies in coffeehouses. In these gathering places, the latest essays were read by the literate and discussed amongst those who were educated as well as by people who received little formal education. In French Saint Domingue, people of the first caste, *les blancs*, the whites, discussed the French Revolution in the presences of their slaves.<sup>41</sup>

Many of the *grands blancs* had received their education in France and they were exposed to radical writings of the *philosophes*. Many *gens de couleur* received an education in France; however, in some cases the Creoles, people born of French parents in Saint Domingue, tried to deter them from going abroad.<sup>42</sup> Many of those who were enslaved and who worked in service positions listened carefully to the whites and began to form their own philosophy. Educated individuals, especially among the mulattoes, began writing pamphlets to the National Assembly shortly after the Fall of the Bastille. The writings focused primarily on the inequality between the social castes in Saint Domingue, specifically

the disparagement between *les blancs*, the whites, and the *gens de couleur*, free mulattoes and blacks.<sup>43</sup>

The whites who were sympathetic to the Haitian's cause and the *gens de couleur* who were educated were able to read the pamphlets that were transported into Haiti. There was a man who lived in France who was particularly important to the publishing and writing of the pamphlets, which contained ideas of freedom, equality, and liberty, to Haiti. His name was Julien Raimond.

Raimond was born of an African mother and a French father in Martinique. He was a slave owner in Haiti and his income allowed him to spend his time in France. Raimond was an ardent supporter of equal rights among whites and mulattoes in Saint Domingue. After the fall of the Bastille, he moved to Paris and began writing pamphlets in which the influence of the Enlightenment is evident. Many of his writings stated that Africans needed to be taught what freedom and liberty meant before they could be enfranchised, but that mulattoes, because of the white blood, deserved the immediate granting of equal rights. The powerful whites feared the repercussions that the discussion of the Enlightenment ideas would have on their dominion.

On March 8, 1790, Raimond's dream of people of mixed heritage being able to vote was realized when the National Assembly declared that all property-owning white men, who were 25 and had been paying taxes for

two years were able to vote. In 1791, there was increasing discrimination by the creoles of Saint Domingue towards free mulattoes and blacks. In response, Raimond wrote an essay titled, *Observations on the Origin and Progress of the Prejudice of the White Colonials against the Men of Color*, which attempted to answer two questions: first, whether the free colored people will have the rights of active citizens in the colonies; and second, whether these rights are to be accorded all free colored people, or restricted to certain members of this class.<sup>44</sup> On May 15, 1791, the decree for which Raimond had been campaigning was issued. It was the first legal expression in the Western world of the idea that persons of African descent were entitled to all the rights of citizenship.<sup>45</sup> In 1795, Raimond, along with other commissioners from France, was sent to Saint Domingue to obtain first-hand information and to help in the restoration of the island.<sup>46</sup> This was a victory for Raimond and all mulattoes, but the whites in Saint Domingue were outraged and refused to follow the decree. They enjoyed their power over the mulattoes and Africans.

Due to the whites' refusal to implement the decree, a young man of mixed race, Vincent Ogé, secretly left France to start a mulatto revolution in Saint Domingue. Ogé wrote to the president of the Provincial Assembly in Saint Domingue, shortly after the decree was passed, stating, "GENTLEMEN: A prejudice, too long maintained, is about to fall."<sup>47</sup> In a motion made by

<sup>40</sup> "Guillaume Thomas François Raynal".

<sup>41</sup> Ott, 41.

<sup>42</sup> Mercer Cook, "Julien Raimond" *The Journal of Negro History* 26, no. 2 (1941), 139.

<sup>43</sup> Cook, 142.

<sup>44</sup> Cook, 149.

<sup>45</sup> Cook, 151.

<sup>46</sup> Cook, 164.

<sup>47</sup> John R. Beard, *Toussaint L'Ouverture: Biography and Autobiography* (Boston: James Redpath, 1863), 46.

Ogé in 1789, his work clearly expresses Enlightenment philosophy that all men are created equal. In it, he states that freedom is made for all men. That clearly expresses Rousseau's idea of equality for all men.<sup>48</sup> Ogé led an insurrection against the whites, but his plan failed. He escaped to the Spanish side of the island, but he was betrayed and handed over to the French. He was tried, convicted, and executed. His death caused an outrage among those living in France at the time, especially among *La Société des Amis des Noirs*. The *Amis des Noirs* along with Raimond, wrote pamphlets encouraging the emancipation of slaves and the granting of equal rights among whites and people of mixed race.

One slave who was able to read about these ideas flooding the colony was Toussaint L'Ouverture, born Toussaint Breda. The earliest piece of scholarship discussed in this paper, the biography of Toussaint L'Ouverture (written by the Reverend John R. Beard, D.D., 1836) is an excellent resource of information regarding L'Ouverture's experience in the military, his ascension to power, and most interesting for the purposes of this paper, the Enlightenment philosophy and its impact on his thinking.

L'Ouverture received limited scholastic training from his godfather, Pierre

Baptiste.<sup>49</sup> Beard states, "A scholar, in the higher sense of the word, he never became."<sup>50</sup> Although never attending formal school, he gained a great amount of knowledge through speaking with free and white men.<sup>51</sup>

Beard recounts that L'Ouverture read works from the Abbé Raynal. From his "first dim conception of the misery of servitude"<sup>52</sup> as a young man, Toussaint was profoundly struck, and felt personally called, by Raynal's statement that a liberator was needed to release his fellow citizens from the yoke of slavery.<sup>53</sup> L'Ouverture stated, "A secret voice said to me, 'Since the blacks are free, they need a chief, and it is I who must be that chief, foretold by the Abbé Raynal'."<sup>54</sup> L'Ouverture read Raynal to see what he and others, specifically those in France, had to say about slavery.<sup>55</sup> He heard about passages from Raynal and, eventually, demonstrated his knowledge on the subject.<sup>56</sup>

Beard stated several times that L'Ouverture was more humane than the other commanders of the army because of his Enlightenment ideas of human rights. L'Ouverture from the time he joined the insurgency, one month after the initial wave in 1791, joined the forces of Jean-François and Biassou.<sup>57</sup> The leaders did not trust him; therefore, when they learned of his knowledge

of herbs and medicines, Jean-François and Biassou forced him to work on the wounded.<sup>58</sup> As the rebellion continued, he was made an aide-de-camp of Biassou because of the many deaths that occurred within the ranks.<sup>59</sup>

His skills as a leader, that he learned while in the Spanish Army, were instrumental in the success of the revolution. In 1796, upon his appointment as Lieutenant Governor of the island, he began to establish Saint Domingue as a prosperous colony for France. Under L'Ouverture's direction, the former slaves began to view themselves as a community. A nationalistic view of their situation began to enter their minds. Although the former slaves were from different parts of the continent of Africa, their enslavement bonded them together forming a community. The sense of community helped to keep the colony prosperous until Napoleon invaded it again in 1801.

In 1801, after losing to the British in Africa and India, Napoleon focused on Haiti. He sent his brother-in-law, Leclerc, to the island and stated that Toussaint was to give command to the Frenchman.<sup>60</sup> L'Ouverture and the blacks saw through the façade of peace and were ready to take up arms against the French. Leclerc, under order from Napoleon,

<sup>48</sup> Lynn Hunt ed., *The French Revolution and Human Rights: A Brief Documentary History* (Boston: Bedford Books of St. Martin's Press, 1996), 104.

<sup>49</sup> Beard, 36.

<sup>50</sup> Beard, 37.

<sup>51</sup> Beard, 40.

<sup>52</sup> Beard, 38.

<sup>53</sup> Beard, 38.

<sup>54</sup> Beard, 119.

<sup>55</sup> Beard, 41.

<sup>56</sup> Beard, 41.

<sup>57</sup> Beard, 49-50.

<sup>58</sup> Beard, 54.

<sup>59</sup> Beard, 54.

<sup>60</sup> Beard, 158.

forcibly took control of the island, but he ultimately failed. The Africans maintained their freedom and on January 1, 1804, Haiti became an independent nation establishing the second republic in the Western Hemisphere.<sup>61</sup>

Toussaint L'Ouverture was an enlightened leader. His leadership enabled him to take approximately 400,000 people and have them rise up against three of the most powerful militaries at the time, France, Spain, and Britain, and win. He gave the former enslaved Africans a sense of community. This was not his only contribution, though. He also was able to unite the people of the island, regardless of skin color. He formed a coalition among the three castes. In his cabinet, he had Africans, mulattoes, and whites. In his army, he had generals of the three castes as well, who worked together. Toussaint realized that in order for the colony to maintain relatively peaceful, it was imperative to work with everyone. The Enlightenment idea of equality amongst men was at the forefront of his thinking. The *gens de couleur* and slaves believed that the doctrine of "Liberty, Equality, and Fraternity" should be extended to them.<sup>62</sup>

L'Ouverture was successful not only because of his ability to form coalitions and because of his strong character, but also because of his background. The limited education that he received from his godfather, Pierre Baptiste, allowed him to read the works of the Abbé Raynal, who was an important Enlightenment writer. Toussaint's education, background, and leadership skills were efficient in establishing a successful colony, for a period, and having that nation maintain its sovereignty until the present day.

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<sup>61</sup> Ott, 182.

<sup>62</sup> Cook, 141.

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# Epitope Labeling of Histidine Decarboxylase in *Drosophila melanogaster*



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## ABSTRACT

Histidine decarboxylase (HDC) plays a critical role in the synthesis of histamine, a central nervous system neurotransmitter used by both vertebrates and invertebrates. Past attempts to create antisera that recognize the HDC protein in vivo have not produced satisfactory antisera. While HDC antiserum has been made in other organisms, they appear not to be useful across species, including *Drosophila melanogaster*. As a result, little is known about the localization as well as the biochemistry of HDC in the fly. It has been suggested that HDC undergoes a complex maturation process, including cleavage of the polypeptide at both the N- and C- termini of the predicted protein. We report an approach that should allow the HDC protein to be examined in vivo using internal epitope tagging. A plasmid containing a functional Hdc gene was modified by insertion of epitope tags, 6xHis into the protein coding region of the Hdc gene at specific sites. The location of these tags in the protein structure is predicted to be in the mature HDC protein, and thus, should be present where HDC is active. This project will allow future research investigating the biochemistry and cell biology of HDC, after germline transformation of the tagged Hdc constructs is completed.

## Introduction

The biogenic amine histamine serves many functions in biological systems, including modulating gastric acid release in the stomach (Joseph *et. al.*, 1990) and playing a role in allergic reactions (Lin *et. al.*, 2000; Crockard and Ennis 2001). One of its key roles in both vertebrates (Eriksson *et. al.*, 1998) and invertebrates is that of a neurotransmitter (Melzig *et. al.*, 1996). Cells in the nervous system are known to communicate using a process of regulated exocytosis, known as synaptic transmission (Bajjalieh & Scheller, 1995). Neurotransmitters are responsible for the transfer of chemical messages, which is the basis of thought, learning, memory and motor control (Ludwig & Pittman, 2003). Neurotransmitters are critical to the function of the nervous system, as they are able to pass messages across the synapse, the space between adjacent neurons. In *Drosophila*, 18 pairs of histaminergic cells are found in the central nervous system (CNS) (Melzig *et. al.*, 1998). High concentrations of histamine are also found in the photoreceptors and mechanosensory cells of cuticular hair sensilla (Melzig *et. al.*, 1996). Prior research has demonstrated the importance of histamine as a neurotransmitter for vision and mechanosensory mediated behaviors (Melzig *et. al.*, 1996). Histamine is synthesized from the amino acid histidine through the action of the enzyme histidine decarboxylase (HDC) (Sarthy, 1991).

In order to better understand the regulation and function of HDC in the nervous system, information on the cellular and subcellular localization of this enzyme is needed. Thus far this work has been challenging, as there are limited HDC antibodies available (Dartsch *et. al.*, 2004) and none that are known to be effective in *Drosophila*. Attempts at making antisera specifically for HDC in *Drosophila*

have failed, likely due to its similar structure to other decarboxylases, like dopa decarboxylase (Burg *et. al.*, 1993). Previous work has attempted to overcome this difficulty by creating a gene-fusion for HDC in *Drosophila*. This too has proven unsuccessful (Burg, unpublished data), likely due to the post translational editing that occurs in the initial HDC translational product. Recent work has shown an extensive maturation process for HDC (in vertebrate systems) in which both the carboxy and amino termini are cleaved (Fleming & Wang, 2000). It has been observed in rats that the initial HDC protein is 74-kDa, but it is subsequently cleaved, resulting in a final active enzyme of 48-kDa (Fleming & Wang, 2000). The predicted *Drosophila* HDC protein is larger than rat HDC prior to any possible cleavage, but the amino acid sequence is highly conserved between these species in critical regions necessary for HDC function. The same regions that are cleaved during rat HDC protein maturation are also present in the *Drosophila* predicted protein, suggesting that *Drosophila* HDC also undergoes processing prior to becoming an active protein. This processing of the protein includes the cleavage of both the carboxy and amino termini using “PEST” regions known to be targets of cellular enzymes that cleave proteins containing these sequences (Fleming & Wang, 2000).

*Drosophila* is an ideal model organism for the study of HDC. The human, rat and *Drosophila* *Hdc* gene is 87% conserved across species (Burg *et. al.* 1993). Previous research of *Hdc* in *Drosophila* has established a transgenic germline transformation, the wild-type (normal) *Hdc* gene was used to completely restore *Hdc* function back to mutants that normally lacked *Hdc* function totally (Burg & Pak, 1994; Burg & Pak, 1995; Burg & Pak, 1995). This “rescued mutant” demonstrated

that all the regulatory information needed for normal gene expression was confined to 7.4 kb of DNA which has been completely sequenced from a wild-type *Drosophila* strain (Burg & Pak, 1994; Burg & Pak, 1995; Burg & Pak, 1995).

To overcome the problem of the lack of a good antibody for HDC in *Drosophila*, we propose a method of inserting an epitope tag into the open reading frame of the *Hdc* gene. Epitope tags are useful when antibodies are not available for a particular protein (Brault *et al.*, 1999). Many varieties of epitope tags are available (Jarvik & Telmer, 1998). The 6xHis epitope tag consisted of six consecutive histidine residues. Proteins encoding this sequence can be purified by using a divalent metal ion column. Alternately, using the anti-6xHis antibody, it is also possible to analyze the protein via Western blot or by immunofluorescent techniques. Epitope tags are normally inserted at either the carboxy or amino termini, but as was previously stated, in HDC both the termini are likely cleaved during protein maturation. For a tag to be useful in studying HDC, it must be inserted internally (Figure 3). A large tag inserted internally is more likely to interfere with the functionality of HDC than a small tag. There are many epitope tags with established antibodies available, but most are much larger than the 6xHis tag and produce the same results with their respective antibodies (Jarvik & Telmer, 1998). The small size of the 6xHis tag along with the commercially available antibody makes it ideal for an internal insertion into the *Hdc* gene.

The insertion of an epitope tag into the *Hdc* gene will be done at specific restriction enzyme sites, using oligonucleotide primers with extensive overhanging sequences coding for the tag in a PCR-based approach, producing a tagged fragment of the gene. This

tagged *Hdc* fragment will be inserted into the native gene, creating a normal functioning *Hdc* gene containing an epitope tag. Here we outline the location of the inserted tags within the *Hdc* gene and the methods of creating the transformation vector containing a functional *Hdc* gene with an internal epitope tag.

## Materials and Methods

### *Primer design and epitope placement.*

The forward oligonucleotide primers were designed to include the sequence of the epitope tags. The composition of each of the primers included: a 7-10bp cap sequence, followed by the *Sall* restriction enzyme recognition sequence, then the sequence encoding for the 6xHis, and 19-24bp complementary to the *Hdc* gene. The sequences of the primers were as indicated in Figure 1. Forward primer 1 and reverse primer 2 were used to insert the 6xHis tag immediately adjacent to the *Sall* restriction endonuclease site which is 1.7kb from the *EcoRI* restriction endonuclease site (Figure 2). The location of the primers used and their sequence was based on the current model of *Hdc* gene structure (Figure 2). By deducing the predicted protein structure of HDC using a known structure of a high related protein (DDC), it was possible to indicate in the structure of DDC where the proposed epitope tag for HDC will likely be located (Figure 3).

### *Production of 6xHis-tagged Hdc gene fragments.*

Using the tagged primers, fragments of the *Hdc* gene were synthesized using a PCR approach (Figure 4). A control reaction that lacked DNA template was also run using the same parameters. The template used was the genomic *Hdc* gene contained in a pCaSpeR-3 that previously was shown to rescue the *Hdc* mutant phenotype completely, indicating that this *Hdc* DNA contained



the normal gene. The *Hdc* gene was linearized with *Sal*I and purified using GeneClean. All amplifications were done using an Eppendorf Mastercycler gradient thermocycler. The reactions were set up using Expand High Fidelity Plus PCR system (Roche). Amplification parameters were as follows: 94°C for 20 s, 71°C for 30 s and 68°C for 1 min and 40 s for 18 cycles. The PCR products were initially blunt-ended, but contained restriction sites at both ends, which allowed the PCR DNA fragments to be cut with the enzymes, allowing the fragment to be cloned into a standard cloning vector using the *Sal*I (or *Sac*I)

and *Eco*RI sites in the pBluescript II SK(+) vector using T4 DNA ligase (NEB). Transformations of XL1blue competent cells with the pBluescript II SK(+) vector containing the tagged *Hdc* fragment were done through a 1 min heat shock. The cells were incubated at 37°C while shaking at 250 rotations/min for 1 hour before applying to plates. The plates were incubated at 37°C for 16 hours and stored at 4°C.

#### *Sequencing of tagged fragments.*

Blue/white screening was done to select bacterial cells positive bearing the plasmid with *Hdc* gene fragment

(Fig. 4). Once cells were identified, the plasmids were isolated from these cells through standard alkaline lysis techniques, and the DNA analyzed using restriction enzyme digestions. Once clones with inserts were identified, the DNA was purified (Qiagen) and sent for sequence analysis. For the sequencing of the fragment containing the tag at the *Sal*I site, T3 and M13F-20 universal primers were used (Retrogen). T7 and M13R universal primers were used for the sequencing of the fragments with the epitope tag at the *Sac*I site. Three clones were sequenced from each of the three tagged groups.

#### Primer 1

5'-GGAAAGAGTCGACCACCACCACCACCACCTATATTGCAGACTATTTGGAGAAC-3'

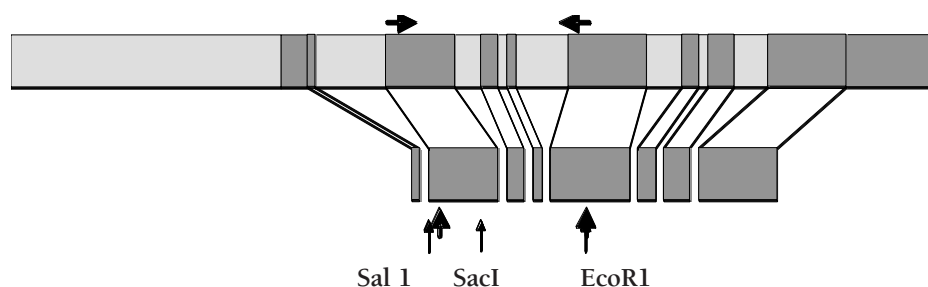
#### Primer 2

5'-CCACTCCGGAATTCTCGT GCTGCAGATACAGCGGCTCCACA-3'

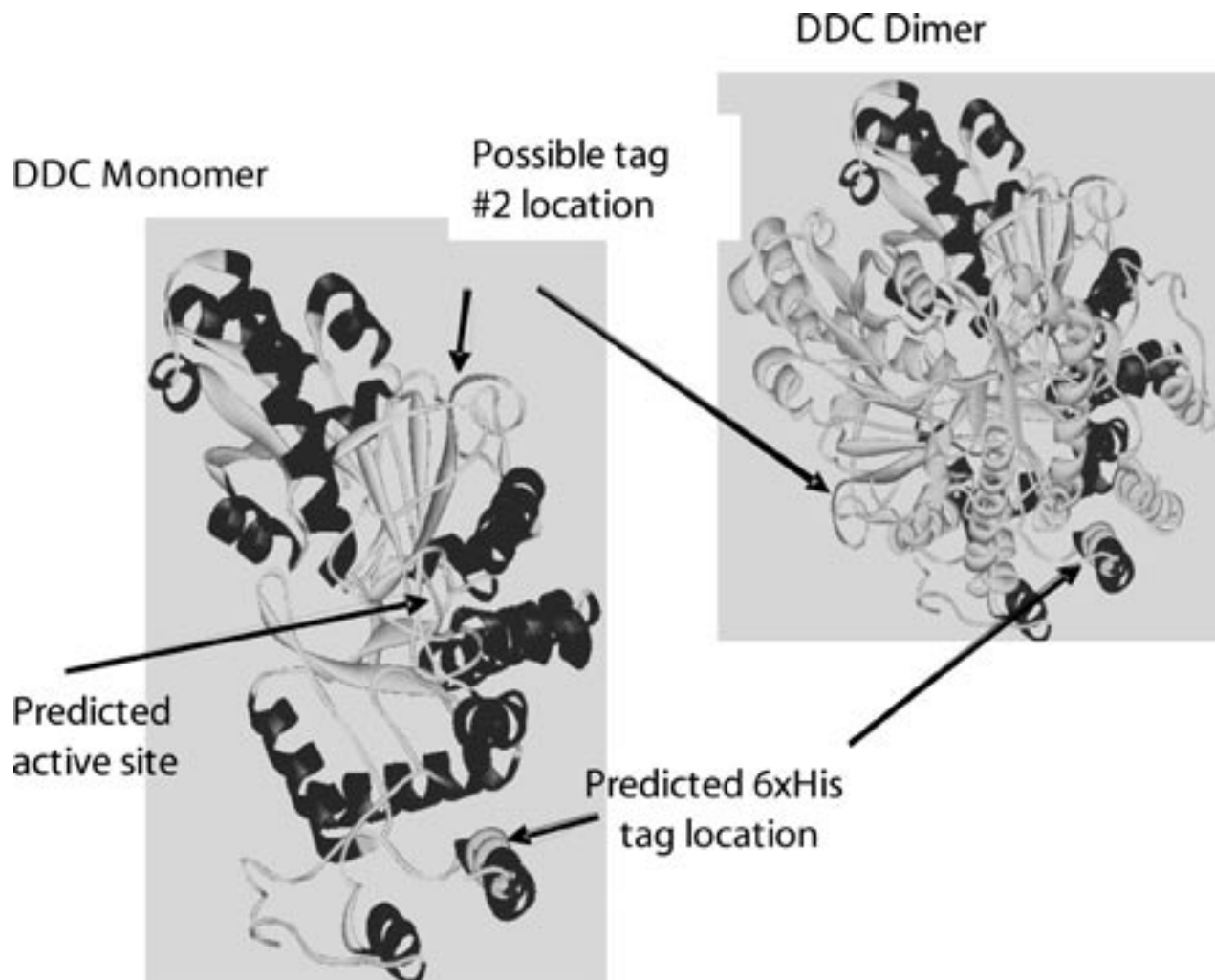
**Figure 1.** Sequence of primers used in PCR reactions to produce epitope-tagged fragments of the *Hdc* gene.

Primer 1, 55bp, was used to insert the 6xHis tag immediately adjacent to the *Sal*I restriction endonuclease site which is 1.7kb from the *Eco*RI restriction endonuclease site.

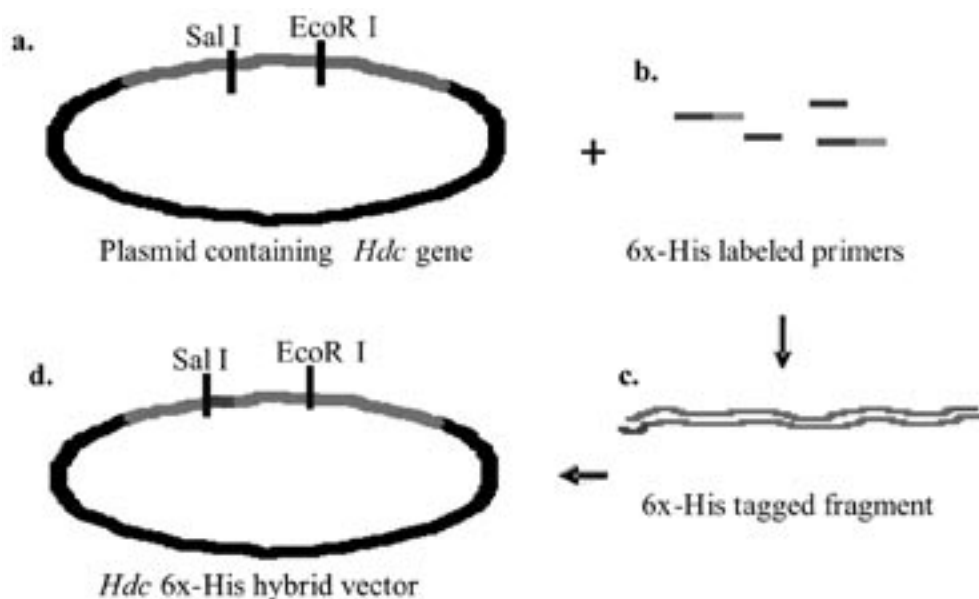
Primer 2, 41bp, including the *Eco*RI recognition site and was used in the PCR amplification of this region of HDC.



**Figure 2.** *Hdc* gene intron/exon structure (7.4 kb). The lighter regions represent introns while the darker regions represent exons. The dropped down portion represents the HDC protein coding region. Indicated (by arrowheads above the gene structure) is the location of PCR primers in the genomic fragment used as template and the location of *Sal*I and *Eco*RI restriction sites in the coding region.



**Figure 3.** Crystal structure of *Sus scrofa* (pig) dopa decarboxylase (Burkhard et. al., 2001) used to predict structural placement of histidine decarboxylase 6xHis epitope tag (arrows). Within the monomer structure of DDC and dimeric structure DDC, are indicated the predicted position of the 6xHis tag generated currently reported (6xHis) or planned (tag #2). Dimer formation was predicted as solved for the pig DDC enzyme, indicating that the epitope tags are likely outside important structural elements that could disrupt protein structure and function. These structural models were constructed using the Weblab program.



**Figure 4.** Method used for placing the insertion of a 6xHis tag at the *Sal*I restriction endonuclease site in the *Hdc* gene. Restriction endonuclease sites were selected in the *Hdc* gene (a) as a likely location for insertion of the epitope tag. Forward primers coding for the sequence of the tags (b) and reverse primers were designed to amplify a region of *Hdc* containing the tag (c). With the use of the restriction endonuclease digestion, the tagged fragments can then be inserted into the *Hdc* gene, creating an *Hdc*-epitope-tagged hybrid vector (d).

## Results

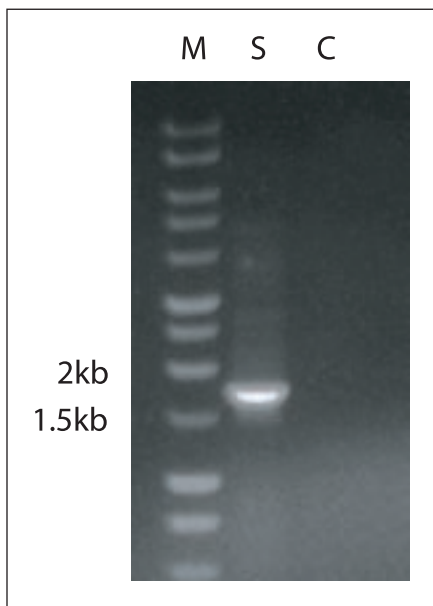
The expected size of the *Hdc* fragments that were amplified using the primer at the *Sal*I site in the *Hdc* gene was 1.7kb and the control reaction which lacked DNA template was confirmed to not produce any products (Fig. 5). As apparent by gel electrophoretic analysis (Fig. 6), the digested DNA fragments were of the correct sizes according to the sequence of the *Hdc* gene, confirming the PCR products likely identity. The results of the digest for the *Sal*I locus 6xHis indicate the expected two bands of 3kb (pBluescript) and 1.7kb (insert) (Fig. 6).

DNA sequence analysis of the *Hdc* gene fragment containing the suspected

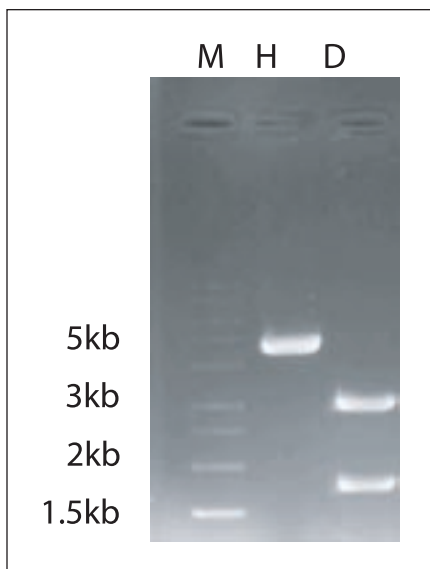
6xHIS indicated that the 6xHis tag at the *Sal*I site had been inserted (data not shown). All of the sequencing results confirmed that the expected fragment of the gene had been synthesized properly. In the DNA sequence, it was noted that the *Sal*I region 6xHis tag was inserted into the open reading frame with one polymorphism introduced into the primary protein structure. This alteration, located in the second exon, was a single base substitution which caused the change of an alanine to a valine (GCG→GTG). There were seven additional single nucleotide alterations in the amplified DNA. Three of these alterations occurred in intronic regions that likely will not affect the function or

expression of the *Hdc* gene, while the remaining three alterations occurred in positions that did not result in a change in amino acid composition. All alterations were unintentional except for the 6xHis tag insertion. These changes were present in all three of the clones sequenced, and could reflect variability between wild type strains, indicated in previous work (M. Birdsey and M. Burg, Pers. commun.).

Results indicate that the 6xHis tag is positioned in the HDC protein structure as indicated in Figures 3 and 7. Figure 7 indicates precisely where the additional histidine (H) amino acids are inserted into the HDC protein, confirmed by sequence analysis.



**Figure 5.** Gel electrophoresis of PCR amplified Hdc fragment (S) using a primer contain the sequence of the 6xHis tag adjacent to the SalI restriction site. A 1 kb DNA size standard (M) was used to confirm size. The sample (S) did appear to contain a fragment of the expected size 1.7 kb. The control (C) lacking template was also run on the gel and did show any product.



**Figure 6.** Gel electrophoresis of an Hdc gene fragment containing a 6xHis epitope adjacent to the SalI site and ligated into pBluescript. The undigested (U) sample contains a single fragment of 4.7 kb. The digested sample (D) indicates the inserted fragment digested out of the vector by EcoRI and SalI. The resulting pBluescript fragment is 3 kb and the tagged Hdc fragment is 1.7 kb. A 1 kb DNA size standard (M) was used to determine DNA fragment sizes.

Fly HDC ----MDFKEYRQRGKEMVDHHHHHHHYIADYLENIRERRVFPDVSPGYMRQLLPESAPIEG  
 Pig DDC ----MNASDFRRRGKEMVD-----YMADYLEGIEGRQVYPDVQPGYLRPLIPATAPQEP  
 Rat HDC MMEPSEYHEYQARGKEMVD-----YICQYLSTVRERQVTPNVKPGYLRAQIPSSAPEEP  
  
 Fly HDC EPWPKIFS DVERIVMPGITHWQSPHMHAYFPALNSMPSLLGDMLADAINCLGFTWASSPA  
 Pig DDC DTFEDI LQDVEKIIMPGVTHWHSPYFFAYFPTASSYPAMLADMLCGAIGCIGFSSWAASPA  
 Rat HDC DSWDSIFGDIEQIIMPGVVHWQSPHMHAYPALTSWPSLLGDMLADAINCLGFTWASSPA  
  
 Fly HDC CTELEIIVMNWLGMIGLPDAFLHLSSQSQGGGVLTASEATLVCLLAGRTRAIQRFHE  
 Pig DDC CTELETVMDWLGMQLPEAFLAG-EAGEGGGVIOGSASEATLVALLAARTKVVRRLQA  
 Rat HDC CTELEMNIMDWLAKMLGLPDDFLHHHPSSQGGGVLTQRTVSESTLIALLAARKNKILEMKA  
  
 Fly HDC RHPGYQDAEINARLVAYCSDQAHSSVEKAALIGLVRMYIEADDDLAMRGKLLREAIEDD  
 Pig DDC ASPGLTQGA VLEKLVAYASDQAHSSVERAGLIGGVKLKAIPSDGKFAMRASALQEALERD  
 Rat HDC HEPNADESSLNARLVAYASDQAHSSVEKAGLISLVKIKFLPVDDNFSLRGEALQKAIEED  
  
 Fly HDC IKQGLVPFVFCATLTGTTGSCSFDNLEEIGIVCAEHHLWLHVDAAYAGSAFICPEFRTWLR  
 Pig DDC KAAGLIPFFVATLTGTTSCSFDNLLVGPICHEEDIWLHVDAAYAGSAFICPEFRHLLN  
 Rat HDC KQQGLVPFVFCATLTGTTGVCAFDKLSLGPICAREGLWLHVDAAYAGTAFILRPELGRFLK  
  
 Fly HDC GIERADSI AFNPSKWL MVHFDAT ALWVRDSTAVHRTFNVEPLYLQHEN--SGVAVDFMHW  
 Pig DDC GVEFADSFNFNPHKWL LVNFDCSAMVVKRRD LTGAFKLDPVYLKHS HQSGGLITDYRHW  
 Rat HDC GIEYADSF TFNPSKWMVHFDCTGFVVKDKYKLQQTFSVNPIYLRHAN--SGVATDFMHW  
  
 Fly HDC QIPLSRFRALKVWFVLR SYGIKGLQRHIREGVRLAQKFEALVLADHRFELPAKRHLGLV  
 Pig DDC QPLGRFRFRSLKMWFVFRMYGVKGLQAYIRKHVQLSHEFEAFVLQDPRFEVCAEVTGLGLV  
 Rat HDC QIPLSRFRFRSLKWL FVIRSFVGNLQAHVRHGTDMAKYFESLVRSDPVFEIPAERHLGLV  
  
 Fly HDC VFRI RGDNEITEKLLKRLNHRGNLHCIPSS LKQYVIRFTITSTHTTLDIVKDWMEIRQ  
 Pig DDC CFR LKGS DGLNEALLERINSARKIHLVPCRLRGQFVLRFAICSRKVESGHVRLAWEHIRG  
 Rat HDC VFR LKGP NCLTESVLKEIAKTGQVFLIPATIQDKLIIRFTVTSQFTTKDDILRDWNLIRE  
  
 Fly HDC VASTVLEEMNITISNRVYLKETKEKNEAFGSSLLSNSPLSPKVNGSFAAIFDADEFLA  
 Pig DDC LAEELLA AE-----EGKAEIKS-----  
 Rat HDC AANLVLSQHCTS-----QPSRAKN-----LIPPPVTR-----  
  
 Fly HDC KTYAGVRIAHQESPSMRRVRGILMSGKQFSLDSHMDVVVQTTLDAGNGATRTSTTNSYG  
 Pig DDC -----  
 Rat HDC -----  
  
 Fly HDC HTTSAAQANSERQASIQEDNEESPEETELLSLCRTSNVPSPEHAHSLTPSRSCSSSSHS  
 Pig DDC -----  
 Rat HDC --DSKDLTNGLSLESVNEGDDPVQVRKIFRLPGDS-LETTMDPFDDCFSEEASDTTKHK  
  
 Fly HDC LIHS LTQSSPRSSPVNQFRPITLCAVPSSQSLSMPLAMPLPNRNVTVSVDSL NPNVTTCN  
 Pig DDC -----  
 Rat HDC LSSFLFSYLSVQNK KKTMRSLSCNSMPMSAQK-----SPPPDAS  
  
 Fly HDC VYHGKRFLEPLENLAQTSASFSSSIFRLPTPIATPTRESPEDPDWPAKTFSQLLERYSS  
 Pig DDC -----  
 Rat HDC VKHGG-----FFRARIFSG-----FPEEMMMKKG GFKLIKFYSV  
  
 Fly HDC QSQSLGNNSSTESSSLSGGATPTPTPMSSLDELVTPLLLSFASPSQPMLSAHGIGEGQRE  
 Pig DDC -----  
 Rat HDC PSFP-----ECSSQCG---TLQLPCCPLQAMV-----  
  
 Fly HDC QGSDSDATVCSTTSSMESL  
 Pig DDC -----  
  
 Rat HDC -----

### Consensus key

- single, fully conserved residue
- conservation of strong groups
- conservation of weak groups
- no consensus

**Figure 7.** Protein sequence alignment of newly constructed *D. melanogaster* Sall-6xHis histidine decarboxylase identified thorough sequence analysis of PCR-generated fragments (see Figs 5, 6.), *Sus scrofa* (pig) dopa decarboxylase, and *Rattus norvegicus* (rat) histidine decarboxylase. The sequences are highly conserved for the first 465 residues. The tail region of HDC may be cleaved off during protein maturation as it contains PEST-like regions. Underlined region is the “active site” for the enzyme, and amino acids (H) indicates the 6xHis insertion.

### Discussion

The epitope tag 6xHis has been successfully placed into the coding region of the *Hdc* gene of *Drosophila* immediately adjacent to the Sall recognition site that is 1.7 kb upstream of the EcoRI site. The tag was inserted into the open reading frame in exon 2 of the *Hdc* gene. The insertion of the 6xHis tag at the Sall site was done without introducing sequence alterations into the gene which would disrupt its function. Although seven possible single nucleotide alterations have been detected, it is unlikely that these alterations will alter gene function. While it is possible that the alterations were caused by the PCR, due to the fact that a high-fidelity polymerase was used, the error rate observed is significantly higher than expected. It is likely that the differences observed are those that have

been confirmed to exist between wild-type strains, and observed recently in the sequence analysis of mutations in the *Hdc* gene (M. Birdsey and M. Burg, pers. commun.). The single base substitution of an alanine to a valine does not occur in or near a region that is likely the active site of the enzyme, thus is likely not to affect HDC enzymatic activity.

The purpose of this project was to produce an epitope tagged *Hdc* gene in order to conduct germline transformation and place this newly constructed gene back into *Drosophila*. For this purpose, *Drosophila* mutants that lack functional HDC will be used as a recipient strain, once the DNA has been introduced successfully into the *Drosophila* germline, using standard techniques. Prior research has established that the HDC mutants

can be transformed with the cloned *Hdc* gene that was used in this project and recover full HDC expression (Burg & Pak, 1994; Burg & Pak, 1995; Burg & Pak, 1995). With the use of these mutants, it will be possible to assess the functionality of the tagged HDC construct both biochemically, physiologically and behaviorally. Once the function of the tagged HDC protein is established, commercially available antibodies will be used to begin answering many questions concerning HDC location in tissue that can only be done with an antibody. Epitope tagged proteins can be detected by using many of the same procedures that are used to detect proteins that have a specific antibody (Jarvik & Telmer, 1998; Harlow & Lane, 1988).



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# Study of the human mitochondrial DNA polymorphism



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## ABSTRACT

*Traces of Paleolithic exodus routes of modern humans from Africa to Europe have been studied genetically using female specific ancestral lineages via mitochondrial DNA (mtDNA). We suggest modern humans entered Europe near the Carpathian Mountains and Hungarian Valley. If so, isolated populations of highlanders in Carpathian Europe may carry a genetic fingerprint of the ancient European predecessors and illustrate the migration routes of modern humans into Europe. Lineage-specific polymorphic sites on mtDNA were analyzed in the Carpathian Highlander population. The Carpathian Highlanders genetically resemble modern Europeans when analyzed by a hierarchical haplotyping scheme; however more studies need to be undertaken to fully understand the Carpathian Highlander's relation to the modern European population. Further analysis of European-specific subhaplogroups in Carpathian Highlanders will further clarify the relationship between this group and the rest of European inhabitants.*

## Introduction

Multidisciplinary theories suggest that modern humans (*Homo sapiens*) originated in Sub-Saharan Africa about 200,000-100,000 years ago (Nei 1995). The modern human race is all, in fact, related. In this study the goal is to find a trace of a specific lineage of modern humans that in Paleolithic times came out of Africa and into Europe. We will be looking for the lineage tracings by studying modern human DNA. The focus will be on a small portion of the human genome, which is mitochondrial DNA (mtDNA) and how it can be used as a tool to trace the links between modern humans.

Mitochondrial DNA is found in the mitochondria of all eukaryotic cells. Mitochondria are the powerhouses of the cell. These are the organelles that produce energy for cellular function (Ingman and Gyllensten 2001). Mitochondria are abundant in each eukaryotic cell, hence the high copy number of mtDNA. mtDNA is a 16Kb molecule represented by hundreds to thousands of double stranded, circular copies per cell (Torroni 2006). The mtDNA genome is maternally inherited and is known to have a much higher evolutionary rate than nuclear DNA (Torroni 2006). Ancestral maternal lineages can be traced by the sequence variation—the mutations that have taken place in the molecule since the first modern human. The sequence variation can be noted by neutral differences that are found in the mtDNA called Single Nucleotide Polymorphisms or SNPs.

All modern humans have a certain type of mtDNA. The types of mtDNA are associated with the SNP pattern within the mitochondrial genome. mtDNA types are called haplogroups, so each person belongs to a certain haplogroup. Haplogroups are notated by letters of the alphabet, and there are a little over a dozen of them. Many major haplogroups are further subdivided into subhaplogroups.

Belonging to a particular haplogroup can display a person's common female specific place of origin (Torroni 2006). Haplogroup analysis is also used to trace population migration patterns (Santos 2004). The relative frequency of a haplogroup in a certain area determines its geographical origin.

The haplogroup L was the very first haplogroup of modern humans—originating in Africa (Torroni 2006). All the haplogroups that are known today stem from this single predecessor haplogroup. N, the earliest European haplogroup, stemmed from L about 65,000 years ago. About 60,000 years ago the R group was derived from N. The derivatives of R represent the early European haplogroups that are still the majority of the haplotypes in this area of the world. These are U/K (established about 50,000 years ago), H/V (established about 45,000 years ago), and J/T (established about 20,000 years ago). Stemming from the Paleolithic H haplogroup are two relatively recent sub-groups; H1 and H3. These sub-groups are European specific and are thought to originate in Southern France about 16,000 years ago.

The populating of Europe took place about 50,000 years ago (Torroni 2006), when most of Europe was covered by a thick sheet of ice (Adams 1997). These people were not spread all throughout Europe however; they initially resided in small glacial refuges.

In this study we addressed the question of how modern humans traveled out of Africa to Europe—what exodus routes were taken and what haplogroups can be used as clues to answer the question. We are suggesting an exodus of people traveling northeast out of the Horn of Africa then west into Europe. The movement out of Africa took place about 100,000 years ago by a small group of the first modern humans (Nei 1995). These people traveled east into the Fertile Crescent

and may have established small colonies there. Because the people were in new environmental conditions and given the fast evolutionary pace of mtDNA, new mutations may have started to emerge from the predecessor haplogroup. Some of the population continued on their move out of the Fertile Crescent following the Mediterranean Sea and then into the area of the Black Sea. At this time, the Black Sea was thought to be a freshwater lake (Ballard 2000). Small human populations might have been established in this area. This is also the area that we are suggesting the Paleolithic H haplogroup was conceived. From there, further expansion into Europe most likely took place via major European waterways. One of such waterways might have been the Danube River. People followed this river northwest, and some may have settled in the Carpathian Mountains and the Hungarian Valley.

The rest of the story of how people migrated across Europe is quite clear. Those whose haplogroup is the Paleolithic H spread throughout Europe after the ice shield partially retreated. They continued into Southern France where the haplogroup H was firmly established and then spread across Europe. This haplogroup then split into subgroups H1 and H3, which are European specific sub-groups (these sub-groups are the most frequent haplotypes of those living in modern Europe; representing about 46% (Santos 2004)).

By looking at the mtDNA genetics of an isolated population in the Carpathian Mountains we could test our Out-of-Africa exodus hypothesis. The isolated population is of the Carpathian Highlanders—the Lemko, Hutsul, and Boyko people. These people claim to have been Carpathian Mountains since the dawn of time. The Highlanders' genetics have never been previously studied. By studying their mtDNA genetics we were hoping to address

if these people are relatives of those who first populated Europe or if they are actually more closely related to the modern European population.

If, in fact, the Carpathian Highlanders are representatives from a geographical reserve for ancient haplogroups it is expected that they will have a higher proportion of the Paleolithic H in their mtDNA genetic make-up rather than the more recent European specific sub-group types, H1 and H3. This is because of their proximity to the genetic cradle. If the Carpathian Highlanders are representatives of a more modern European population then, we would expect to see a majority of the common Eurasian haplogroups in the sample. We would especially expect a majority of modern European specific H subhaplogroups H1 and H3 in the Carpathian Highlanders.

## Materials and Methods

DNA samples were collected using Epicentre® buccal swabs. One hundred-fifteen Carpathian Highlanders consented to donate a sample. The DNA was extracted from the swabs using a QIAgen QIAamp DNA Mini Kit® following the protocol for buccal swab spin procedure extraction. The DNA sample extractions were eluted in one hundred micro liters of sterile water. An aliquot of fifty micro liters of the DNA was stored at -80°C, and the remaining fifty micro liters of DNA were stored at 4°C as a working stock for haplotyping usage.

The samples were haplotyped according to a hierarchical approach (Figure 1) using Polymerase Chain Reaction (PCR) and restriction enzyme digests. (Specifications for PCRs and restriction digests on Table 1.) (The haplotyping approach and primer sequences were adapted from Santos 2004).

Each sample went through the same basic PCR procedure. The PCR

consisted of a 50 micro liter mix. The reagents used were one unit of *Taq* DNA Polymerase with Standard *Taq* Buffer from New England Biolabs Inc.®, one unit of Deoxynucleotide Solution Mix from New England Biolabs Inc.®, and 10 pmols of each primer per reaction. The final volume was 50 micro liters filled with sterile water. The PCR thermocycler set-up was an initial 5 minute 95°C denaturing period, 95°C cycle denaturing period of 1 minute, 50 second primer annealing time, a 1 minute period of polymerization extension at 72°C, and a final extension of 5 minutes at 72°C. The PCR was run for 39 cycles. After each PCR was completed it was run on a 1.0% agarose gel to verify a successful reaction.

Each digestion used 8 micro liters of PCR product, enzyme, and enzyme buffer. The amounts and reaction temperature of the enzyme and enzyme buffer were followed according to the manufacturers (New England Biolabs Inc.®) specifications. Each reaction ran for 2-4 hours. The RFLP analysis were done on 2.0-2.5% agarose gels using the New England Biolabs Inc.® Low Molecular Weight DNA Ladder and 50bp DNA Ladder.

The sequencing for the 12705 C/T region was sent to the University of Michigan Sequencing Core. The preparation was followed according to the sequencing core instructions. The PCR product of the 12705 C/T amplification was cleaned up using a Qiagen MinElute PCR Purification Kit® for sequencing purposes.

## Results

From haplotyping the Carpathian Highlander mtDNA in the method shown on Figure 1, the majority of the haplotypes found in this population are representative of common European background. Most of the haplotypes found in the Carpathian Highlander population are Western-Eurasian. The

haplogroup of each sample can be found in Table 2.

A statistical comparison made between the haplogroup percentages represented by the Carpathian Highlanders and the modern European population was performed. This was to identify whether the Carpathian Highlanders provide a different proportion of haplogroups than modern Europeans. The modern European population haplogroup percentages used in this analysis were from the Santos (2004) study. The comparison was between haplogroup representation percentages of U/K, H/V, J/T, and other (refers to haplogroups represented in a non-significant amount) in both the Carpathian Highlanders and modern Europeans.

The Carpathian Highlander population is not different from the modern European population according to a  $\chi^2$  test. The  $\chi^2$  statistic is 0.414519 with a p-value of 0.93. For the Carpathian Highlanders to be a significantly different population than modern Europeans the  $\chi^2$  statistic would have to be greater than 7.81.

The statistical analysis shows that the sampled Carpathian Highlanders are most likely closely related to modern Europeans. The haplogroup representations in both groups are very similar.

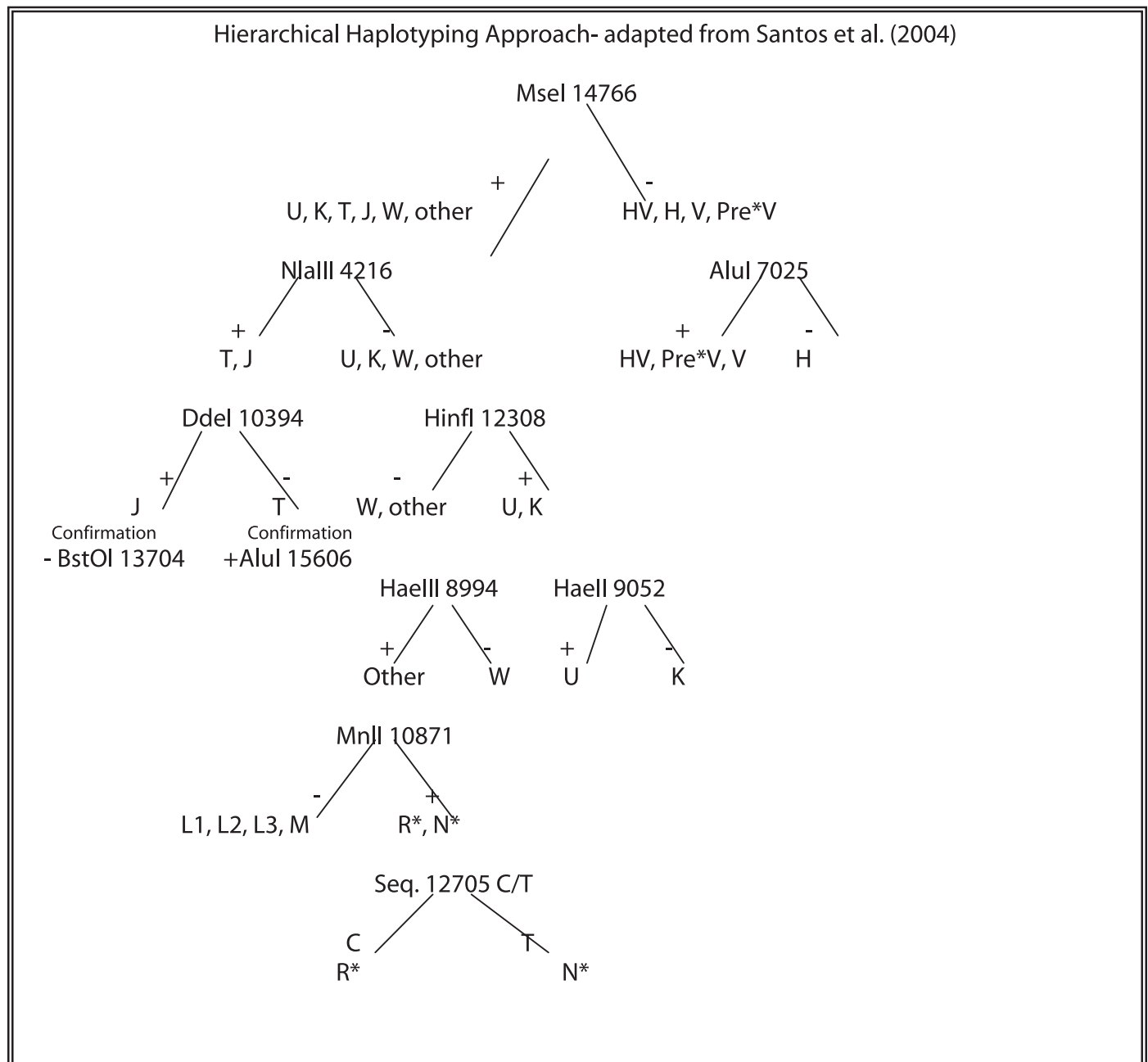
## Discussion

The data show that by using the hierarchical approach represented on Figure 1 that the population sample of Carpathian Highlanders look similar to those of modern Europeans. This could mean that, in fact, the Carpathian Highlanders are more closely related to those people who populated Europe at a later time than what was hypothesized. (The Carpathian Highlanders may represent a population more closely related to those who first populated Europe out of Africa considering their isolation and proximity to the primary genetic cradle.)

To further check the results we wish to analyze more polymorphic sites in the sample mtDNA. These sites would be of the recently found subhaplogroups of H, H1 and H3. These subhaplogroups are European specific, and they are relatively recent developments in the Eurasian haplogroups (Torroni 2006). The classification and origin of the Eurasian haplogroups can be seen in Figure 2. If the subhaplogroups H1 and H3 are taken into consideration, more genetic history could be discovered about the Carpathian Highlanders. Determining this could also provide us with a clearer picture of exodus routes of modern humans from Africa. If the Carpathian Highlanders are, in fact, a population that is related to modern Europeans then we would expect to see a majority of those who belong to the H haplogroup to have the polymorphisms for H1 or H3. This is because the H1 and H3 subgroups are a more modern type of the H haplogroup (Torroni 2006). These subhaplogroups represent the majority of modern Europeans.

However, if these polymorphisms are not present at a high frequency in the Carpathian Highlanders, then it is probable that these people are actually relatives of those who first populated Europe from Africa—the European predecessors. The high representation of the haplogroup H in the Carpathian Highlanders would be of the ancient Paleolithic H that originated on an exodus route from Africa.

**Figure 1.** A hierarchical approach for finding mtDNA haplogroups among Eastern European populations (more specifically Carpathian Highlanders) adapted from Santos (2004). The symbol “+” represents a polymorphism in the specified region of mtDNA, and The symbol “-” represents a nonpolymorphic sample representative in the specified region of mtDNA.





**Table 1.** Primers used with the polymorphic sites and sequences, the annealing temperature, the restriction enzyme used to digest PCR fragment and temperature, and what fragments to expect from digestion.

PCR	Digestion					
Polymorphic Site	Primer Sequence	Annealing Temperature (°C)	PCR Product Size	Enzyme	Digestion Temperature (°C)	SNP Digestion Fragments
MseI 14766	MseI4603L- CTAAACCCCATAAATAGGAG	54	226	<i>MseI</i>	65	Nonpolymorphic: 201bp; 21bp; 4bp
	MseI4791H- AGGTCGATGAATGAGTGG					Polymorphic: 184bp; 21bp; 17bp; 4bp
AluI 7025 (7028C)	Alu6949L- CCGTAGGTGGCCTGACTGGC	58	123	<i>AluI</i>	37	Nonpolymorphic: 108bp; 15bp
	Alu7025R- TGATGGCAAATA CAGCTCCT					Polymorphic: 78bp; 30bp; 15bp
NlaIII 4216	NlaIII4538- CACTCATCACAGCGCTAAGC	60	266	<i>NlaIII</i>	37	Nonpolymorphic: 266bp
	NlaIII4621- TGGCAGCTTCTGTGGAAC					Polymorphic: 177bp; 89bp
DdeI 10394	DdeI0252L- TTGATCTAGAAATTGCCCTC	48.2	208	<i>DdeI</i>	37	Nonpolymorphic: 208bp
	DdeI0527R- GTATTCTAGAAGTGAGATG					Polymorphic: 143bp; 65bp
AluI 15606	AluI15503- AGACCTCCTAGGCGACC	53	154	<i>AluI</i>	37	Nonpolymorphic: 154bp
	AluI15620- GATGGATAGTAATAGGGCAAG					Polymorphic: 121bp; 33bp
BstOI 13704	BstOI13627- TAGAATAATTCTTCTACCC	53	137	<i>BstOI</i>	60	Nonpolymorphic: 137bp
	BstOI13725- TAGTAATGAGAAATCCTCCG					Polymorphic: 98bp; 39bp
HinfI 12308	HinfI12216L- CACAAGAACTGCTAACTCATGC	58	123	<i>HinfI</i>	37	Nonpolymorphic: 123bp
	HinfI12338H- ATTACTTTTATTGGAGTTGCACCAAGATT					Polymorphic: 93bp; 30bp
HaeIII 8994	Hae8880L- ACAGTGATTATAGGCTTTCGC	56	200	<i>HaeIII</i>	37	Nonpolymorphic: 167bp; 33bp
	Hae9042H- GTGCTTCCAATTAGG					Polymorphic: 136bp; 33bp; 31bp
HaeII 9052	HaeII8997- AACCAATAGCCCTGGCC	52	160	<i>HaeII</i>	37	Nonpolymorphic: 160bp
	HaeIIH9121- GCGATTCTAGGATAGTCAG					Polymorphic: 84bp; 76bp
MnII 10871	MnII10727L- CTCAATCTCCAACACATATGGC	58	232	<i>MnII</i>	37	Nonpolymorphic: 232bp
	MnII10920R- GGTCGGAGGAAAAGTTG					Polymorphic: 176bp; 56bp
Seq. 12705 C/T	CTL12553- ACAACCCAGCTCTCCCTAAG	58	635			Sequence results C: R*
	CTH13127- TGGAAGCGGATGAGTAAGAA					Sequence results T: N*

**Figure 2.** Breakdown and conception of European haplogroups from the first haplogroup, L that first originated in Africa [(Torroni 2006) and (Santos 2004)].

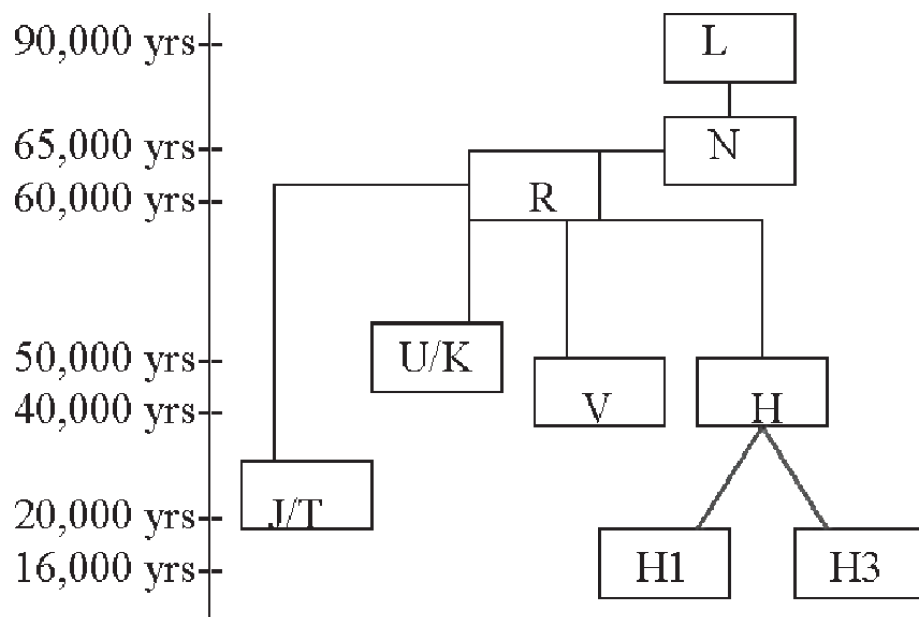


Table 2. Carpathian Highlander sample population haplotyping results.

Sample	Haplotype	Sample	Haplotype	Sample	Haplotype
A1	U	C4	J	E9	H
A2	H	C5	R*	E10	J
A3	U	C6	U	E11	U
A4	H	C7	H	E12	U
A5	T	C8	T	E13	H
A6	H	C9	T	E14	U
A7	R*	C10	H	E15	K
A8	U	D1	H	F1	U
A9	H	D2	H	F2	H
A10	HV, PRE*V, V	D3	W	F3	T
B1	H	D4	N*	F4	OTHER
B2	H	D5	H	F5	H
B3	H	D6	U	F6	J
B4	T	D7	R*	F7	H
B5	K	E1	J	L1M2	U
B6	W	E2	H	Z3L1	T
B7	H	E3	U	15C59	H
B8	H	E4	H	2MC65	HV, PRE*V, V
B9	H	E5	H	3L458	T
C1	H	E6	U	5M3L8	H
C2	X	E7	J	70936	H
C3	U	E8	J	856E3	H

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## About the TRiO Programs

To fight the war on poverty, our nation made a commitment to provide education for all Americans, regardless of background or economic circumstances. In support of this commitment, Congress established several programs in 1965 to help those from low-income backgrounds and families with no previous college graduates (first generation). The first three programs established were Talent Search, Upward Bound, and Student Support Services. Thus, they are known as the TRiO Programs.

Since then, other programs have been added, including Upward Bound Math and Science, Educational Opportunity Center, The Training Authority, and in 1989, The Ronald E. McNair Post-baccalaureate Achievement Program. The goal of all of the programs is to provide educational opportunity for all.

The Ronald E. McNair Post-baccalaureate Achievement Program is designed to prepare highly talented undergraduates to pursue doctoral degrees. In addition, the goal is to increase the number of students from low-income backgrounds, first generation college students, and under-represented minorities on college and university faculties.

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