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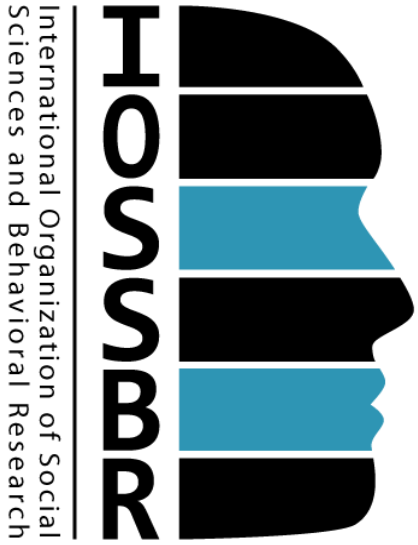

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Agents of Social Change Influential Women Architects and Artists in New Mexico and the American Southwest

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ABSTRACT

This paper reviews selected Southwestern American women architects and artists who challenged prevailing norms at the turn of the 20th century to achieve international recognition in their fields.

This study considers the influences of the Arts and Crafts Movement and the Reform Movement on Native American and Anglo American women and compares how each group adopted strategies, adapted to changing social conditions, and made personal choices regarding race, culture, family, gender, and the changing political realities of the time. Native American Pueblo cultures of the southwest inadvertently inspired some Anglo American women to break from tradition as reform efforts of Anglo Americans opened avenues of expression for Native American women. As agents of social change, the contributions of women, both White and Indian were, if not yet fully discovered and truly appreciated, paramount to the artistic and social development of the American Southwest.

Keywords: gender, art, culture, social reform, American Southwest

New Mexico and the greater American southwest are unique in that intact Native American cultures still flourish there today. Tracing their ancestral roots to pre Columbian times, various tribal groups including Hopi, Navajo, and the Pueblo peoples retain to this day a highly developed sense of cultural identity and autonomy. The Ancestral Pueblo people of Chaco in the northwest region, and the Mogollon of the southwest region established peaceful, agrarian-based societies by A.D. 1000. After severe drought set in around A.D.1130, many archaeologists agree with Fagan (2005) who surmises a societal collapse resulting in the abandonment of the towering stone settlements at places like Mesa Verde forcing the survivors to seek water at lower elevations along the Rio Grande where they built multistoried adobe pueblo settlements. (p. 55-57) Nomadic tribes frequently raided the agrarian Pueblo villages, which were situated on mesa tops or in protective enclaves formed by surrounding cliff walls. A distinctive feature of pueblo architecture was the round roofed ceremonial space called the Kiva. Built below ground level and reserved for use by the men, it is thought that males used the kiva as a special place to congregate and this tradition may result from the social structure of these Stone Age native cultures. Often called the *Anasazi* or "ancient ones", southwestern Pueblo cultures were organized as matriarchal and matrilineal societies. Women held property rights, and family names were passed down through the wife's relations. Tracy L. Brown (2013) surmises that Pueblo women participated in regular decision making at a level equal to men citing Spanish observations that women had "consultative roles" in the Pueblo political process after contact with the Spanish. (p. 39)

The native peoples of the American southwest developed a long history of coexistence with western culture that began with Spanish settlers from Mexico who founded settlements in the early 1600's. When the Spanish arrived, the natives lived along the major river ways in western New Mexico and parts of eastern Arizona just as they do today. The nomadic Apache and Navajo tribes, also known as the Athapascan people, were the last Native Americans to arrive in this area around the same time as the first Spanish explorers. The village dwelling Pueblo peoples formed necessary alliances with the Spanish to offset the threat from raiding nomadic tribes. Anglo-Americans began to infiltrate the area in the early 1800s, and by the end of the Mexican-American War the regions of New Mexico and Arizona had become U. S. territories. This collision of cultures afforded each group the opportunity to selectively exchange artistic skills, technologies, and ideologies with each other. The Native American tribes of the southwest learned to work in silver, appropriated domesticated animals, and adopted the use of modular adobe bricks from the Spanish. Through a long period of contact they fused European techniques with their traditions in pottery making, rug weaving, basket making, and other tribal arts and crafts. The harsh conditions of the American frontier demanded an independent and self-reliant spirit apparent in many women of the time regardless of national origin. After Sunday church services, women in the town of Santa Fe would gather in the plaza to sell food, whiskey, or to deal card games. Women had the right to own their own businesses and were not required to turn the profits over to their husbands, as they were likely required to do in the United States. Many women were proprietors owning billiard halls and saloons, they owned rental properties, and owned and operated businesses. The most famous woman entrepreneur of the territorial period was La Tules. In the 1830s, she ran a saloon and casino. She became so rich that she loaned money to the United States army to pay soldiers. Contrary to traditional American customs of the day, New Mexico women kept their own wages and their maiden names, were influential in politics, and could file suit in court. They enjoyed a unique sense of personal, religious, entrepreneurial, and sexual freedom compared to other parts of the United States. Spanish-Mexican influences were essentially guided by Catholic traditions whereas the Anglo-Americans who gained control over the region in the mid 1800's were predominantly Protestant. The influence of the Catholic Church was weak in the areas north of the Rio Grande following Mexican Independence from Spain in 1822, and having no land holdings to generate wealth and power had minimal influence until the establishment of an archdiocese in Santa Fe in the 1850's. (Bunting, 1976, p. 4) In 1843, the mission stations were secularized and the Franciscan friars were forced to relinquish their role as ministers and protectors of the Indians.

> Lecompte asserts, "During the Mexican Period (1822-1848) fewer than half the couples of Santa Fe were married. Men and women lived together and raised children in relationships sanctified by society if not by the church. Although the citizens of New Mexico were generally patriotic, docile, and obedient, New Mexico's officials often acted independently of the central government, ignoring federal laws and edicts when they were not in the best interest of New Mexico". (p. 91)

There were no significant Protestant religious influences throughout the territorial period (1846-1912), and this combined with a small rural population under a weak government allowed a high degree of autonomy for many white and Hispanic women of the time. The Treaty of Guadalupe Hidalgo, which ended U.S. conquest of the entire northwestern third of Mexico in 1848, guaranteed American citizenship to all former Mexican citizens in New Mexico. The property

rights of women guaranteed under the Mexican land-grant system were upheld by the treaty. However, the Catholic Church, as well as some Protestant sects, opposed the Suffrage Movement in the 19th century. New Mexico ratified the 19th Amendment in 1920, although the amendment did not guarantee full US citizenship or the right to vote for women of Native American ancestry.

A distinctive aspect of the Southwestern American Pueblo culture is the symbolic meanings given to things for everyday and sacred ritual uses. The means of production in pre-industrial societies makes no distinction between home and workshop as they are very often the same place. Within the matriarchal structure of the Pueblo cultures, there was a clear distinction between the roles and responsibilities of men and women. In the hunter-gatherer tradition women (gatherers) became the chief pottery makers as men (hunters) made arrows.

> According to Susan Peterson (1997) intricate variations in production were developed by each pueblo community. "Clay vessels have been made for storage and household use in these stationary societies for at least two thousand years. Each pueblo has developed a style of form and decoration indigenous to its needs and beliefs. These varying styles have been historically documented and attributed to particular pueblos since the Spanish conquest". (p. 102)

Late 19th and early 20th century perceptions of New Mexico were often negative. In contrast to a rapidly industrializing America, New Mexico, with its "primitive" native cultures, mud brick houses, and a lack of technological infrastructure was perceived as backwards and crude. The turn of the century saw the arrival of artists, writers, and academics interested in archeology and anthropology. They came from Europe and the east and west coast urban centers of the United States, attracted to the natural beauty of the American southwest landscape and the unique regional cultures. This migration and the intensified interest in the American southwest coincided with the romanticism of the Native American peoples during the Arts and Crafts Movement in the United States. The Pueblo cultures were not nomadic raiders; they had adopted certain skills and outwardly displayed features of Western European culture such as the domestication of sheep, Spanish adobe building techniques, and practiced a conciliatory form of Christianity. This long period of association with European-American culture may have saved them from the obliteration that was often the fate of many other Indian Tribes. At the turn of the 20th century, Native American women were often perceived as important examples of the "Noble Savage", a popular idealism of the time. With the end of the great Indian Wars the general public began to see the native peoples in a new light. Native American women were now seen as role models inspiring white women's new visions of their changing roles in modern America society. New theories of sexuality, new political ideas about female self-determination, the changing nature of the traditional family structure, and the employment of women outside the home contributed to a rethinking of Victorian ideals of female behavior.

> Susan Ressler (2003) finds Indian women reacting differently to these changes than white women. She states, "Only rarely, however, did Indian women's views of their own participation in the movement surface in the historical record. Even when they did, their actions are still often filtered through white women's words. It is nevertheless possible from these sparse and fragmented instances to piece together how Indian women may have interpreted white women's efforts to promote Indian

> arts and crafts. Indian women artists often seem to have catered to their white patrons on the surface, but resented and sometimes ridiculed white women's assumptions behind their backs". (p. 89)

Margaret D. Jacobs (1998) has noted that during the American Arts and Craft Movement white women appear to have taken a greater interest than white men in promoting American Indian pottery, and she has indentified two major groups of white women. The first group favored the preservation of Pueblo culture and art through protection against the corrosive influences of American culture, a second group championed Native American assimilation into mainstream American life through the preferred method of encouragement, and by force if necessary. She writes: "The Indian arts and crafts movement became a primary means whereby they sought to preserve their image of the ideal Pueblo Indian -- a deeply spiritual, traditional artist who subsumed her individual interests to the good of the community and who lived in harmony with Nature". (p. 187-215)

Many artists, writers, and anthropologists tended to favor the first approach, and extolled the various Pueblo Indians, the Navajo, and other southwest tribal groups as model societies that deserved protection and preservation. They feared that outright assimilation would forever destroy the distinctive artistic and cultural aspects of the native peoples, and this could threaten to wipe out the last remaining vestiges of what were considered original living indigenous cultures from which there was much to learn firsthand.

> Ressler (2003) contends, "Changes in notions of white women's roles and sexual natures deeply affected white women who participated in the arts and crafts movement. In fact, they seem to have used the movement as a forum for articulating and debating their competing visions of gender and sexuality in modern America. Throughout white women's private correspondence and promotional material regarding Indian arts and crafts, Indian women became powerful symbols of white women's differing ideals. Women in both wings of the movement endowed Indian women artists with their rival visions. It was small wonder that female moral reformers identified assimilation into modern American life as their goal for Native Americans; it was also their own ambition for white women. This idealized image of Pueblo women might be surprising given that many preservationist women championed careers and more public roles for white women". (p. 89)

Gail Collins (2007) has called the turn of the 20th century "the golden age of the American single woman" citing how magazines and printed literature of the time published numerous articles by unmarried professional women that had chosen career over marriage. Collins asserts,
"The authors assured their readers that they had not been lacking in offers –one essay, which Ladies Home Journal regarded as among the most popular pieces it had ever published, was by a single woman who said she had turned down five suitors. Few of the writers really discussed their careers-they said they had chosen celibacy because the men weren't good enough."

Collins points out that their choosiness was possible because of new opportunities for women to work outside of the home. The development of home-making technologies, which shortened the time required for the traditional tasks of cooking, washing, and cleaning, filtered down from the

affluent to the middle classes allowing for more free time to engage in intellectual pursuits. The proliferation of women's colleges and universities through the United States, and changing social and political notions of the woman's role in society, helped to create what American writer Henry James termed the "New Woman". She was educated, independent, devoted to a professional career, and openly challenged the limits set by a male dominated society. The New Women were active in the Suffragette and Temperance movements, and were often disdainful of the "flapper girl" popular in the roaring 20's.

Mary Elizabeth Jane Coulter, born April 4, 1869 in Pittsburg, Pennsylvania, spent the formulate years of her life in St. Paul. On the banks of the Mississippi River, St. Paul was near a sizeable Sioux Indian community, and as a child she developed a keen interest in American Indian art. Possessed of a strong and determined personality, Mary attended the California School of Design where she studied art and design, and helped pay her way by apprenticing at a local architect's office. She dreamed of becoming an architect during the end of the Victorian Era when the vast stocks of American buildings were inspired by European trends. She shared the ideas of many American architects of the time that called for a new style that reflected a truly American sensitivity to locality, regional history, and better suited to climate. Toward the beginning of the 20th century, California architects were creating the Spanish Revival Style and Coulter was deeply influenced by this focus on authentic American references in art, design, and architecture. This conviction would form the basis for her personal aesthetics throughout her remarkable career. In 1892, she began a 15 year stint teaching at the Mechanic Arts High School in Menomonie, Wisconsin. During this time, she took courses in archeology and studied American Indian arts and crafts. Through an acquaintance, she gained the attention of Fred Harvey who had an arrangement with the Atchison, Topeka, and Santa Fe railway to provide food and services at station hotels and restaurants. Harvey focused on combining culinary fineries from Europe and the United States with local Indian products. Pottery, silver, turquoise jewelry, blankets, and baskets were made available, creating a profitable economic return from the sale of Indian arts and crafts. Harvey needed a "decorator who knew Indian things and had an imagination" (Grattan, 1992, p. 8), and she went to work for the Fred Harvey Company and the Santa Fe Railway where she was employed from 1902-1948. Her major commissions with Harvey were the Alvarado Indian Building, Albuquerque, New Mexico (1902), La Fonda, Santa Fe (1925), La Posada, Winslow, Arizona (1931), and Union Station Restaurant, Los Angeles, California (1938).

Coulter was also instrumental in creating the National Park Service Rustic Style with her buildings at the Grand Canyon National Park. These include Hopi House (1905), Lookout Studio and Hermit's Rest (1914), Desert View Watchtower (1932), and Bright Angel Lodge (1935). She was a pioneer in her ability to understand, interpret, and express Native American art and craft into modern American buildings of her time. Many of her most recognized works still stand unchallenged today as elegant examples of the fusion of natural geography, cultural history, and functional clarity. Coulter was a contemporary of famed female architect Julia Morgan who designed more than 700 buildings based in the San Francisco Bay area. Encouraged by Bernard Maybeck, Morgan went to Paris and persisted for several years until she was admitted to the L'Ecole des Beaux Arts where she was the first female graduate. Morgan is most famous as the architect of the Hearst Castle in San Simeon. Morgan's number of works was far more numerous than that of Coulter, and the scale of her projects dramatically overshadowed Coulter's work set in the remote expanses of Arizona and New Mexico. Speaking on Coulter's legacy, Arnold Berke

(1973) offers this insight, “Coulter’s obscurity, even while she lived, can also be explained by the fact that she was a woman in a predominantly male profession, that she served as the Harvey house architect for nearly all of her career, and that her production was modest and generally far from urban centers.” (p. 4) Many of the white women who settled in the Southwest to pursue careers in the arts rejected the “proper” female reformers' view of womanhood, and instead championed a new feminism that emphasized intellectual self-fulfillment and a self-determined sexuality over traditional family commitments. Whereas the Victorian norm had given way to the Suffragette, who could choose between marriage and family or the chaste life of spinsterhood, there were women who wanted no part of either. Georgia O’Keefe personified this version of the new woman and did not renounce the role of female companion, yet lived in what would have been considered an unconventional marriage. O’Keefe never seemed subordinate to another male throughout her life but she did not project the image of the celibate professional woman as did some other women of her era. Although married to Alfred Stieglitz, O’Keefe maintained remarkable independence throughout her life, and through her international success as an artist, brought recognition of the cultural and geographic characteristics of New Mexico which supported the appreciation of Native American arts and crafts.

Born in 1887 at the Tewa San Ildefonso Pueblo, New Mexico, Maria Montoya Martinez became internationally known for her pottery. She was interested in the art at early age first learning the basics from her aunt. At a time when traditional Indian pottery was being lost, she and her husband, Julian Martinez, revived and advanced a distinctive style of pottery which was based on ancient pottery remains unearthed by archeologist Edgar Lee Hewitt. Martinez’s famous black on black pottery was the result of extensive experimentation resulting in a technique where the fire surrounding the pottery was smothered trapping carbon in the smoke that turned the clay black. According to Hyde (1973), even though Julian decorated the pots, only Maria claimed the work since pottery was still considered a woman’s job in the Pueblo.(p. 4) Until 1925, she signed her work “Marie” not giving credit to Julian who did all the surface decorating until his death in 1947. Peterson (1977) has observed how Maria passed on her art to members of her family, and she taught primarily through demonstration and observation even though she was noted as being reticent to teach her craft to persons outside of her tribal group. (p. 83)

Merina Lujan was born in Castle Gate, Utah (1906-1993); she was given the Tiwa name Pop Chalee by her Taos grandmother. The name means Blue Flower. Her father was Taos Indian and her mother was mostly Swiss. Her early years were marked by an unstable household and a distant relationship with her mother. Eventually, she wound up at the U.S. Indian School in Santa Fe for a short time, but soon left home and at 16 married a white wood worker. Shunned by her tribal group for her marriage to a white man, she went back to the Santa Fe Indian School and studied art with Dorothy Dunn who created the Studio School at the Indian School where she specialized in working with Native American students. Bernstein and Rushing (1995) emphasize that Dunn advocated the “flat style” of painting inspired by mural and pottery painting. This approach was criticized by many for teaching "a style that she believed, rightly or wrongly, was the only authentic painting style for Native American artists to follow.” (p. 5) Chalee flourished under Dunn’s encouragement, and she soon became widely known for her mural style of compositions that featured mystical dream-like themes. Her paintings can be described as ephemeral, much more than “decorative woodland scenes. Pop Chalee transformed a traditional style of painting to create magical, idyllic images of wide-eyed animals, ceremonial figures, and woodland settings.”

(Villani, 2009) During her school years, Chalee intensified her understanding of the art of her Indian ancestors working as a paid copyist for the Laboratory of Anthropology, documenting a vast collection of Native American pottery. Margret Cesa claims, "These tasks served to increase Pop Chalee's appreciation of Native American arts and heightened her pride in her Pueblo heritage." (p. 5) Chalee's work outside the studio was equally important as she was a lifelong speaker helping to educate non-Indian peoples to the ways of the American Indian cultures. Princess Blue Flower became a leading advocate for her people and for the art of the American Southwest bridging the white and Indian cultures, both to which she belonged. Like Maria Martinez, she found uncommon fame for someone of her origins, but neither Martinez nor Chalee gave up marriage, children, or renounced the ways of their people in order to achieve recognition in their respective arts. In fact, painting and pottery were not unusual professions for either woman to pursue given the way in which craft making and artistic decoration are natural modes of production within the quasi pre-industrial societies of the Native American peoples of the American Southwest. Martinez and Chalee also derived the monetary support necessary to become accomplished artists. Through the support and patronage of white or non-Indian collectors, each found a way to remain relatively content within the traditional boundaries of their cultures, and yet they were revolutionary artists that, unlike the revolutionary white women artists of the same time, found traditional marriage and family life compatible with their professional work. As architects, Mary Coulter and Julia Morgan broke rank and flourished in professions traditionally reserved for men, but at a price. Each gave up marriage and family to pursue a male profession, and lived a life of spinsterhood as this was the only proper or practical option available to women of the time. Coulter, Morgan, and O'Keefe achieved notoriety without having children who would inherit their talents and skills.

The reform movement in the late 19th century changed white middle-class women's minds about pursuing professional, academic, and public leadership roles. Many White American women became active in crusading for social change. Openly attacking discrimination and exploitation, and promoting education, health, and equal civil rights for women, they fostered a separate movement in the Southwest to hasten a reform in the
treatment of the Indian Tribes.

A new appreciation of native peoples emerged, founded upon the recognition of their cultural achievements as accomplishments worthy of study and respect. Martinez and Chalee had no intentions of becoming iconic role models for white women, but instead found ways to reach new heights of artistic achievement and fame outside of their tribal worlds, something not regularly attained by Native American women at the time. White American women in the 20th century, building on the 19th century history of nonconforming, self-reliant, and entrepreneurial women of the New Mexico territorial period, looked to the Native American women artists as role models of women who could have artistic professions which, unlike white societies, were seen as being condoned if not encouraged by their families and tribal societies. In an era of changing social values, the Native American Pueblo cultures of the southwest inadvertently inspired some Anglo American women to break from tradition. As agents of social change, the contributions of women, both White and Indian were, if not yet fully discovered and truly appreciated, paramount to the artistic and social development of the American Southwest.

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Social Bonds and Foucaultian Theory in Cult Ideology: A Look into Cult Recruitment and Retention

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ABSTRACT

Since the 1970's, cults (or "new religious movements") have increasingly become a part of U.S. consciousness, especially after incidents such as the mass suicide at Jonestown and the confrontation at Waco. However, our understanding of the dynamic process behind cult creation and maintenance are still largely undeveloped. In order for cults to recruit members and retain group solidarity, they must 1) control the individual by isolating them, which forces them to internalize the ideology of the group and their beliefs and norms, as well as 2) create and maintain social bonds. We propose that Foucault's theoretical framework of control and surveillance can be used to describe a cult's linguistic and social ability to portray and possess power in this way. The surveillance is not intended to control externally (using obvious, brute force), but internally thorough linguistic means. Consequently, group solidarity then becomes cemented and effectively maintained, continually validating that the ideology or belief controlling the individual is justified and necessary. We also propose that while cults express internalized control, they simultaneously express some idiosyncratic elements of "soft power" which maintains the social bonding with recruits or current members, allowing them to achieve their finished product of a true believer, or at least, a committed member. Foucault's study of the prison system did not describe cultic social bonds since boundaries between the institutionalized and their overseers were clearly demarcated; not to be crossed nor bound together and lacking of a cohesive ideology. However, similar to the self-regulating dynamics of the prison system, once the cult ideology is installed, it can only be internalized and truly upheld through a self-regulation that is enforced through social bonds and solidarity with like-minded individuals. Social bonds, then, are established with recruits and committed members and are not only a part of the framework of the power structure of the group, but essential to the group's survival and future recruitment.

Keywords: Foucault, cults, social bonds, ideology

Introduction

Occasionally, one may see stories in the news or the media about cults (or sometimes referred to as "new religious movements"). Their behavior seems strange, unusual, bizarre or even dangerous. Cults exist worldwide, but came to the forefront of American controversy in the 1960's to the 1970's following various, radical social movements (Lewis, 1998). In fact, only a very small number of cults formed in America before 1930, partially due to the religious atmosphere at the time. Strange, deviant religious activity that did not adhere to Christian or Puritan traditions were not as tolerated, and therefore could not thrive (Stark, Bainbridge & Doyle, 1979). In 1979, when cult interest and activity was high, only 15 percent of cults in the United States at the time formed before 1930, and 61 percent of the cults were less than twenty years old (Stark, Bainbridge & Doyle, 1979). The "youth movements" of the 1970's (college protests, increasing education enrollment, growth in the number of new religions) emerged from young people in America who attempted to separate themselves from institutions or rigid, structured notions of commitments (Wright & Piper, 1986). Desiring exploration, excitement, and the continuation of the freedom they had experienced from the various social movements, young people began to explore alternative lifestyles. New, idiosyncratic religions began to spread in the United States, specifically cult communes and psychedelic, cult behavior. Today, the Western and Pacific region of the United States contains the highest concentration of cult activity (Lewis, 1998). Cults can be divided into three main categories: client cults, audience cults, and cult movements. Client cults address particular cliental, particularly through magic. Audience cults are cults that display lower levels of organization, as people from great distances access the same information about the cult through mass media, books, magazines, online, and newspapers. Cult movements are more organized movements and are considered as more "full-fledged" religions, but with greater socio-cultural tension and deviance than mainstream religions or sects of mainstream religions (Stark & Bainbridge, 1980).

Unfortunately, tragedy marred the image and reputation of these new religious groups. After incidents such as the government raid on Island Pond, the confrontation and death of over 80 people in Waco, and the mass suicide at Jonestown, people began to recognize the potential perils of such groups and debated on the separation between the law and possible infringement on religious beliefs. Soon afterwards, deprogramming and anticult movements began, motivated by fear of dangerous and criminal cult behavior. Deprogramming consisted of kidnapping cult followers against their will and taking them somewhere isolated from other cult members to be counseled by family members or psychologists who would attempt to "deprogram" them, pointing out the inconsistencies of the beliefs taught in the cult while simultaneously distancing the individual from the leader and their cult companions (Lewis, 1998). Deprogramming was controversial - supported by some and condemned by others. To this day, cults are still a social phenomenon in the United States.

It is difficult to use the word "cult" without including religious, political or social movements that confess strong beliefs without qualifying as a cult. The word itself has been examined in numerous studies to determine people's interpretation and perception of cults. In his book *Cults in America*, James Lewis, referenced a study where respondents were given the biography of a fictional character named "Bill". The respondents were told that Bill either joined the Marines, a priesthood, or The Unification Church (otherwise known as the "Moonie" cult). The story

described the man's situation: he was not allowed to see his family, was constantly surrounded by like-minded members, and would sometimes feel guilty if he questioned the actions or beliefs of the group. Lewis wrote, "When given a choice of describing Bill's indoctrination experience, subjects who thought Bill had joined the Catholic Priesthood…labeled his indoctrination as 'resocialization; those who were told that he had joined the Marines most frequently labeled the process 'conversion'; and those who were under the impression that he became a Moonie applied the label "brainwashing' (1998:27)." In other words, once the word "cult" is ascribed to a new religious group, the tendency is higher that someone's mind will default to negative connotations of that religious group.

Cults are indeed separated and distinguished from other religious, political and social movements primarily by their deviance, their leadership, and the amount of control they exert on and demand from their members. In this particular study, a "cult" is defined as a "fringe (often religious) group that is separated from mainstream religious groups and recognized as deviant by mainstream religious groups as well as society in general." Furthermore, these groups usually also comprise of a charismatic cult leader (or leaders) who impose and actively propagate an ideology of intense spiritual and emotional value that requires the members to express great devotion to the group or its teachers, sacred texts/symbols, practices, or ideology. This study further defines a "member" as "someone who identifies themselves as belonging to that cult or group." "Mainstream religious groups" in this study include Catholics, Christians (including all mainstream denominations such as Baptist, Protestants, Lutheran, etc.), Buddhists, Hindus and Muslims. The units of analysis include individuals as well as groups of people (the cults themselves).

An individual's worldview is dependent upon his or her positionality. Positionality refers to the potential biases one may have developed and cultivated from personal experiences, upbringing, worldviews or assumptions about the world. Furthermore, awareness of one's positionality is necessary in identifying past biases and experiences that may illuminate or intrude into research.

Humans are complex, and their behavior in groups can also be complex. This study stems from an interest in cult behavior and phenomenon as well as the desire to study group dynamics and the forces that influence the individual. The impact that collective group beliefs have on the individual alludes to the "tug-of-war" between free will and determinism, as well as the individual and society. Ultimately, it is useful and interesting to study, examine, describe and explain the interactions that shape an individual's perceptions and social life, as well as the ways the individual reflects those interactions to change the world around them.

The epistemology of this study is categorized as post-positivism and social construction. There are some objective truths that can be supported when it comes to cult behavior, such as percentages and census data of distributions of cultic groups. These objective, concrete truths mirror more abstract ideas, such as ineffective or effective recruiting strategies, or profiles of individuals who are more or less likely to join a cult. Social construction is also evident in cultic studies because reality in the group is not necessarily based on objective realities or the realities of societal norms, but is instead built from the ideology and the reality that the cult leader constructs and portrays to their members or potential recruits. Cults can "invent deviant

perspectives and then have conviction in them, despite the lack of objective, confirmatory evidence (Bainbridge & Stark 1979:285)."

Research Questions/Thesis

Sociologists have not investigated the subject of cults as rigorously as their psychologist counterparts who examine mind control and brainwashing that is usually associated with cults. Therefore, further sociological exploration into the subject of the social power of cults and what attracts and retains members in their organizations is the aim of this study. Several factors could be involved in an individual's recruitment. The literature review endeavors to delineate "pull" factors that attract recruits and subsequently retain them until they become a committed member. This study proposes that in order to recruit and retain the highest number of members, cults must have 1) a way to subtly control the individual through internalization by isolating them and installing a new set of beliefs and norms, as well as 2) social bonds with cult members. The probability that an individual will stay in the cult is contingent on the presence of not one or the other, but of both. The ability for a cult to control and individual through internalization of the ideology or presence of the cult leader can be described and explained using Foucault's description of power, control, discipline and surveillance through "panopticonism", as well as Durkheim's discussion of anomie, integration and attachment. The ideology and group beliefs and norms are initially "planted" in the individual *externally* through subtle control and charismatic leadership, but survive *internally* and are nurtured through social bonds, eventually "growing" into a committed member.

Review of Related Literature

When cults surfaced in the 1960's and 70's, many different models from multiple disciplines emerged in order to analyze patterns of cult recruitment. Social scientists wanted to study individuals who had stronger tendencies to join a cult, what attracted them to a cult, and what cults did to draw people to them. Religious scholars pointed out that cults usually thrive where conventional faith is weak, and many who joined cults initially showed interest in more flexible, casual audience cults (Bainbridge & Stark, 1980). New recruits usually had also been exposed to more mainstream religions prior to cult membership, but were looking for something new and different; therefore, they abandoned a rigid, religious element but still remained open to the supernatural. Religious scholars constructed models that addressed cult formation and the beginnings of cult leadership, such as the pathology model and the entrepreneur model. The pathology model has been used by both sociologists and anthropologists, and is "related closely to deprivation theories of revolutions and social movements…it describes cult innovation as the result of individual psychopathology that finds successful social expression (Bainbridge & Stark, 1979:284-285)." It contends that individual mental illness, psychotic episodes, or hallucinations predisposes a leader to come to sensational conclusions or the belief that they have received a revelation that is unique and above others' understanding. Afterwards, they seek followers to guide and teach. The entrepreneur model suggests that cults are much like a business that tries to offer a new, exciting "product" in the "market" of religion by offering rewards, or "compensators", that give the group the appearance of a worthy investment. These

compensators can range from concrete, immediate compensators (i.e. money) to more general, overarching compensators that have no immediate gratification (eternal life, heaven, etc.). When recruiting, cult members act like a salesperson, giving their "pitch" on the "compensators" of the religion to individuals who believe the investment will be profitable and worthwhile. Religious scholars likened cult recruitment to a "social transaction" - the stronger the religious "compensators" the cults or the ideology offers to the individual, the more likely the individual will be recruited (Stark & Bainbridge, 1979).

One of the more popular cult recruitment models came from psychologists, who presented the "brainwashing" model. This model describes new cult conversion as intentional mind control that is exerted on the potential member by the cult leader and followers. The model analogizes the recruiting tactics of cults to the tactics used on prisoners of war in concentration camps, communist China or the Vietnam War. Brainwashing involves "'stripping' the potential convert of their previous identities, neutralizing their powers of will, creating dependence on the cult and then programming them with cult beliefs (Long & Hadden, 1983:1)." It can also be referred to as "mental kidnapping", suggesting that the new member is not voluntarily joining a group, but instead has deteriorated physical, mental, or emotional capacity to withstand a cult's persuasive power, and is therefore exploited. Most importantly, brainwashing also includes isolating the individual in order to control the information they receive. Lacking an outlet to the outside world or exposure to anything besides group beliefs, it becomes easier for an individual to internalize whatever the group tells them.

Sociologists who studied cult behavior wanted to include the aspect of socialization because recruiting power can also be found in social bonds that the potential recruit forms with current followers. In the past, social theorists hypothesized that adhering to large, influential social movements that have "cultish" qualities (i.e. Nazism) was the result of Durkheimian anomie and isolation, exacerbated by no intimate, social bonds in areas that were quickly becoming densely populated. They suggested that in times of chaos or crisis in society, cults may increase their collection of members because large numbers of people are trying to endure the same intolerable state, thus reaching out for purpose, passion, guidance and other individuals to endure with them (Bainbridge & Stark, 1980). Although the evidence for this mass, societal anomie hypothesis was later declared as convoluted, there is some evidence that individual anomie in regards to family ties or adolescent experiences can contribute to an individual choosing to join a cult (Wright & Piper, 1986). This "depravation" model argued that some people join cults because of bonds or connections that they are lacking in their own family (Curtis & Curtis, 1993; Wright & Piper, 1986). The cult then becomes the promise and hope of becoming a new, "surrogate" family system because it is able to display signs of a family, such as deep moral codes, community, bonding, and affection. Researchers Stuart Wright and Elisabeth Piper discovered that it was possible that "the decline of traditional familialism is an antecedent social condition to the increased popularity of new religious movements (1986:16)." Wright and Piper additionally explained that, "while persons may convert to deviant religious groups for reasons extraneous to the family, prolonged involvement [with the cult] may call into question the desirably of severely deuced family ties or previous discarded values (1986:17)." Individuals may be recruited for many reasons, but the cult may not be able to retain them in the long run if their connections to their own family belief system are deeper than the connections with the cult belief system. Therefore, sociologists also composed an alternative but compatible model known as the "drift"

model, contending that individuals who experience anomie and low attachment and integration in society are not brainwashed or controlled mentally, but are merely *more susceptible* to be "pulled into" various religious or social movements in their search for stability, connection and attachment (Long & Hadden, 1983).

Theoretical Framework

Neither brainwashing described by psychologists nor the dimensions of socialization proposed by sociologists can be a complete explanation for cult recruitment in and of themselves; both are needed to explain and examine this phenomenon. When being recruited, the individual must be introduced and assimilated with the group's beliefs while also bonding with other cult followers. When studying suicide, Durkheim similarly argued that an individual must be both integrated *and* attached in order to function most effectively in society or in the group. Too much or too little of one or the other presented problems with the individual staying connected or attached to society or the group, thus resulting in deviant behavior such as suicide. In the same way, an individual who is being recruited into a cult will have a higher probability of joining and staying with the cult by being integrated into the cult's belief (internalizing) but *also attaching* to the members of the group.

One major component of recruitment is the amount of control exercised on the individual that leads the individual to internalize the beliefs of the group. This can be done through the leader or the ideology. Leaders of cults are usually charismatic, meaning that they exhibit personalities that are influential and able to persuade others. This charisma can draw someone into a cult, especially if, as mentioned above, they are somehow mentally and emotionally vulnerable or experiencing anomie. Both charismatic leadership and propagated ideologies are evident in cults, but the technique of delivery plays a role in someone joining or defecting from the group. The cult must make the member internalize the control they have exerted on them. This control is unique because it has the ability to subtly control not from the outside in using brute, physical force, but from the *inside out*. Once the individual becomes established in the belief system, control can then be self-regulated. This kind of control that is exerted onto the potential recruit can be likened to Foucault's "Panopticon", which he described as a tall tower standing in the center of a prison, surrounded by individual cells with prisoners inside. While under the impression that there was constantly someone watching them from the tower and that this person could see them but they could not see the "watcher", each prisoner would eventually be conditioned to behave in the way the panopticon intended. Eventually, there may no longer be a need to put the individual in the tower; control from the external structure (the tower) would thus be *internalized* and *self-regulated* in the individual.

Foucault, however, argued that in order for this power structure to survive and accomplish its goal of intangible, efficient, and effective control, horizontal and lateral bonds with others that could cause agitations or revolts against the surveillance would need to be disintegrated (Rabinow, 1984). Cults, however, function differently within this area of Foucault's argument, as each member is striving for the same goal, leading to group conformity as well as connections and bonds with each other. Bonds are not meant to agitate the power structure, but cement the new member *into* the power structure. Internalization must take place, but in order for the power

structure of a cult to survive it has to be validated and upheld through social bonding with like-minded individuals in the group. Power over the individual is not only exercised from the top down (the "leader" to "followers"), but laterally as well with other members of the group. Consequently, this is where the socialization aspect of cult recruitment and retention occurs.

Analysis of Data

Psychologists conducted successful research with cults and have found support that attempting to control a person's mind by isolating them and controlling their beliefs as well as what information they receive does occur in cult recruitment. Research conducted in 1993 by John and Mimi Curtis found that individuals who are emotionally vulnerable economically deprived, or predisposed to extreme anxiety, abuse, addiction or dissociative states are at risk for joining a cult because the cult presents an "escape" or opportunities to ease the stressors in their life. Once initiated, the member is "expected to surrender their identity which makes them disoriented, helpless, and out of control...then, are forced to disown their own individuality and identify with the cult structure (458)." Subsequently, pathology similar to "Stockholm Syndrome" may induce (Curtis & Curtis, 1993), as the new member is forced to identify with their "captors."

Foucault's argument of power, control and surveillance can be compared to the similar argument that psychologists made when describing cult recruitment through mind control or brainwashing. When cults have the ability to manipulate someone's mind, the control is very subtle, effective and efficient while simultaneously monitoring and surveying behavior. It is an intangible way to control someone else, and its invisibility gives it power because it raises no alarms and consequently no resistance. Foucault described "its low exteriorization, its relative invisibility, the little resistance it arouses…(Rabinow, 1984:207)." Furthermore, it "installs" or "programs" the individual who then is able to efficiently and effectively self-regulate the beliefs of the group. Moreover, Foucault argued that this new form of discipline would make power more effective and efficient because it would stifle changing reactions and create predictability, which can be observed in cults that isolate individuals and control their connections to the outside world, making their belief system more predictable. In a cult, all individuals are expected to be "programmed" the same, and since reformation and replication are expected there is constant validation that the ideology or belief controlling the individual is justified and necessary. Finally, the individual takes on the new *group identity* described by John and Mimi Curtis, creating a situation where life inside of the cult becomes normal while life outside of the cult becomes less and less of an option.

Sociologists, on the other hand, argued that recruitment involves more socialization than psychologists initially suspected because people are not necessarily "passive participants" in socialization; they interact and change the world that is simultaneously interacting with and changing them. If we exclusively used the brainwashing model to explain recruitment, this would imply brainwashing could happen to anyone, anywhere, which is not the case (Long & Hadden, 1983). Also as mentioned before, cults tend to stay relatively young and have a short "life span", primarily due to disbandment after the leader passes away (Stark, Bainbridge & Doyle, 1979). This supports the conclusion that socialization and interpersonal bonds also cement the individuals in the group and therefore maintain the group's survival. Therefore,

sociologists began to investigate cults through ethnography. Ethnographic, participant-observation research was conducted with The Unification Church and found that interpersonal bonds between current members and potential members was crucial for recruitment, even if the potential member was not completely immersed in the ideology. After experiencing failing recruitment techniques, The Unification Church adjusted their strategy to include social networking. Interestingly enough, this is not just a strategy used in cults, sects or other deviant religious groups, but also in more conventional religious groups such as Christian groups (Stark & Bainbridge, 1980). This evidenced a "soft power", or attraction, that was exemplified through social bonding. An example of this comes from an excerpt of the study done with The Unification Church:

> "In the early 1960s, John Lofland and Rodney Stark conducted a participant-observation study of the first group of American members of the Korean-based cult of the Reverend Sun Myung Moon…A close watch on recruitment as it occurred revealed the essential role played by interpersonal bonds between cult members and potential recruits. When such bonds did not exist and failed to develop, newcomers failed to join. When such bonds did exist or develop (and when they were stronger than bonds to others who opposed the individual's recruitment), people did join. Indeed, persons were sometimes drawn by their attachment to group members to move into the Moonie commune while still openly expressing rejection of the Moon ideology (1378)."

Another example of the power of socialization in recruitment is portrayed in another group known as The Power. Initially the group began as a therapy group that was based on Alfred Adler's ideas that each individual has personal, subconscious goals they strive for and that striving for those goals can release the individual from the torment of inner conflict. The group began to grow, and followers began to participate more heavily in the content they covered as well as the group activities. They began to submit new ideas for therapy as they felt that the members of the group were the only ones who truly understood them. At that point, a *social implosion* occurred. William Bainbridge and Rodney Stark describe a social implosion as the event where "part of an extended social network collapses as social ties within it strengthen and, reciprocally, those to persons outside it weaken (1979:293)." It happened very subtly and slowly; "it was a step by step process (1979:293)." Furthermore, "The Power recruited clients through the founders' pre-existing friendship network, and the therapy sessions greatly intensified the strength and intimacy of their social bonds (1979:293)." This example attests to the theory that recruitment is expressed by both internalizing control *from* the group as well as social bonding *with* the group. Emotionally vulnerable individuals were attracted to The Power for what it had to offer them, but the central reason that they stayed with the group was because of the social bonding that took place between the members. Integration to what the group taught and attachment to its members *both* took place, leading to successful recruitment and sustainment of the group.

Besides initial recruitment, sociologists also investigated what causes members to stay in deviant religious groups. In 1994, researcher Laurence Iannaccone evaluated and supported a previous study conducted with conservative churches in the 1970's. The initial study was carried out by Dean Kelly, who discovered that, when compared to more liberal churches in the same time period, stricter churches had strong, increasing membership – primarily due to their priorities on

absolution, conformity, and control over the members' lifestyles. The strict church atmosphere relied on its ability to eliminate "free-riding" and therefore stimulate participation among devoted members. In the same way, a cult that claims their own "absolute truth" while conforming and dictating other members of the cult has the power to control the lifestyles of the members while keeping the truly committed, full time members. In this same way, Foucault actually wrote: "This is why discipline fixes; it arrests or regulates movements; it clears up confusion, it dissipates compact groupings of individuals wandering about the country in unpredictable ways (Rabinow, 1984:209)."

Scope and Limitations

There are some limitations to this study that should be addressed. First, the date of the material is older than expected. Old, outdated data can intrude on research. However, much of the data is from the 1970's or 1980's, when cult controversy, research and interest were at a high point. Although old data is not ideal, it could present a unique advantage to the study because it takes "snapshots" at points in time when new religious movements were active and strong. In the same way that historians who study a certain point in history use information from long ago to piece together and analyze what happened, this older information on cult behavior can also bring up good points that researchers studied back then when data was plentiful, accessible and "at the surface". Similarly, the amount of researchers and authors who studied the sociological aspects of cult recruitment and retention was small as well, as collecting data about deviant behavior such as cults can pose unique and cumbersome challenges. Data appeared to have been "drawn" from the same wealth of information provided by the same authors, particularly citing prior studies from John Lofland, William Bainbridge and Rodney Stark – three men who contributed enormously to sociology in regards to cult studies. Alternatively, there were some articles that challenged the Bainbridge and Stark models of recruitment and cult analysis, which supports the notion that new models can certainly critique old models, then evolve and emerge with further study. Finally, many articles and studies about cult recruitment and retention drew examples, information and data from the most sensational and extreme cult groups, even some who had committed crimes. Examples of such groups include The Unification Church, The Branch Davidians, and Family of God/Children of God. These groups captured the most attention for studies, even though there are plenty of other "cult-like" groups that are not as extreme but do adhere to deviant faiths and to this study's definition of a "cult". By only studying the most deviant groups, data may be skewed and the results produced may not be as accurate or may not be a truly representative sample of all cult groups.

The social sciences need reliability and validity in order for a study to be pertinent, relevant and successful. Reliability refers to the notion that whatever was measured would also be measured when collected over and over again. Validity in the social sciences refers to accurately measuring an indicator of a variable you are supposed to measure. Reliability in this study may be low because it may not be completely possible to collect the same data over and over again when studying a volatile social situation such as religion and cult recruitment. Each member does bring their own experiences to the table. However, this study is higher in validity and generalizability because I measured and studied what was needed, and the same information may generally be applied to the way that many cults operate and recruit others. This paper attempted

to examine patterns in cult recruitment and behavior, and patterns tend to be generalizable and valid. Therefore, this study could be referred to as reliable, but higher in regards to validity and generalizability.

Policy Recommendations and Future Study

Policy recommendations are made at the conclusions of studies in order to apply what was learned during the study. This study deviates from this view in a slight way because policy is difficult to enforce on religion, an institution that will continue to exist through time. It is also difficult to introduce or enforce policy on something that would not want to be taken away or infringed upon, such as religious beliefs. There are, however, some concerns that could indicate if a deviant faith crosses the boundary of "strange" to "dangerous". James Lewis (1998) discusses some of these concerns in his book, *Cults of America:*

1. The group considers themselves to be "above the law" and commits crimes (theft, fraud, child abuse, illegal firearm possession, etc.).
2. The group is ready to wage an actual, physical war against other human beings, and is not opposed to using incendiary devices, guns, ammunition or other weapons to wage this war.
3. The group continually makes false, public accusations or constantly misinforms.
4. The group abuses or exploits its members or employs physical force to make them stay against their will.

Government can only intervene on religious beliefs if those beliefs include harmful or criminal acts against other humans. Since not all cults engage in such behavior, a "grassroots" approach with individual communities would be best. Most people are able to notice when a friend or family member acts differently or changes personalities after convening with a different group of people. The people immediately surrounding the individual can be the "eyes and ears" of the situation. However, as discussed earlier, the potential recruit may not have ties or connections with anyone at all and may join without anyone else in their life being aware or concerned for their well-being. In this case, "cult watch" groups can also be helpful and intervene if necessary, without demonizing the group or infringing on their rights to practice their beliefs.

Sociology has great potential in the realm of cultic studies. Some topics that could be investigated by sociologists could include case studies with specific groups in order to evaluate how they socialize within that specific group. Sociologists could also conduct more general studies with cults in order to compare and contrast beliefs systems, gender roles, or social-psychological aspects. Future research could also include more macrolevel studies discussing societal "cherry picking" – how society chooses which groups to finally accept or reject. One group in particular, Scientology, was blatantly considered a cult in the review of the literature. Today, Scientology has become more mainstreamed, leading us to believe that society may have a pattern as to the groups they choose to accept or reject.

Conclusion

This study discusses the history of cults, specifically in America, as well as recruitment models that have been constructed in the field of social science in regards to how cults recruit members and keep those members, coaxing them to express full membership later. Support has been found for the hypothesis that cults use both the psychological aspect of internalized, self-regulated control propagated by a charismatic leader and the force of the ideology on the individual, but that the individual also needs social bonds to complement this control. The dismissal of either factor could lead to a potential recruit not joining the group or defecting after joining. Our hypothesis is supported through the theoretical framework of Durkheimian anomie, attachment and integration, as well as Foucault's theory of power, discipline, surveillance and panopticonism. However, our hypothesis challenges Foucault's idea of dissolving lateral bonds as a way of retaining power, because in a cult that *is* the method that power is kept and crystallized. Examining previous studies that were primarily conducted with cults such as The Unification Church, Hara Krishna, Family of God/Children of God and The Power, the theoretical analysis of the data includes psychological studies of vulnerable individuals who were susceptible to a cult's control. Additionally, studies that utilized ethnographic methods and participant-observation revealed that socialization with current cult members is also an integral part of cult recruitment.

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Measuring Pre-Service Principals' Dispositions through Behavioral Indicators

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ABSTRACT

According to the National Council of Accreditation of Teacher Education (NCATE), universities with principal preparation programs are required to assess the dispositions of their pre-service principals to ensure quality candidates who can become effective school leaders. Even when specific dispositions have been identified as desirable for school leader effectiveness, measuring them presents a problem because of the abstract nature of dispositions. The following paper reports the results of an investigation regarding the expectations of dispositions that university faculty have for their pre-service principals and the development of an instrument to measure abstract dispositions by using observable behavioral indicators as criteria.

Statement of the Problem

The National Council of Accreditation of Teacher Education (NCATE) requires that candidates in redesigned principal preparation programs in universities throughout the United States demonstrate the appropriate knowledge, skills, and dispositions for successful school leadership (Brown, Herron & King, 2008). Although the Educational Leadership Constituent Council (ELCC) standards describe the skills that principal candidates must display, specific criteria for demonstration of dispositions continue to be discussed and debated (Diez, 2006). Indicators for the knowledge and skills that candidates need have been generally agreed upon; however indicators for dispositions have not because the dispositions elusive and imprecise and thus difficult to define (Zaccaro, Kemp, and Bader, 2004) and difficult to measure. Moreover, even if principal candidates possess leadership skills, they may not have the appropriate dispositions to use those skills effectively as a school leader (Katz & Raths, 1985).

Furthermore, with the 21st Century emphasis on accountability, it is crucial for principals to possess the skills and dispositions for effective school leadership in order to lead their

schools toward increased student achievement. The consequences of not doing so are dramatic for failing schools and their principals. Therefore, it is necessary that pre-service principals have or develop the appropriate skills and dispositions to be prepared for the reality of school leadership, especially because their professional evaluations will depend on the degree of student achievement that occurs at their schools.

The present researchers have spent the last several years reviewing the literature on dispositions and surveying and interviewing Louisiana school district superintendents and university faculty regarding the expectations they have for their school principals and pre-service principals, respectively. The present study describes their three-year journey to research and develop an appropriate instrument to measure professional dispositions of principal candidates. The final instrument will help university faculty and principal mentors measure professional dispositions of educational leadership candidates by observing behavioral indicators for each disposition.

Background and Previous Research

The purpose of the present study is to introduce an instrument that measures dispositions of pre-service principals. This instrument development has been an ongoing process over three years. The endeavor began with a study investigating whether the candidates in a principal preparation program at a university in southeast Louisiana had improved their professional knowledge, skills and dispositions (Crain-Dorough, Campbell & Winstead, 2010). The instrument was administered by the university to the candidates at the beginning and end of the principal preparation program. The self-report instrument asked the candidates whether they believed that certain behaviors were important. The present researchers were disappointed to discover that the candidates' level of professionalism had remained the same from the beginning semester of the program to the culminating semester two years later while their knowledge and skills had shown slight to moderate increases.

The researchers identified two potential problems with the instrument used by the university. The first problem had to do with the actual behaviors measured by the questions, and the second had to do with the nature of the self-report. Behaviors, the importance of which candidates were asked to identify, included punctuality, attendance, relationships with students, ability to change teaching style to match learners. Indeed, almost all of the items were slanted toward expectations of pre-service teachers and had little or nothing to do with pre-service principals. The second problem concerned the self-report itself. The researchers surmised that either the beginning M.Ed. candidates believed that they should deliver the answer expected of their professors or they did not have the necessary self-knowledge to report accurately on their own actual behaviors.

Thus began the three-year journey in search of an instrument that measured professional dispositions of pre-service principals. Having found no suitable instrument, the researchers then set out to construct their own. They interviewed 13 school district superintendents in Louisiana regarding their expectations of the characteristics, skills, and

dispositions of their principals. The superintendents' responses were at first used to construct the initial draft instrument for pre-service principals. However, the question that challenged the researchers was whether what superintendents expected of their school principals was the same as what university faculty expected of their candidates. And should they be the same? Therefore, upon consideration, the researchers decided to use the superintendents' responses to construct a draft instrument to measure dispositions and skills of practicing principals and to survey university faculty with similar questions regarding their expectations of M.Ed. candidates and to use faculty responses to construct a draft instrument for pre-service principals.

The researchers compared the dispositions and skills identified by the district superintendents and the university faculty (Campbell, Crain-Dorough, Mense, & Richardson, 2012). The main finding was that there were some discrepancies between the perceptions of the district superintendents regarding practicing principals and the faculty members regarding both pre-service principals and future principals. Another major finding was the discrepancy in definitions of terms such as attitudes, characteristics, behaviors, actions, skills, and dispositions. However, upon consideration of their research and the fact that instruments to measure dispositions of practicing principals existed, the researchers decided to construct one instrument for pre-service principals based on the research in the field and the surveys and interviews of superintendents and university faculty that they had conducted.

Nevertheless, another problem arose. Even if the appropriate dispositions for effective school leadership were isolated and defined, how was a university faculty member to judge whether or not the pre-service principal possessed the disposition or to what degree? After leading discussions with our own department faculty and conducting literature searches regarding the manner in which other universities evaluated dispositions, the present researchers concluded that the most logical and sound method was through direct observation of behaviors and/or through the report of the candidates' principal mentors, who supervised them at the school building level.

Review of the Literature

Literature was reviewed in three areas: leadership traits/characteristics/attributes; dispositions; and behavior.

Leadership Traits, Characteristics, Attributes

The long history of the emphasis of studying leadership traits from the ancient civilizations to the 21st century has been aptly summarized by Zaccaro, Kemp, and Bader (2004). They maintained that these early writings "attest to the enduring and compelling notions that leaders have particular qualities distinguishing them from non leaders, and that these qualities can be identified and assessed" (p. 102).

The trait theory of leadership evolved throughout the years as variations of the trait theory emerged. Gibb (1947) proclaimed that leadership was always relative to the situation, and Stogdill (1948) concluded that characteristics alone cannot predict leadership. Likewise, Ghiselli & Brown (1955) asserted that leadership is determined by the social situation: "Under one set of circumstances an individual will be a good leader and under others he will be a poor one" (p. 471). Later the study of leadership traits as predictors of future leaders declined, and different emphases emerged. Rotation design studies were conducted in the 1940s and 1950s to test the stability of leader status by having members of different groups rank certain individuals' leadership status when those particular individuals were in each group. Although there was a high correlation of rankings of the same member across different groups, the tasks were similar and, consequently, such high correlations could be attributed to the situation. Conclusions from these studies eventually led to situational leadership theories (Zaccaro, Kemp, & Bader, 2004).

The 1960s and 1970s were dominated by situational leadership theories, foremost of which was Fiedler's contingency model, which held that leadership style is dependent upon the constraints of the situation (Miner, 2005) and that leaders were effective "when their leadership patterns matched the situational contingencies" (Zaccaro, Kemp, & Bader, 2004, p. 107). Hersey and Blanchard (1977) likewise proposed a similar situational leadership model.

Whereupon newer, more sophisticated methodology was used to re-examine the earlier leadership trait studies during the 1980s, a renewed interest in trait theories was subsequently sparked. Among those studies, charismatic leadership became a topic of interest. Zaccaro (2001) contended that potential charismatic leadership might be indicated by cognitive ability, self-confidence, socialized power motives, propensity toward risk taking, social skills, and a capacity for nurturing constituted (in Zaccaro, Kemp, & Bader, 2004). The 1980s resurgence of interest in charismatic leadership traits continued throughout the 1990s. After the 1990s, the focus of leadership trait research gravitated toward cognitive ability, personality, motivation, interpersonal skills, and leader knowledge and expertise.

Although it is widely recognized that traits alone do not produce a leader and that traits must be combined with appropriate and effective leader behaviors, some still claim that leadership characteristics do matter. House et al (2004) conducted a global study of 62 countries regarding international leadership and found many positive universal leadership attributes, including the following: trustworthy, foresighted, positive, intelligent, win-win problem solver, administratively skilled, just, dynamic, motivational, decisive, communicative, honest, encouraging, dependable, and team builder. Northouse (2015) posited that the six specific traits that are replete in the research literature for successful leadership are intelligence, confidence, charisma, determination, sociability, and integrity, which "undergirds all aspects of leadership" (p. 27). Kirkpatrick and Locke (1991) maintained that effective leaders are different from others because they possess certain key characteristics: drive, which includes achievement motivation, ambition, energy, tenacity, and initiative; leadership motivation, or the desire to lead;

honesty/integrity; self-confidence; cognitive ability to problem solve and make good judgments; and knowledge of the business. They also claimed that these traits, although important, merely "endow people with the potential for leadership" (p. 56) and must be merged with leadership skills and behaviors for effective leadership.

Despite the long history of studying leaders and their characteristics, researchers have succeeded in compiling a list of desirable attributes but have not presented compelling evidence that isolated certain key traits as guaranteeing success. The best we have is a list of those characteristics most commonly found in the literature over the years.

Dispositions

While the terms disposition and trait have been used interchangeably, attempts have been made to distinguish the terms. Katz and Raths (1985) posited that a disposition is a trend and a trait is an emotion, suggesting that dispositions should be observed over time while traits could be displayed only once. They further asserted that a disposition requires a person to behave with a level of intensity over an extended period of time and throughout a range of situations, thus implying that dispositions are manifest through habits of behavior. Leithwood, Jantzi, Coffin, and Wilson (1996) likewise claimed that dispositions require intentional behavior over time. Nevertheless, there is not agreement among researchers regarding the importance of dispositions, especially in light of the difficulty of capturing disposition data (Schussler, 2006).

There have also been attempts to define the term disposition. According to the National Policy Board for Educational Administration (2002), educational leadership dispositions are the "values, commitments, and professional ethics that influence behaviors toward students, families, colleagues, and communities and affect student learning, motivation, and development as well as the educator's own professional growth. Dispositions are guided by beliefs and attitudes, and are related to values such as caring, fairness, honesty, responsibility, and social justice" (p. 33).

In the literature, dispositions have been articulated in various ways, such as values, commitments, and ethics, internally held and externally displayed (Cudahy, Finnan, Jaruszewics, & McCarty, 2002); moral purpose, or social responsibility toward others (Fullan, 2002); and habits of mind demonstrated as trends of behavior (Katz & Raths, 1985). Green (2009) argued that dispositions reflect "an individual's beliefs, values, and … commitment" and that a leader's disposition is the key indication of success or failure (p. 9). Schussler (2006) contended that self-awareness, inclination, and reflection typify the operation of dispositions. Perkins (1995) defined dispositions as inclinations that motivate and direct behavior, while Tishman and Andrade (1995) asserted that dispositions were "tendencies toward particular patterns of thinking" (p. 2), and Tishman, Jay and Perkins (1992) considered them to be inclinations that guided intellectual behavior (in Hackett & Hortman, 2008).

Some research sought to identify the most important dispositions for effective leadership. Wildy and Louden (2000) maintained that the dispositions leading to effective leadership

include caring for and involving others, being fair and open to alternatives, being strong in decision making, and having and articulating a vision. Although they echo previous research to some extent, the most effective teacher leadership dispositions espoused by Danielson (2006) include a deep commitment to student learning, optimism and enthusiasm, open-mindedness and humility, courage and willingness to take risks, confidence and decisiveness, tolerance for ambiguity, creativity and flexibility, perseverance, and willingness to work hard, or a strong work ethic.

Murphy, Hunt, and Wasonga (2004) declared that seven dispositions were indispensable for co-creative school leadership, a form of shared leadership whereby all the human capacity in the school is utilized. Those seven dispositions are collaboration, active listening, cultural anthropology (use of the cultural context of the school in creating a vision of the future), egalitarianism (recognition of the equal importance of the contributions of all school community members), patience, humbleness, and trust and trustworthiness (p. 23). Using those seven dispositions as the framework for a further study of co-creative leadership, Wasonga and Murphy (2007) discovered one other important disposition that emerged: resilience. The three essential dispositions that emerged were collaboration, active listening, and trust and trustworthiness. Green (2009) reported 49 leadership constructs found in the literature that comprise effective leadership dispositions. A few of those dispositions are compassion, integrity, character, rapport, sensitivity, trust, courage, tenacity, accountability, creativity, humility, fairness, honesty, and communication (p. 44).

Other research took a slightly different slant. Wasicsko (2007) believed that the important qualities of school principals are not so much what they know or do so much as who they are. "The leader's human qualities and disposition combined with his or her knowledge and skills enable that leader to transform the lives of teachers and students and create a school culture that invites all to learn and grow" (p. 27). Northouse (2009) similarly declared that character, or who you are as a person, is an essential aspect of ethical leadership and refers to one's disposition and core values. The Josephson Institute of Ethics in California (2008) developed a model of instruction for character education based on six dimensions of character: trustworthiness, respect, responsibility, fairness, caring, and citizenship.

Despite researchers' inability to agree on a precise definition of dispositions, university principal preparation programs are required by the National Council for Accreditation of Teacher Education (NCATE) to assess the dispositions of their candidates. NCATE developed a definition of dispositions that it published in its 2002 manual:

Dispositions. The values, commitments, and professional ethics that influence behaviors toward students, families, colleagues, and communities and affect student learning, motivation, and development as well as the educator's own professional growth. Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice. For example, they might include a belief that all students can learn, a vision of high and challenging standards, or a commitment to a safe and supportive learning environment. (NCATE, 2002, p. 53).

Lauder (2000) contended that successful principals needed the appropriate skills to apply their required knowledge base and the proper dispositions to use their knowledge and skills effectively (p. 24). Additionally, she reported that many principal preparation programs are employing screening instruments to provide evidence that their prospective M.Ed. candidates have the appropriate dispositions to become successful school leaders. In fact, she recommended that the entrance requirements should include an analysis of the prospective candidate's dispositions. Similarly, Brown, Herron, and King (2008) claimed that leadership dispositions should be assessed and that standardized models should be developed for use by university principal preparation programs.

In a comparison of several instruments used at various universities to measure dispositions of school leadership candidates, Campbell and Crain-Dorough (2013) found the following dispositional constructs repeated most often: commitment to learning, respect, honesty/ethics, responsibility/work ethic, collaboration, and flexibility. Schulte and Kowal (2005) designed and validated an instrument, the Administrator Dispositions Index, aligned with Educational Leadership Constituent Council (ELCC) standards, to measure the professional leadership dispositions of school leaders. The Administrator Dispositions Index is both reliable and valid for measuring dispositions, but the authors acknowledge that teaching and assessing dispositions of school leadership candidates is challenging because it involves human behavior and attitudes.

Behavior

Psychology is defined as the science of behavior with the goal of describing and explaining what people do. However, some researchers lament the serious decline of behavioral observation in present day psychological research, especially in social and personality psychology, in favor of self-report questionnaires and surveys (Baumeister, Vohs, & Funder, 2007; Furr, 2009). Baumeister et al (2007) reported that the decrease in behavioral observations began in the 1980's and has continued to the present. In fact, they maintained that current behavioral research in psychology often turns out to be a study of self-reports of hypothetical behavior in questionnaires. They further contended that, although self-reports of behavior and inner states may be appropriate for some topics, the observation of behavior is also important. In fact, as Wilson (2002) has shown, people's self-reflection and introspection may be far from accurate. Indeed, Brown, Herron, and King (2008) conducted a study of administrative internship candidates regarding their perceptions of their beliefs and practices of dispositions and reported a gap between beliefs and practices and recommended further research regarding the reason for the gap between belief and practices of dispositions.

Also, Scholl (2008) asserted that dispositional variables are internal and consistent from situation to situation and constitute one's personality, which includes values, attitudes, traits, skills, abilities, aptitudes, cognitive style, self-concept, and dominant motivation source. Because dispositions comprise a major construct of personality, a further look at the measures of personality psychology is appropriate and relevant. But the methodology for measurement of personality psychology is not always as obvious as it seems. Furr

(2009) found it ironic that personality psychology, which is based on the study of human behavior, "lacks the dedication to the study of behavior" (p.369) and concluded that behavioral observation is crucial for personality psychology. One of the four primary roles of behavior in personality psychology is as an "outcome through which personality constructs manifest themselves concretely" (p. 374). In other words, personality can be measured through the observation of behavior.

Arnstine (1990) likewise claimed that observable behavior is evidence of a disposition, although it is not the disposition itself. Erickson, Hyndman, & Wirtz (2005, p. 2) attributed Taylor & Wasicsko (2000) with the contention that a disposition describes "the attitudes, perceptions, and/or beliefs that form the basis for behavior" (p. 2). In other words, dispositions are displayed through one's behavior and, as such, dispositions can be measured through observation of the behavior. In fact, admission to the College of Education at Eastern Kentucky University is contingent upon the testimony of four faculty members that they have observed the "student demonstrate behaviors that indicate they possess the dispositions" (Erickson, Hyndman, & Wirtz, 2005, p. 8).

In a study of leadership, Derue, Nahrgang, Wellman, & Humphrey (2011) criticized the lack of integration in leadership research, both in the trait paradigm and in the behavior paradigm. They therefore constructed a conceptual framework integrating trait theory and behavioral theory of leadership effectiveness and conducted a study of leader traits and leader behaviors. The results indicated that, "although having certain traits may predispose individuals to certain behaviors, behaviors are the more important predictor of leadership effectiveness" (p. 40).

The present study is a compilation and an analysis of the responses of school district superintendents and university faculty regarding their expectations of practicing principals and pre-service principals, respectively, and the constructs from disposition instruments in the field. The data were merged to design an instrument that measures dispositions of pre-service principals by using the major constructs and behavioral indicators for each construct to concretize the dispositions so that university faculty can more accurately evaluate meaningful dispositions of their candidates.

Methods and Procedures

The methods herein described are from those studies that collected the perceptions of school district superintendents (Campbell & Crain-Dorough, 2010) and university faculty (Campbell, Crain-Dorough, Mense, & Richardson, 2012) regarding their expectations of their practicing principals and pre-service principals, respectively. Also described is the method used in a study which compared several instruments in the field that measured professional dispositions of principal candidates (Campbell & Crain-Dorough, 2013). From these instruments the major constructs of dispositions were extrapolated. The present study merged the data to construct the present instrument for use at a university in southeast Louisiana to measure the dispositions of their pre-service principals during their enrollment in a principal preparation program.

Perceptions of District Superintendents

In an effort to ground the instrument development in the local education context, thirteen school district superintendents in Louisiana were interviewed in person or by phone regarding the dispositions they look for in effective school principals. Six interview questions were worded to prompt the superintendents to provide a description of a quality principal in various ways. Interview questions asked about characteristics, behaviors, and attitudes, in addition to dispositions, to solicit more varied feedback not tied to an individual's own definition of "dispositions."

The superintendents were asked the following five questions:

1. What specific and/or general attitudes do you look for in a school principal?
2. What behaviors do you look for in a school principal?
3. What characteristics do you look for in a school principal?
4. What skills do you expect a principal to have in his/her repertoire?
5. What specific actions do you expect a school principal to engage in at his/her school?
6. In describing the ideal school principal, what adjectives would you use?

Responses were unitized and categorized and compared to the literature.

Perceptions of University Faculty

The expectations of pre-service principals were obtained from nine faculty members from seven different universities with principal preparation programs from across the same southern state. Participants were interviewed either in person or by e-mail regarding the ideal characteristics and dispositions they desire in their principal candidates in the master's degree program. In addition, they were asked questions regarding the manner in which they measure the dispositions of their candidates. Interview questions consisted of open-ended interview questions similar to those that were used with the superintendents.

The faculty members were asked the following eight questions:

1. What specific and/or general attitudes do you look for in a principal candidate?
2. What behaviors do you look for in a principal candidate?
3. What characteristics do you look for in a principal candidate?
4. What skills do you expect a principal candidate to have in his/her repertoire?
5. What specific actions do you expect a principal candidate to engage in at his/her school?
6. In describing the ideal school principal, what adjectives would you use?
7. How does your program measure dispositions formally or informally?
8. How does your program utilize data regarding the dispositions of your candidates?

The respondents were asked in questions one through six to provide responses about candidates as graduate students and then as future principals. The final set of responses that were included in the analysis for three of the "respondents" actually represented two

faculty members who were interviewed simultaneously at each of three institutions. In addition, three faculty members from one institution submitted individual responses. The researchers decided to utilize each set of responses whether from an individual or a set of individuals as a unit of analysis in this study. Responses compiled from multiple individuals were considered more reliable. The individual responses from the same institution were considered as representative of perceptions of educational leadership experts in the field. The overlap of responses by the three individuals at one institution was considered and determined to be minimal. Responses were unitized and categorized and compared to the literature and to the results from the practicing principals study (Campbell & Crain-Dorough, 2010; Campbell, Crain-Dorough, Mense, & Richardson, 2012).

Comparison of Disposition Instruments

A qualitative content analysis was conducted of several instruments measuring dispositions of practicing and/or pre-service principals found in the literature and the field. The instruments analyzed were the Administrator Disposition Index (ADI), the Professional Disposition Qualities (PDQ) for Educators, the Indicator Ph.D. Georgia Instrument, the Pre-service Principals Disposition Instrument, and the Practicing Principals Disposition Instrument.

The content analysis focused on capturing the dispositional constructs that were most commonly found across all instruments as well as the differences among them. The Indicator Ph.D. Georgia Instrument, the Practicing Principals Disposition Instrument, and the Pre-Service Principals Disposition Instrument included dispositional constructs and behavioral indicators. Although the ADI and the PDQ for Educators included mainly behavioral indicators, they both had broader subscales under which these behaviors were categorized. For example, the ADI had two subscales, the Student-Centered Subscale and the Community-Centered Subscale; the PDQ for Educators had three subscales, the Professional Commitment and Responsibility subscale, the Intra/Interpersonal Skills subscale, and the Attitudes toward Learners subscale.

Present Study

The present study presents the results from merging the most commonly found dispositional constructs and behavioral indicators from the instruments and research. The resulting instrument includes five dispositional constructs, each with its own set of behavioral indicators. Many of the behavioral indicators were derived from the superintendents' expectations of their practicing principals and from the university faculty members' expectations of their pre-service principals. Some of the behavioral indicators were derived from the instruments used in the field. In most cases, they were collapsed into a general description rather than a list of behaviors. As displayed in Appendix A, each behavioral indicator is aligned with one of the standards of the Educational Leadership Constituent Council (ELCC). (See Appendix A.)

Two of the instruments mentioned, the Pre-service Principals Disposition Instrument, and the Practicing Principals Disposition Instrument, were draft instruments constructed by the present researchers for use at their university for pre-service principals and for use in the field for practicing principals. After constructing the draft instruments, the educational leadership faculty at their university met to collaborate and define the dispositions and respective behavioral indicators that they felt captured the essence of the most important dispositions for leading schools effectively. The resulting instrument is the culmination of over three years of research and a semester of collaborative work among the faculty at a university in southeast Louisiana. (See Appendix A.)

Results and Conclusions

The instrument introduced here represents a merger of three years' research on dispositions of school leadership. The difficulty in constructing such an instrument underscores the contention that measuring dispositions is quite difficult. The main problem is that a disposition is an internal propensity that inclines one to behave in certain ways in certain conditions and situations. Because it is an abstract, intangible quality, it can only be evident in one's behavior; therefore, instruments that purport to measure dispositions actually measure the frequency with which one displays certain behaviors. Thus, the inclusion of behavioral indicators seems to be a validated method and the most practical means of gauging one's dispositions.

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Appendix A

Items to Measure Dispositions of Pre-Service Principals

Disposition Constructs	Item	The candidate demonstrates the importance of…	Old #	S1	S2	S3	S4	S5	S6
Respect	1	Respecting the feelings, opinions, knowledge, and abilities of others	2				X	X	
	2	Being open to and appreciating diversity	3		X		X	X	X
	3	Conducting oneself with equality and equity	4		X	X			X
Integrity	4	Accepting consequences for personal actions or decisions	5					X	
	5	Understanding and upholding the laws and policies that govern public schools	6					X	X
	6	Behaving in an ethical and professional manner, such as observing confidentiality, punctuality, and appearance	7					X	
	7	Representing him/herself in an appropriate professional manner before various constituencies	8						X
	8	Carrying out responsibilities	26	X		X			
	9	Giving credit to others for their ideas or work (i.e., avoids plagiarism)	28					X	
Flexibility	10	Embracing change that leads to positive outcomes	9	X					X
	11	Having an open mind to new ideas	10				X		
	12	Exercising authentic self-assessment of knowledge, beliefs, and performance	16					X	
	13	Using multiple sources of data to identify problems and to make decisions.	36	X	X		X		X

Disposition Constructs	Item #	The candidate demonstrates the importance of…	Old #	S1	S2	S3	S4	S5	S6
Collaboration	14	Supporting teamwork and working with others to achieve common goals	12	X			X		X
	15	Having the ability to lead groups	13	X	X	X	X		X
	16	Sharing knowledge and responsibilities with others	14			X			
	17	Giving appropriate constructive feedback	15		X				
	18	Having partnerships with multiple stakeholders	35				X		X
	19	Employing effective verbal and written communication	32	X	X	X	X		X
	20	Modeling a positive outlook	30	X	X		X		
Educator and Learner Efficacy	21	Believing that leaders can influence student learning	21		X	X			
	22	Holding high expectations for all students and teachers	22	X	X	X			
	23	Having a willingness to try new ideas and leadership strategies to increase student learning	23		X				
	24	Having enthusiasm for the process of learning	19		X				

A Mixed Methods Analysis of Human Trafficking

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ABSTRACT

Human trafficking is a serious global problem that transcends international borders and disciplinary boundaries. Utilizing mixed methods, all county Sheriffs in Florida (67% response rate) were surveyed and interviews conducted with key constituents. The data suggest that the myriad of well-intentioned agencies responding to the problems need a frame of reference to help them synthesize and conceptualize various approaches to better respond to the multitude of problems related to trafficking. Policy recommendations are to refocus the law enforcement response - which may include various approaches that can simultaneously benefit public health - by incorporating an Epidemiological Criminology framework to help to guide the development of more systematic and integrative insight into the world of human trafficking.

Key Words: Human trafficking, Epidemiological Criminology, sex trafficking, mixed methods

Introduction

Human trafficking presents a conglomeration of problems generally dealt with by public health, criminal justice, social service and immigration agencies. Victim advocates and mass media state that millions are victimized each year. In the United States, Florida has one of the highest concentrations of human trafficking victims (Florida Department of Children and Families, 2004). Law enforcement officers are often the government entity most likely to contact victims first. However, law enforcement officers may not know the cues needed to properly identify a human trafficking situation or encounter, which may account for the previously reported low rate of interaction between officers and victims of human trafficking (Farrell et al. 2010). Quite often, the initial contact is related to "illegal" activity on the part of the victims (e.g., illicit migrant labor, prostitution, illegal immigration, drug use, etc.). Following law enforcement policy and law, the actual trafficking victim may be detained, arrested and/or deported, while others are never even recognized as being a victim. This policy strengthens the traffickers' hold and power over the victims since captives are routinely told by their abductors to shun the police, and not to seek help, as law enforcement officials will arrest them. This control strategy must be negated. It is imperative for victims to seek help and for law enforcement officers to be trained, equipped, and legally mandated to render aid. Law enforcement must be an ally to victims and a solution to the problem, rather than a threat utilized by the traffickers to help maintain control.

However, a quandary exists. If victims are engaged in illegal activity, how can law enforcement ignore their legal mandate to enforce the law? The data collected in this study presents a solution with global relevance by striking a balance between both the enforcement arm (the iron fist) and the need for intervening from a public health perspective (the velvet glove).

Three distinct areas of focus are provided. First, generally, victims fall under two categories: sex workers and other types of labor (domestic help, agriculture, industry, construction, etc.). We will examine the rate at which each is encountered by law enforcement agents. Second, there is great diversity on the numbers of victims of human trafficking cited. We hope to provide an empirical foundation others can build on to start determining the actual number of victims based on experiential knowledge estimates and case data from local law enforcement officials. Third, we are utilizing a new paradigm called "Epidemiological Criminology" where public health solutions and methods are applied to criminal justice problems and challenges, such as those presented by human trafficking.

Relatively few human trafficking studies have been carried out in the United States (Laczko, 2005). This study relied on a mixed methodological approach to provide both practical and scientific insight. First, a comprehensive survey was conducted of all Florida Sheriffs having countywide jurisdiction, and all the units responsible for the policing of human trafficking. Secondly, additional on-going methodology includes interviews with "key informants" such as victims, police officers and attorneys. This mixed methods strategy was employed to provide greater validity and a contextual "view" of the problem and to help ascertain its "real" magnitude. The combined data support an argument that law enforcement agencies should not be looked to as the sole entities for identifying victims of human trafficking.

Human Trafficking Literature

The extent of human trafficking is widely reported to be of monumental proportions. Worldwide, the United Nations (UN) commonly cites the figure at 2.4 million victims per year (Dearnley & Chalke, 2010). As many as 12.3 million people are said to be victims of forced labor, bonded labor and prostitution (Trafficking in Persons Report, 2010). In the United States, Raymond and Hughes report, "*the U.S. government estimates that 50,000 women and children are trafficked each year into the United States . . . primarily from Latin America, Russia, the New Independent States, and Southeast Asia*" (2001, p. 15). More recent estimates place between 14,500 and 17,500 being trafficked into the United States annually (Simon, 2008). Florida, by most estimation, accounts for at least 20% of U.S. trafficking. For example, "*in 2002, approximately 19% of federally certified trafficking victims who received benefits from the U.S. Department of Health and Human Services lived in Florida*" (Simon, 2008: 2) with 27% of all surveyed Florida law enforcement agencies having reported investigating a case of human trafficking, which was second-highest in the United States (Farrell, McDevitt, & Fahy, 2008). Additional resources have estimated that Florida experiences the third highest amount of human trafficking in the United States, behind California and Texas (NHTRC, 2011). There are estimated to be another 850,000 illegal immigrants in Florida (Hoefer, Rytina, & Campbell, 2006). Extrapolations from this (admittedly suspect) data would suggest between 3,500 to 10,000 are trafficked yearly in the state of Florida. However it is clear that the actual numbers are impossible to ascertain due to the clandestine nature of the crime. Yet, according to these same sources, in 2009 there were only

4,166 successful trafficking prosecutions (Trafficking in Persons Report, 2010). There appears to be a disparity between the huge numbers of victims and relatively few criminal prosecutions.

When delving deeper into the mélange of human trafficking, it is becoming more widely known that children are the commodities of choice by the traffickers—primarily for sexual exploitation. Sajjadul-Hoque (2010) conducted a qualitative, in-depth analysis of trafficked female girls in Bangladesh from an anthropological perspective. Sajjadul-Hoque draws a strong comparison between human trafficking and modern day slavery. Yet, when examined more closely in the context of a developed nation and the exploitation of children, especially in the sex industry, the most primordial instinct of needing to protect a child fails to manifest, even when systems of protection and enforcement are thrust into the world of human trafficking. For example, in the United States most trafficking victims are unidentified, especially children, and having less access to services that could help to release them from their trafficking captors (Gożdziak, 2010).

It has been estimated that over 87% of victims are trafficked for sexual services with the majority of the sex victims being women and female children (Rittossa, 2009). Still, to date, there exist conflicting definitions of what constitutes "trafficking". Despite the definitional quandaries, studies continue to consistenly show that victimized children of trafficking experience multiple psychological problems, including anxiety, depression, lacking in motivation, aggressive behavior, feelings of alienation and isolation, difficulty in concentration, and posttraumatic stress disorder (PTSD), along with a host of other psychological and physical maladies (Rittossa, 2009). To address the devastating impact on the child victims of human trafficking—especially those being enslaved to service the sexual pathologies of their captors—the social science profession and its scholars on human trafficking in the United States have shown that through education, advocacy, and research, new insight can be gained and systems to combat this modern form of slavery can be developed (Kotrla, 2010).

In 2007, public opinion research surveys and focus groups were undertaken in Russia to ask the public's opinion regarding human trafficking. On one of the eight questions that were added to a routine national survey administered annually over 40% of respondents indicated that the victim was to blame for their situation (Buckley, 2009). Buckley's relied on mixed methods to examine this and her analysis revealed that respondents consistently placed little faith in the government or its systems in combating the growing crime of human trafficking. Other innovative methods have been used to paint a clearer portrait of human trafficking and policy implications that may, at times, impact how government responds.

According to some sources, human trafficking is the third largest criminal enterprise in the world after arms and drug trafficking (Olujuwon, 2008), reputedly yielding profits exceeding $31.6 billion dollars annually (Rittossa, 2009) up from $10 billion in 2006 (U.S. Department of Justice, 2006). Apart from these purported enormous profits, perceptually, the world of human trafficking has been well removed and placed in the shadows from the public's awareness in the United States. This lack of awareness however is compounded further by the realization that the law enforcement community specifically, and the larger criminal justice system generally, have also been hard-pressed to add human trafficking awareness, analysis and investigation into their training curricula, protocols, and data collection systems, especially when considering the complexities of victimization (Stolz, 2010).

Some of the best data may be derived from experienced law enforcement officers who routinely encounter what could be described as the industry's goods and services, ranging from forced labor to sexual exploitation. Some studies have reported that less than 10% of police agencies have identified and investigated cases as "human trafficking" (Farrell et al., 2010). Still, to date, there are few quantitative studies that are considered reliable, thereby raising the specter if the estimated number of human trafficking cases is actually valid (Laczko, 2005). Even fewer studies have relied on qualitative methods to examine human trafficking (Sajjadul-Hoque, 2010).

The complexity in attempting to understand the crime of human trafficking is further accentuated by the vast diaspora of the criminal enterprise, spanning cultures and geography (Turner and Kelly, 2009). Human trafficking has its tentacles across the full spectrum of criminal offenses, to include sexual exploitation through forced prostitution, forced labor, and forced drug use and transport. Some researchers have even likened it to modern day slavery, an appropriate designation given the forced nature of the crime (Skinner, 2010; Aguilar, 2008). The most widely used definition of human trafficking is: "*a) sex trafficking in which a commercial sex act is induced by force, fraud, or coercion, or in which the person induced to perform such act has not attained 18 years of age; or (b) the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slaver"* (Trafficking in Persons Report, 2010: 1). Definitions such as this greatly increase the number of cases since previously crimes such as "sex act" by someone under 18 would have been statutory rape, prostitution or some other previously existing crime.

Theoretical Issues

Farrell et al. (2009) used the social problems model as the theoretical framework to examine the construct of *trafficking.* Their study analyzed text from U.S. newspaper articles about *human trafficking* from 1990 to 2006. Relying on this method, their findings appear to suggest that the framing of human trafficking as being important by the public has changed over time based on the nexus that has linked policies to national security and their relationship to the identification, apprehension, and criminal prosecution of perpetrators of human trafficking (Farrell, 2009). Thus, a key concern becomes just how likely will law enforcement agencies and various policymaking entities in the government address human trafficking as both a public health and criminal justice imperative.

One alarming and consistent finding is that victims often return to the abusive situation, even when "rescued" (Bernat and Lichtenstein, 2009). Sex victims will often return to the illicit industry, for example.

The U.S. Department of Justice (DOJ) sponsored a 2004 conference in Tampa, Florida, where federal officials developed a grants program in which the public would help develop strategies to raise public awareness as a means to help identify more victims and establish protocols between government agencies and service providers. However, what appeared to be lacking throughout these various campaigns, conferences, and articles is the nexus between the public health and

criminal justice (scholarly and practitioner) communities. Existing literature and theory (Laczko, 2005; van Impe, 2000) suggest the development of multidisciplinary approaches to address the issue of human trafficking. The remainder of the present work proposes such a framework, provides the corresponding rationale, and presents mixed methods data to support this.

Rationale for Epidemiological Criminology

In 2009, Akers and Lanier first presented an argument for criminal justice and criminology having roots in public health and epidemiology. Epidemiological Criminology, or "EpiCrim", was presented as a means of "coming full circle" and reuniting these disciplines and provides the theoretical basis for this study. The following section gives a synopsis of their argument.

There is an increasing overlap and blurring of distinctions between public health and criminology (Lanier, Lucken, & Akers, 2009). Both criminal justice and public health academics and professionals work with marginalized populations; people at high risk to multiple dangers including drug use, health problems, exploitation, and incarceration. AIDS/HIV, for example, provides the first illustration of the interconnection between the two fields since AIDS/HIV was the health threat which first dramatically confronted criminal justice agencies (Lanier, 2006) especially prisons and jails (Braithwaite, Hammett, & Mayberry, 1996). Victims of human trafficking, likewise, fit well under each category and so thus comprise a population of special interest to a public health and criminological analytical framework. Although numerous illustrations can be used to illustrate this merging, there is a scarcity of explicit theoretical and methodological linkage. To address this deficiency, we suggest the development of a new paradigm, or a new framework, which links methods, and statistical models of public health, which are complemented by their criminal justice counterpart (Akers & Lanier, 2009). In this study, we outline the commonalties and distinctions, followed by an example dealing with human trafficking that integrate the disciplinary similarities. We propose Epidemiological Criminology as a bridging framework and a useful conceptual model for addressing problems emulating from human trafficking.

Historical Precedent

According to Akers and Lanier (2009), *"(t)he disciplines of science, technology, and medicine have long recognized the importance of technical and scientific integration in order to advance our understanding of the world. During the Renaissance, the scientist, philosopher, artesian, engineer, physician, and musician were one and the same person. This was the Age of Reasoning—when disciplines had no boundaries and specialization had few allies. However, as the world became smaller—through communications, transportation, and industrialization—disciplines became more specialized. Scientists, including behavioral and social scientists, began looking within their disciplines to such a degree that few external methods and approaches were used to help explain behavioral change or social deviance (Miller, Wright and Dannels, 2001). Disciplines such as epidemiology and sociology began to specialize*" (p.1). For example, Emile Durkheim first established sociology as a distinct science using, ironically enough what we now recognize as "public health factors" to study suicide (Durkheim, 1864/1951). Durkheim relied upon variables such as religiosity, climate and temperament to illustrate that suicide rates, as measured across selected indicators, were more associated with the

larger society, in contrast to the commonly held conclusion that suicide was an individual act. More than any other, Durkheim's research led to the creation of sociology as an academic discipline (Akers & Lanier, 2009). Later, criminal justice and criminology emerged, in part, from this sociological base. As Akers and Lanier (2009) argued, *"(i)n the public health domain, the field of "social epidemiology" of the mid 20th century grew out of awareness that societal characteristics affect the pattern of disease and health in a society. The underlying question of social epidemiology is "what are the effects that social factors have on individual and population health?" The same question Durkheim posed in his 1864 treatise*" (p.1-2). Much later, Park, Burgess, Shaw and McKay and others of the Chicago School of Sociology were conducting epidemiological community studies utilizing cohort groups and methodologies such as spots maps (Aker & Lanier, 2009; Lanier & Henry, 2008). Others such as Robert Merton applied variations of Durkheim's ideas to American society. As Akers and Lanier (2009) pointed out, there were other contemporary scholars, such as Donald Cressey, who argued the need for epidemiology to be included into criminological theory and research, as reflected in his 1960 article entitled "Epidemiology and Individual Conduct: A Case from Criminology*"* (Cressey, 1960).

Areas of Convergence

From a theoretical perspective, both public health and criminal justice practices have shared similar theories, approaches, and lexicon of terms in their quest to describe and define various prevention approaches. As Akers and Lanier (2009) noted public health prevention theories, for example, discuss primary, secondary, and tertiary interventions. To illustrate, primary prevention is used to avoid a healthcare problem *before* it occurs, such as through the use of immunizations or health education for protective behavior (e.g., washing hands, use of condoms as a protective barrier, etc.). Secondary prevention, on the other hand, measures asymptomatic persons who have already developed *risk factors* but in whom the condition is not yet apparent (U.S. Preventative Services Task Force, 1996). Whereas tertiary prevention interventions involves dealing with a disease that has already *entered the host* person (or environment) by trying to mitigate negative effects while continuing to strengthen the higher order functions to fight off any related disease related consequences.

With respect to the criminal justice system, these concepts are not new to crime prevention. Analogous to these public health prevention intervention theories are crime prevention theories. Primary and secondary prevention from a criminological perspective is sometimes referred to as "root causes" or "opportunity reduction" theories of crime and prevention, respectively. For example, root causes of crime theories can range from illiteracy to cranial lesions on the brain that have been known to lead to deviant and criminal behavior (Lanier & Henry, 2008). Preventing some of the root causes of crime may be to primarily target the vectors of the disease, such as street maintenance, broken windows, abandoned or dilapidated buildings, all which have led to a disorganized community (Sampson, 2002, 2003). This approach would be analogous to a public health approach of immunization.

On the other end of the crime prevention continuum is opportunity reduction which, for example, may refer to more locks and lights in homes, neighborhoods, and businesses to reduce risk of crime, or what has been referred to as secondary prevention, or "target hardening". In the context

of public health, the use of protective barriers (e.g., the use of condoms or washing of the hands) can be employed to help prevent cross contamination. Targeting at-risk youth or offenders directly may be another form of secondary prevention to help avoid a "*super-spread*" of a disease; from a criminological framework, it may be to try and prevent a dramatic increase in gang violence and membership. However, after a crime (or vector) has been committed (or entered the host), to prevent future, or further occurrences, or to reduce the recidivism rate, tertiary prevention measures can be instituted, such as through the use of incarceration (or, in the context of public health, it might result in quarantine, such as in the context of a disease outbreak), or for victims (or patients), or human trafficking victims, to learn how to not become re-victimized or re-infected.

In regard to the development of disease, the manifestation of disease is not solely dependent on the presence, or prevention, of a pathogen. That is, tuberculosis (TB), for example, is a result of the inhalation of *Mycobacterium tuberculosis* (Dara, Grzemska, Kimerling, Reyes, & Zagorskiy, 2009; Lönnroth, Jaramillo, Williams, Dye, & Raviglione, 2009). One of the primary conditions, or risk factors, associated with inhalation of the pathogen is population density (Lönnroth et al., 2009) – the more dense the population, the more likely you are to be in close proximity with someone that is infected with TB and the more likely you are to be near that individual when the bacterium is expelled in the form of sputum in a cough. However, once the sputum is expelled, it must be inhaled by a bystander. Significantly, if the bacterium is ingested opposed to inhaled, it will be killed by stomach acids and no infection will occur. Also, if the bacterium lands on an external surface, the exposure to the external environment will ultimately cause it to expire. Furthermore, individuals with more efficient immune systems may be able to fight off the bacteria before it begins to multiply within his or her lungs. The effectiveness of an immune system is dependent, in large part, on a healthy diet and otherwise positive health behaviors (Lönnroth et al. 2009). Recognizing the above, it is clear that, while TB is diagnosed by, and its development is dependent upon, the presence or absence of *Mycobacterium tuberculosis*, which is under the realm of medicine/public health, the process and enabling factors that make infection possible are dictated by additional social institutions – community planning, education, and dietary access, to name a few.

Similarly, crime can be framed in the same perspective. While human trafficking falls under the jurisdiction of various law enforcement agencies, there are numerous additional agencies, departments, and institutions that share the responsibility for the root cause of crime, and which can contribute to the identification of victims. Consequently, while the legal aspects of the social disease of human trafficking are addressed through the criminal justice system, it is short-sighted to make the claim that it is an exclusively criminal concern. In order to fully understand the breadth of human trafficking, and address the problem accordingly, we must acknowledge that it is a multi-institutional concern and that it should be approached as such. In addition to the role of law enforcement in identifying and prosecuting the captors, the public health arena can function as a second identifying source, given the nature of the medical encounter. Additionally, public health officers can provide an understanding of the cognitive rationalization of the captives, which will further our understanding of why the captives *remain* in captivity.

Areas of Divergence

The Association of American Colleges identified, "*the need for new combinations of disciplinary knowledge and research methods to solve new and complex problems*" (Walker, Golde, Jones, Bueschel, & Hutchings, 2008, p. 1). As we advance a new paradigm of human trafficking around the sciences that are focusing on deviant and aberrant behavior, we can reflect on how criminology can have a sub-discipline of epidemiology, or, conversely, how epidemiology can have a sub-discipline of criminology, to help explain disease patterns and their linkage to the human condition, which should take into account the behavioral, biomedical, structural, and environmental factors that can advance our understanding of criminal behavior (Akers & Lanier, 2009; Lanier, Lucken, & Akers, 2009).

Epidemiological methods, and theories that have taken into account issues such as disease patterns and distribution, casual linkages, methods of transmission, identification of hosts and vectors, and the like are useful tools in the context that predictive modeling should not be limited to traditional interpretations of diseases and their spread (Akers & Lanier, 2009). Rather, such models can and have also been linked to the study of aberrant behavior, as in the case of human trafficking (Sampson, Raudenbush, & Earls, 1997). However, to varying degrees, the study of such behaviors still incorporates many of the same methodologies and theories while applying often-different statistical techniques and constructs in the analyses.

In effect, when conceptualizing the study of human trafficking as a '*disease'* for example, we can develop new and innovative models that advance our thinking in how best to develop biomedical, behavioral, and/or structural interventions (Sampson, Raudenbush, & Earls, 1997; Durrah, 1997). This need may exist, especially on an international level. Anne Gallagher (2008) noted, "*Most (countries) are developing and adapting their response on the run, often under strong political pressure, and principally through trial and error*" (p. 318). Parenthetically, incorporating perspectives from epidemiology and their various scientific frameworks into our analysis can lead towards new contextual inquiries and methods that may take into account the legal, social, personal and administrative complexities surrounding human trafficking.

Summary Argument

Agency practice and intellectual tendencies have shown that theories and preferred methods and analysis change over time. All theories and methodologies, regardless of their discipline, experience cycles of change and dominance in policies, practices, and social mores that tend to re-manifest themselves depending on the political or scientific winds of change. Now is a time when a significant number of theories can be drawn "*into a coherent framework that accommodates examining criminal and health behaviors in a consistent manner grounded in the same paradigms regardless of discipline. Now that criminology has reached maturity as an academic discipline, it can again "come full circle" back to the academic public health roots first articulated by Durkheim*" (Akers & Lanier, 2009, p. 4). Indeed, Public Health has taken the steps towards explicitly integrating criminal justice and criminology; take, for example, CDC's efforts to thwart violence and homicide. There continues to exist an abundant literature documenting the adverse health effects perpetuated by the criminal justice system (Durrah, 2005; Golembeski & Fullilove, 2005; Lanier, 2006, Lightfoot, Comulada & Stover, 2007; Lown,

Schmidt & Wiley, 2006; Messina & Grella, 2006; Wallack & Lawrence, 2005). The time is ripe for identification of theory that addresses these adverse health effects across disciplines.

Methods

In 2009, the Florida Department of Law Enforcement (FDLE) expressed an interest and need to empirically ascertain the nature and extent of human trafficking within the state of Florida. Based on the precepts of mixed methods research it was decided to utilize both questionnaires and interviews to conduct the study. In addition, due to policy related, programmatic and legal interest in "import" and "export" locales the study was replicated in the Republic of South Africa (RSA) using identical methodological and analytical procedures. However, the RSA component is not concluded.

The selection of law enforcement agencies as the source for evaluating human trafficking was rooted in the practical reality that any reporting or identification of criminal behavior – human trafficking included – is likely to be processed through the local law enforcement department. By surveying and interviewing county sheriffs, the study utilizes the branch of law enforcement that is likely to encounter the greatest amount of trafficking victims. In Florida (and probably elsewhere), while the limits of jurisdiction for city police departments are defined by municipal borders, county sheriffs not only have jurisdiction within the city, but also beyond the urban boundaries, which include suburban and rural communities. Considering the reality that trafficking victims are utilized not only for sexual labor, which is likely to be concentrated in an urban environment, but also manual, physical labor, it is likely that the limited range of city law enforcement agencies constrains their ability to encounter and detect a substantial proportion of human trafficking victims. Finally, task forces are often convened to address problems like human trafficking and county sheriffs are always major participants. Recognizing these facts, the inclusion of municipal law enforcement departments could have led to an over-representation and overlapping of the perceived prevalence of human trafficking within the urban environment, relative to the observed and reported rural and suburban rates. Sheriffs were thus the most appropriate law enforcement agencies to study.

Instrument Development and Administration

For the questionnaire phase of the study all existing survey instruments that could be located dealing with human trafficking and law enforcement were examined. None were found to be specific enough, nor methodologically elaborate, so a new instrument was developed. After a preliminary instrument was created, FDLE and several senior law enforcement officials reviewed it for content validity and a few suggested changes were made. Next, the survey instrument was pretested with several law enforcement officers to help assess readability and to further assess content validity. After this pretest some answer formats were revised to make the instrument easier to complete. Finally, the completed instrument was sent to researchers in South Africa and they were asked to review the survey instruments for it applicability in their country. This final step resulted in a few additional questions being added.

The first section of the questionnaire (see Appendix A) contained thirteen (13) items measuring the type of department (size, locale, etc.) and county level characteristics (urban, border, etc.). Section 1 also asked if a special unit for dealing with "undocumented citizens" existed and the percentage of the employees who are bi-lingual. Finally section 1 also requested demographic information about the person actually completing the form (Sheriff, staff or sworn officer, years experience, gender, etc.). The second section of the instrument contains 38 items, two of which are open ended. The third open ended section (six items) asks about special problems created by human trafficking, specific case examples, means of victims transport, how undocumented immigrants are screened to determine is victims or not, how the case came to the attention of law enforcement and where victim's country of origin was. In the conclusion of the questionnaire the fourth section simply asked respondents to include anything else important that the questionnaire omitted (it was also open ended).

With mail surveys a low response rate is always a concern. It was reasoned that Florida Sheriffs would be more likely to favorably respond to a request from their paternal organization, The Florida Sheriffs Association (FSA), than to a request from university professors. Consequently, the FSA was asked to sponsor and administer the survey by mail. FSA letterhead was used to explain how to complete the survey, stressed the volunteer nature of participation and assured confidentially. The FSA requested that the surveys be returned to the lead author. Self-addressed return envelopes were included with each survey packet. After one month, a follow-up letter and additional survey was sent to non-responding agencies. After another 30 days elapsed, a telephone call was made to the agencies that still had not responded. In several cases an additional survey was emailed to the agencies that requested them. This is a very close variation (since phone calls replaced additional mailings) of the D. A. Dillman total survey method (Dillman, 1978; Hoddinott and Bass, 1986).

For the interview phase of the study an open-ended format was chosen due to the wide variety of key informants. Respondents included victims, attorneys and law enforcement officers. Bi lingual staff were employed (mandarin Chinese, Vietnamese and Spanish speaking interviewers were trained, but only Spanish speaking were needed). The purpose of conducting the interviews was to provide new areas of inquiry and to provide context to the quantitative questionnaire data. These interviews also presented several disturbing case studies and provided additional areas of inquiry.

Analysis

Given that all of the variables included in the analysis measured the sheriff departments' perception of concern regarding human trafficking, and the theorized relationship that other institutions would have a greater impact on human trafficking than law enforcement, it was deemed most appropriate to perform Analysis of Variance (ANOVA), which enables us to compare a common mean measure (institutional concern regarding human trafficking) across divergent groups and determine whether there is a difference between the groups. We, subsequently, performed the post-hoc Tukey's Honestly Significant Difference (HSD) test. Such analysis made it possible to identify whether the reported perceived mean concern for each variable of interest (EpiCrim variables), regarding human trafficking, was significantly different

from the comparative mean (sheriff department) and whether the EpiCrim institutions were ascribed greater or lesser concern than that of societal concern. Furthermore, qualitative analysis was performed separately, with the interest of gaining a greater understanding of the perceptions of the law enforcement officers regarding human trafficking and the type of institutional exposure experienced by the victims of human trafficking

Findings

Quantitative

Florida has 67 counties and 52 responded to the survey portion of the study. Utilizing the Dillman method a questionnaire response rate of 67 percent was achieved (interestingly one Sheriff wrote a 3 page letter explaining how his budget did not allow him to complete the survey, which would have taken much less time than his 3 page letter took to write). The responding agencies reflected the entire state with regards to urban/rural, coastline/in-land, large/small, and on all other measured departmental and county characteristics. The data was cleaned and entered 3 times, by 3 separate individuals, (a version of the standard double data entry process) to assure a clean data set.

The vast majority of Sheriff Department staff who completed the questionnaire was male (94.2%) and had over 13 years law enforcement experience (94.2%), as shown in Table 1. Most of the responding agencies serviced urban (over 50,000 citizens) areas. Fewer than ten percent (9.6%) were located in rural areas and 10.4% policed both small towns and medium cities. Nearly half the responding agencies had between 101 and 500 officers (48.1%) and eleven agencies (21.2%) were large (over 500 sworn officers). Nearly all (82.7%) of the responding departments had less than 10% of the department who spoke more than one language.

Table 1: Respondent Characteristics

	(N)	Group %	Missing	Total %
Gender				
Males	49	94.2		
Females	3	5.8		100
Years of Experience				
0-3				
4-7				
8-12	3	5.8		
13-18	10	19.2		
>18	39	75		100

Geographic Area				
Rural [1]	5	9.6		
Small city/twp[2]	6	11.5		
Medium city/twp[3]	6	11.5		
Urban[4]	34	65.4	1	98
# Sworn Officers				
< 20	6	11.5		
21-100	10	19.2		
101-500	25	48.1		
>500	11	21.2		100
% Agency that speaks more than one language				
<10%	43	82.7		
11-25%	4	7.7		
26-50%	5	9.6		
51-75%				
>75%				
Total	52	100%		100%

Table 2 reflects the perceived levels of concern with human trafficking by law enforcement officers for their host agency, citizens (public), politicians, public health agencies, and the media in the study areas. The Likert scales ranged from 1-10 on degree of concern. For analytical purposes the scales was collapsed so that 1-3 reflects "low" levels of concern, 4-7 "medium" levels of concern and 8-10 a "high" level of concern. As shown in Table 2, close to 75% of the respondents expressed a low level of law enforcement concern with human trafficking regardless of department size (fewer than 20 sworn officers, 21-100, 101-500 or over 500 sworn officers) or the type of geographic areas (rural, small city, medium city or urban area) serviced by the agency. For a quarter of the respondents, law enforcement concern was "medium" in larger metropolitan areas, and in terms of geographic area. The perceived level of community concern was greater especially in urban areas (though 64% rated it of low concern). More than half of respondents (53%) believed there was little political concern surrounding human trafficking in terms of department size. Similarly 52% of all respondents in geographic area rated it of low concern. Concern regarding Public Health and human trafficking appeared to be "medium" to "high" by 42% of all respondents in medium sized cities/townships (20,001-50,000 residents). Media concern with public trafficking yielded low agreement specifically in agencies with 101-500 sworn officers (35%) and in urban areas with over 50,000 residents according to 42% of the sample. Finally, almost half of respondents (86%) believed that NGOs are of medium to high value based on department size. Moreover, 89% of officials serving urban areas rated the value of NGO's as medium to high.

[1] <5,000 residents
[2] 5-20,000 residents
[3] 20,001-50,000 residents
[4] >50,000 residents

Table 2: Human Trafficking Concern

	Department Size				Geographic Area			
	≤20	21-100	101-500	>500	R[5]	S[6]	M[7]	U[8]
Sheriff perception of HT Problem								
Low	.12	.20	.33	.12	.08	.14	.10	.44
Medium	0	0	.16	.08	.02	0	.02	.20
High	0	0	0	0	0	0	0	0
Level of community concern								
Low	.08	.16	.33	.08	.02	.10	.12	.40
Medium	.02	.02	.16	.12	.04	.04	0	.24
High	.02	.02	0	0	.04	0	0	0
Level of political concern								
Low	.08	.13	.29	.04	.04	.09	.09	.32
Medium	.02	.04	.13	.13	.04	.04	.02	.21
High	0	.04	.08	.02	.02	0	.02	.11
Level of public health concern								
Low	.06	.15	.33	.06	.02	.09	.11	.38
Medium	.06	.04	.10	.10	.06	.06	.02	.17
High	0	.02	.06	0	.02	0	0	.06
Level of media concern								
Low	.06	.16	.34	.06	.02	.06	.12	.41
Medium	.04	.02	.10	.12	.04	.08	0	.16
High	.02	.02	.04	.02	.04	0	0	.06

Table 3 shows the mean and standard deviation for each of the variables most relevant for an EpiCrim argument. As shown in Table 3, relatively little variation exists between how much the police perceive the problems to be (M=2.17), the public's concern (M=3.06), political concern (M=4.00), public health concern (M=3.63), and media concern (M=3.31). Interestingly, non-government organizations (NGOs) were viewed as being very valuable (M=6.91) to help address problems associated with human trafficking.

Table 3: Descriptive statistics

	N	Mean	Std. Deviation	Std. Error Mean
Sheriff concern with HT?	52	2.17	1.757	.244
Sheriff commitment to HT?*	53	6.57	3.214	.441
Citizen's concern with HT?	52	3.06	2.118	.294
Political concern with HT?	49	4.00	2.850	.407
Public Health concern with HT?	49	3.63	2.729	.390
Media concern with HT?	51	3.31	2.557	.358
What is the value of NGO's?*	46	6.91	2.249	.332

* Not included in ANOVA calculation

Table 4: ANOVA – Analysis of Variance in reported concern

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	96.967	4	24.242	4.116	.003
Within Groups	1460.637	248	5.890		
Total	1557.605	252			

While Table 4 indicates that there is a significant difference in the reported average levels of concern, Table 5 communicates the specific difference in means between the sheriff's concern regarding human trafficking and the sheriff department's perception regarding the significance of human trafficking to the institutions relevant to the concept of Epidemiological Criminology. According to the analysis, the survey respondents perceived human trafficking to be a greater concern for the political sector and the public health establishment than for law enforcement. In other words, the very agents of law enforcement whom we assume to be the primary respondents to human trafficking reported human trafficking to be of greater concern for politicians and public health professionals. While both of these findings are relevant to the concept of EpiCrim, in the sense that they support the idea that the criminal justice system needs to reach out to external agencies in order to better address and understand criminal behavior, the most pertinent is the perception that human trafficking is a greater concern for public health than for law enforcement. While it is true that the average perception of public health's concern with human trafficking is between low and medium, it remains that the law enforcement officers perceive human trafficking to be of a significantly greater public health concern than that of law enforcement. Such a finding supports the earlier claims that the criminal justice system would benefit from the inclusion of public health in addressing social illnesses.

Table 5: Difference between means of sheriff's concern and concern of other EpiCrim relevant institutions – Tukey's HSD test

	Mean Difference	Std. Error	95% CI
Citizen's concern with HT?	0.885	.476	-2.19 – 0.42
Political concern with HT?	1.827**	.483	-3.15 – -0.50
Public Health concern with HT?	1.460*	.483	-2.79 – -0.13
Media concern with HT?	1.141	.478	-2.45 – 0.17
F-Ratio	4.116**		

Sig. *.05; **.01

Qualitative

Two Spanish speaking (with very limited English skills) young women, who had been arrested by the Orlando Police Department (OPD) during a Craigslist sting operation, on prostitution charges, retained a local Spanish speaking Orlando attorney. The attorney was aware of the research project and so he contacted the lead author after interviewing his two young clients. He was subsequently interviewed on two occasions and offered case files. When asked about what led them into prostitution, his clients relayed the following harrowing tale, "*after meeting two men online, the women (aged 18 and 20) and one infant flew to Orlando from the Dominican Republic, for a vacation. Upon arrival at the Orlando International Airport (OIA) the two males met the women. Shortly thereafter all their identification and money was taken, the women were raped and thrown in the back of a white van. This van then became their home. They were advertised on Craigslist and taken from residence to residence where they were forced to engage in prostitution (their captors held the infant child as ransom and had all the girls' belongings, money and identification). After a period of months the girls showed up at the address being used by the OPD for their sting operation. The girls were arrested for prostitution and the van drove off. The girls were bailed out by their captors and went back into prostitution, having no other options. The Police were never made aware of their story, victimization or ordeal. The girls never confided in the police since exactly what their captors predicted (that the police would only arrest them) had occurred. After posting bail, meeting with the attorney twice, both girls disappeared.* It is reasonable to assume that the story did not have a happy ending. The criminal case for prostitution was never resolved and the attorney, despite efforts, has never been able to locate the two girls. Law enforcement was conducting the sting in response to the highly publicized Boston murder related to a Craigslist prostitution case. From their perspective they were successful in arresting more than a few prostitutes. However, from another perspective, they were unable to identify, much less solve, a much greater crime of human trafficking. The second interview yielded an equally disturbing illustration.

A senior law enforcement officer met with the lead author at the FDLE headquarters in Tallahassee, Florida to be interviewed. Since the criminal case is on-going no identifying information is provided. The officer also spoke under an agreement of anonymity. His story,

while equally disturbing, had a better conclusion. *"In a large metropolitan area a young white female was reported missing while jogging. Her family contacted the police and posted flyers. Months passed with absolutely no leads or contacts. After several months a cell phone call was placed to the girl's parents homes. The sobbing girl spoke with her Dad and asked him to rescue her. She was dancing in a local adult entertainment bar just a few miles from her home.* The story then relayed by the victim was, "*after being snatched off the street while jogging, I was taken to an apartment and my driver's license, clothes and all shoes were taken. I was repeatedly raped, and otherwise abused, over several weeks, by numerous men. A woman or one of the men was always present, as were several another female victims. After several weeks, nightly I was taken to this club and was forced to strip and provide table and lap dances to men. The Club bouncers knew I was there against my will and never allowed me near the front entrance door or rear exit door. One was always stationed near the doors collecting entrance money from patrons. After several weeks, I made friends with a regular client or customer. I never had to engage in any sex acts at the club, only dance, and turn my money over to the men at the apartment. On this particular night I asked my customer if I could borrow his cell phone and took it into the back dressing room, which was luckily empty. I called my Father and he said to wait fifteen minutes then to run out the front door. In fifteen minutes I did just that and he was waiting to whisk me off. He drove me straight to the police after I told him my story.* The officer then continued his version of the story, "*once in police protection a warrant was quickly obtained for the apartment and a raid conducted. Multiple arrests followed. The woman who ran the apartments was a former kidnap victim herself. One disturbing aspect was that the kidnappers threatened the girls' families with violence if anyone resisted or misbehaved (since they had all the girls' driver's licenses). Half a dozen young girls were found in the apartment and only two agreed to testify. Chillingly, we found a drawer full of young women and girls' driver's licenses".* The case has not been resolved but it is an example of a localized, relatively sophisticated trafficking case. It was psychologically sophisticated in the sense that several weeks of torture and abuse were used to break down the girl's resistance prior to their being taken to the club. It was organizationally sophisticated since a legal, public business was utilized as a source of revenue for the traffickers. The law enforcement resolution of the case came about due to the bravery and innovation on the part of one of the victims. Luckily, she had memorized her Fathers phone number and was brave enough to call him, and run out of the club.

The two examples provide context to the data and issues. Each also show how other agencies can intersect and work with law enforcement. For example, code enforcement officers are privy to both apartment complexes and adult entertainment establishments (and many other possible locations) so could become sentinels for illicit behavior. Additionally, both of the case studies convey the previously alluded to fact that law enforcement agents are ill-equipped to recognize, and therefore address, human trafficking. In both cases, it was the human trafficking victim that found the law enforcement agency, opposed to the police identifying the victim, and in one of the cases the police actually released the captives back to the captors. The qualitative data, combined with the previously referenced quantitative data suggesting that the sheriff department does not perceive human trafficking to be a major concern for its function, provides additional support to the idea that additional agencies need to be considered when attempting to identify, and quantify, the incidence of human trafficking.

Discussion and Recommendations

Human trafficking, the more palatable contemporary term for the historically-accurate term of 'slavery,' is an age-old personal and societal problem. For victims of sex traffickers, the immediate and long-term effects are devastating. Beating and humiliation are common, resulting in a sense of helplessness. Additional possible consequences include serious emotional and psychological disorders including PTSD, HIV/AIDS and a host of other STDs. At a macro level, it impacts society by casting a shadow of fear over everyone, especially vulnerable, foreign speaking young people. It arouses fear in parents and relatives. For labor (domestic and farm) trafficking victims, economic necessity often forced their involuntary servitude. Their continued participation is due to the same economic issues. The massive poverty and actual starvation facing many people in the world's poorest regions make involuntary servitude one option. In Florida the data show considerable more police awareness of labor victims compared to sex victims. This trend was apparent regardless of type community (urban or rural). While sex workers/victims receive the most media and political rhetoric, perhaps more attention should be directed towards the plight of forced labor workers.

The apparent proliferation of human trafficking calls into question the ability of government to protect disempowered individuals. Many laws and their selective enforcement result in large segments of the society not trusting, relying on, nor cooperating with the police. Terrorism and drugs are not the sole threats facing society. These findings show that law enforcement does not rank human trafficking very high on their list of societal concerns. Perhaps this is due to the "underground" nature of this activity, or perhaps due to victim characteristics. It is also possible that the "apparent proliferation" is wrong, and there are many fewer cases than those suggested by non-law enforcement sources.

It is worth noting that the average reported amount of commitment to addressing human trafficking by the sheriff departments was 6.57, which is the second highest reported average. However, this level of commitment seems to be disconnected from the reported level of concern regarding human trafficking, which had the lowest average at 2.17. This also introduces the fact that level of commitment was not used as the variable of comparison. Methodologically *and* theoretically, the utilization of level of concern was a more appropriate comparison group than level of department commitment. Given that the EpiCrim variables reflected a level of concern, opposed to the institutions actions pertaining to human trafficking, it would have been inappropriate to compare the sheriffs' perception of level of concern for the EpiCrim institutions with the sheriff department's action regarding human trafficking. It should also be emphasized that the reported level of commitment should not be interpreted as reflective of the sheriff departments' level of concern regarding human trafficking. This is supported by the aforementioned disconnect between the reported level of commitment and the reported level of concern. Given that the focus of the present research is to propose that human trafficking policy would benefit from the inclusion of EpiCrim institutions (including public health), it is telling that the law enforcement agencies reported a significantly greater degree of concern for public health and politics than the overall societal concern, regarding human trafficking.

Regardless, the results of this study support the perception that in many cases victims do not come to the attention of law enforcement officers. In each of the case studies presented, the

victims came to official attention not through law enforcement efforts. The reasons are complicated. First, the most vulnerable in society, the ones most likely to be trafficked, do not see government (especially law enforcement) as an ally but rather as an entity to be feared and avoided at all cost. Second, fear of deportation and lack of legal status in the United States results in ignorance of the few statutes that have been enacted to aid victims. Third, the psychological control applied by traffickers through repeated rapes and torture is powerful. Even Elizabeth Smart, the wealthy, educated, loved, American girl who was kidnapped from her home in California did not seek law enforcement help on numerous opportunities, when she could have, as a result of her rape and torture. Imagine how much worse it must be for poor, illiterate, non-English speaking people. Finally, law enforcement officers are often narrowly focused on solving specific problems. For example, structurally, there are numerous specialized gang units, drug units, and homicide units. At the individual level police officers often selectively enforce the law based on their own personal belief system, or according to the whims of a supervisor. Language is an obvious impediment, if effective communication cannot occur many victims will remain undetected. This study showed few officers to be bi-lingual.

In summary, the interview data illustrate several themes suggested by the questionnaire data. First, the survey data showed relatively few cases of human trafficking are investigated by Florida law enforcement agencies. Each of the interviews suggests a reason why – much of law enforcement policy, training, and emphasis is aimed at specific types of crime (drug use, prostitution, etc.). Second, police, by training and aptitude, do not care about casual reasoning. Most officers don't care WHY a person abuses drugs, or WHY a young girl strips or engages in prostitution, they only care about proving that the crime for which they made an arrest did, in fact, occur, and that a burden of proof is established. Third, the absence of language skills may be a serious impediment to the law enforcement response to trafficking cases.

Epidemiological Criminology-based response

It is clear that human trafficking is not a health concern in the same framework as HIV/AIDS, or drug use. It is not an illness, in the sense that it has a defining pathogen, chemical dependency, or genetic predisposition. However, human trafficking can very well be framed as a *social* illness, much in the same way that involuntary poverty, transience, and starvation are social ills. Consequently, it is not only appropriate, but also beneficial, to apply epidemiological theory and methods to the already existing criminological understanding of the issue. This understanding includes, among other things, the recognition that, while there are primary determinants of disease, every disease/illness/infection has a series of constraining and enabling factors that interact with the predefined cause, and it is this interaction that ultimately determines whether the disease manifests. As such, if it is possible to identify those constraining and enabling factors, then doing so enables the opportunity to gain a greater understanding of the disease as a whole, and potentially reduce the burden and danger of the disease.

The data and interviews conducted during this study show there is little question of the willingness of law enforcement officers to assist victims of human trafficking. Most officers are well intended, devoted civil servants. The problems surface when officers are too narrowly focused and fail to comprehend the larger picture. As we show, for example in Orlando

responding to Craigslist prostitution was the direct result of a media driven homicide case in Boston.

Consider also that asset forfeiture laws fuel the 'war on drugs' and not a personal belief held by officers that smoking weed (for example) is a serious threat to society. The data also suggests that, while law enforcement agents are not overly concerned about the existence of human trafficking in relation to their own function (M=2.24), it is apparent that they perceive it to be a greater issue for agencies and organization beyond the realm of criminal justice, including the public health establishments (M=3.553). This finding supports the proposition that the medical establishment is one of three avenues through which human trafficking victims are often identified (Logan et al., 2009). This outcome supports the concept, advanced by the thinking within EpiCrim, that agents operating outside of the legal arena are more appropriately equipped to address certain social ills. This is significant since such agencies and agency workers are, often, in a better position to identify victims of trafficking. The interviews also clearly demonstrate that for-profit organizations and individuals, such as criminal defense attorneys, may be in an ideal position to identify victims of human trafficking. However the adversarial nature of American criminal justice may impede collaboration and interactions between attorneys and law enforcement; this was illustrated by the Orlando defense attorney who brought a case to the attention of researchers rather than law enforcement. One possible resolution is looking to the medical community for policy driven practice. For example, often general practitioners will diagnose an ailment or disease and then refer the patient to a specialist. Perhaps the criminal justice system, or non-government organizations, should likewise develop specialist who specialize in treating and helping victims of human trafficking. This study illustrates the need and suggests a willingness of law enforcement agencies to embrace such a policy. The specialized drug enforcement units show the police ability to focus on specific problems. Asset forfeiture laws have funded and provided the motivation for many drug eradication units. Perhaps similar laws should target traffickers.

Policy based on EpiCrim is suggested by Bernat and Lichtenstein (2009) when they argue that service workers must recognize the cycle of violence in trafficking victims is the same as with victims of domestic abuse and include: intimidation, coercion, threats, emotional and physical abuse, economic abuse and the use of "*children as pawns to gain power and control.*" Trafficking victims are more likely to also suffer "*forced isolation, intimidation and economic control*" (Bernat & Lichtenstein, 2009). This is exactly what occurred in the first situation presented in our qualitative findings. As such, "*law enforcement officers and service workers should be educated about the similarities between human trafficking and domestic violence*" (Bernat & Lichtenstein, 2009). Fear of law enforcement and language skills are serious impediments however as the data we collected suggest. Finally, Bernat and Lichtenstein (2009) found victims do not seek help voluntarily. Consequently, they concluded that it is up to the law enforcement agencies, and operating personnel, to reach out to local immigrant organizations in order to develop a level of trust, which may ultimately translate into more effective methods of dealing with human trafficking. Law enforcement respondents to this study overwhelming recognized the value of NGOs, suggesting this strategy holds great promise. The Florida Department of Law Enforcement (FDLE), a sponsor of this study, previously concluded, "*NGOs and non-profits have played a vital role in uncovering cases of human trafficking, translating languages, and providing services for the victims, training law enforcement and victim*

advocates, and lobbying for policies which concern human trafficking. For instance, domestic violence shelters have served as temporary homes and counseling for tracked victims until they are ready to leave" (Simon, 2008, p. 7). Proponents of Epidemiological Criminology would suggest that public health prevention theories such as primary, secondary, and tertiary interventions be developed for human trafficking. NGOs could play a vital role in identification (primary) to prevent human trafficking *before* it occurs, perhaps through economic aid to impoverished areas. Secondary prevention might target at-risk persons who have already developed *risk factors,* such as early identification of vulnerable young girls. Since tertiary prevention interventions involve dealing with a disease that has already *entered the host* person (or environment) trafficking victims will require special efforts and interventions to help them recover, physically, emotionally and economically. A tertiary prevention goal would be to prevent victims from returning to the harmful practices they engaged in while victims.

The treatise is founded on the concept of Epidemiological Criminology. EpiCrim can serve as a theoretical foundation for beginning to address the problems related to, caused by, and that lead to human trafficking. Despite these fledgling first steps, much remains to be accomplished. What we envision for Epidemiological Criminology is addressing anything that affects the health and well-being of a society. We advocate a tighter binding of criminology and public health, resulting in promising theories that emerge from either domain which will inform the other and lead to healthier and safer communities. We anticipate that by tighter bonding between criminology and public health, methodological breakthroughs in one discipline will more quickly become available to the other so that the quality of information used in decision making is improved leading to healthier and safer communities. Finally, we encourage that through strengthening the scientific bonding between criminology and public health will support the more complete integration of public health and criminal justice practice by helping practitioners in both domains speak a common language and with a heightened awareness of the disciplinary demands of the other. At the highest policy levels the "war" metaphors need to be replaced with "health" metaphors. Policy makers need greater dependence on social science methodologies – such as crime mapping and medical geography – for legislative decision-making, especially for complex and eclectic topics such as human trafficking that clearly exceed traditional law enforcement efforts. In the theory and research domains there needs to be more explicitly defined methodological and programmatic linkages. For practitioners, greater understanding and accommodation is required, especially between criminal justice practitioners and those working in public health. For example, as we show above, resolution of the problems identified with human trafficking will significantly benefit from greater interdisciplinary interaction.

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Appendix A

Human Trafficking International Law Enforcement Questionnaire

The Florida Department of Law Enforcement (FDLE), the Florida Sheriffs Association, the Department of Social Work and Criminology at the University of Pretoria (UP) and the Virtual Center for Epidemiological Criminology (VCEC) are conducting an international study on human trafficking. Your department has been specially selected to participate in the survey portion of the study. Your voluntary cooperation is vital and is greatly appreciated. By completing the survey you indicate your voluntary cooperation.

Human Trafficking has been defined by the United Nations as: *The acquisition of people by improper means such as force, fraud or deception, with the aim of exploiting them.* (http://www.unodc.org/unodc/en/human-trafficking/index.html)

This questionnaire will enable us to address the social problem of human trafficking from an officer of the law's perception. Simply circle the response that you feel is most accurate. If unsure, or if the question does not apply, simply skip it. PLEASE TRY TO ANSWER AS HONESTLY AS POSSIBLE. We also urge you to try and answer all the questions to enable us to make accurate calculations and comparisons between agencies. We are trying to determine the

extent of the problem. You, and your Department, have complete anonymity. We only record who has responded so that we can submit a second request to non-respondents. This means that no names or identifying characteristics will be mentioned in any aspect of the study. The data will be used to help develop police and public policy to better deal with the problem. All the study results will be readily available to all interested parties. If you have any questions or need help completing the form, please contact Dr. Mark Lanier at lanier@mail.ucf.edu or at hra001@hotmail.com.

The questionnaire is divided into 4 sections. Section 1 focuses on your individual and your agency's demographic information. Section 2 focuses on the specific perceptions you have about this phenomenon. Section 3 is open-ended and addresses general crime issues. In Section 4 you have the opportunity to voice any aspect that we have omitted in the questionnaire.

Section 1: Demographical information of the reporting official

1). What is your gender? **Male** Female

2). Country of residence: South Africa **United States**
Other_____

3). Your total years service in policing:
0-3 4-7 8-12 13-18 **Over18**

4). City or county where you work as a police official: ___**Okeechobee**_____

5). Your job title or role is: _**Undersheriff**_____

7). How would you best describe your department's geographic area of responsibility?
a. Rural (<5,000 residents) b. Small city/township (5-20,000 residents)
c. Medium city/township (20,001-50,000 residents) d. Large (>50,000 residents)

8). What is the size of your department (by "sworn" or officers having arrest power)?
a.<20 officers b. 21-100 officers **c. 101-500 officers** d. >500 officers

9). What percentage of your department speaks more than one language?
a. <10% b. 11-25% c. 26-50% d. 51-75% e. >75%

10). Is your department located on an international border?
a. Yes **b. No**

11). Is your department considered:
a. Local or City **b. County** c. State d. National

12). Do you have a special unit for dealing with "undocumented citizens" (this refers to illegal immigrants, non-citizens and others who are not legal residents)?

a. Yes **b. No** c. Unsure

13). Do you have a special unit for dealing with vice crimes?

a. Yes **b. No** c. Unsure

Section 2: Perception with regard to Human Trafficking Scale

1). How many community complaints have you received on human trafficking in the past year?

4 - 6

2). How many cases has your department dealt with regarding human trafficking in the past year?

2

On a scale of 1 to 10 (with 1 being none and 10 the most or highest):

3). How much of a problem has human trafficking been in your area?

(None) 1 2 3 **4** 5 6 7 8 9 10 (High)

4). How would you rate your line/patrol officers' understanding (definition and enforcement) of human trafficking?

(None) 1 **2** 3 4 5 6 7 8 9 10 (High)

5). What is your department's level of commitment to dealing with human trafficking?

(None) **1** 2 3 4 5 6 7 8 9 10 (High)

6). What is the level of community (citizen) concern with human trafficking?

(None) **1** 2 3 4 5 6 7 8 9 10 (High)

7). What is the level of political concern with human trafficking?

(None) **1** 2 3 4 5 6 7 8 9 10 (High)

8). What is the level of public health (medical) concern with human trafficking?

(None) **1** 2 3 4 5 6 7 8 9 10 (High)

9). What is the level of media (print and/or television) concern with human trafficking?

(None) **1** 2 3 4 5 6 7 8 9 10 (High)

10). In your jurisdiction, how great a problem is created by "undocumented citizens" (this refers to illegal immigrants, non-citizens and others who are not legal residents)?

(None) 1 2 **3** 4 5 6 7 8 9 10 (High)

11). In your jurisdiction (policing precinct), how great a problem is created by "undocumented citizens" and prostitution?
(None) 1 2 **3** 4 5 6 7 8 9 10 (High)

12). In your jurisdiction, how great a problem is created by "undocumented citizens" and car jackings?
(None) 1 **2** 3 4 5 6 7 8 9 10 (High)

13). In your jurisdiction, how great a problem is created by "undocumented citizens" and domestic (household) labor?
(None) 1 2 **3** 4 5 6 7 8 9 10 (High)

14). In your jurisdiction, how great a problem is created by "undocumented citizens" and drug use?
(None) 1 2 **3** 4 5 6 7 8 9 10 (High)

15). In your jurisdiction, how great a problem is created by "undocumented citizens" and drug selling?
(None) 1 2 **3** 4 5 6 7 8 9 10 (High)

16). In your jurisdiction, how great a problem is created by "undocumented citizens" and burglary?
(None) 1 2 **3** 4 5 6 7 8 9 10 (High)

17). In your jurisdiction, how great a problem is created by "undocumented citizens" and HIV/AIDS?
(None) 1 2 **3** 4 5 6 7 8 9 10 (High)

18). In your jurisdiction, how great a problem is created by "undocumented citizens" and homelessness?
(None) 1 **2** 3 4 5 6 7 8 9 10 (High)

19). In your jurisdiction, how great a problem is created by "undocumented citizens" and street vendors or car guards?
(None) 1 **2** 3 4 5 6 7 8 9 10 (High)

20). In your jurisdiction, if an "undocumented citizen" is found engaged in prostitution how likely is it that he/she would be arrested?
(None) 1 2 3 4 5 6 7 8 9 **10** (High)

21). In your jurisdiction, if an "undocumented citizen" is found engaged in prostitution how likely is it that he/she would be given a social service referral?
(None) **1** 2 3 4 5 6 7 8 9 10 (High)

22). In your jurisdiction, if an "undocumented citizen" is found engaged in prostitution how likely is it that he/she would be given a physical or health exam?

(None) 1 2 3 4 5 6 7 8 9 **10** (High)

23). How much training do your officers receive on human trafficking?
(None) **1** 2 3 4 5 6 7 8 9 10 (High)

24). What is your department's level of commitment to proactive policing?
(None) 1 2 3 4 5 6 7 8 9 **10** (High)

25). What do you perceive the level of support from the community towards the police?
(None) 1 2 3 4 5 6 7 8 9 **10** (High)

26). How highly do you rank the value of local non-government organizations (NGO's)?
(None) 1 2 3 4 5 6 **7** 8 9 10 (High)

27). How highly do you rank the value of the training provided your officers for dealing with diverse ethnic and racial groups?
(None) 1 2 3 4 5 6 7 8 9 **10** (High)

28). How much need is there for special funding to deal with human trafficking?
(None) 1 2 3 4 5 6 7 8 9 **10** (High)

29). How would you rate levels of cooperation among local, state and international authorities regarding human trafficking?
(None) 1 2 3 4 5 6 **7** 8 9 10 (High)

30). How great a role does local business/industry play in human trafficking?
(None) 1 2 3 4 5 6 7 8 9 **10** (High)

31). Do you view human trafficking as a societal problem?
(None) 1 2 3 4 5 **6** 7 8 9 10 (High)

32). Do you think that a relationship exists between undocumented citizens and human trafficking?
(None) 1 2 3 4 5 6 7 8 9 **10** (High)

33). Has your department ever received special funding to address human trafficking?
a. Yes **b. No** c. Unsure

34). Are victims more likely to be trafficked into, or out of, your jurisdiction?
a. Into b. Out c. Unsure

35). Which form of trafficking is more prevalent?
a. Labor b. Sex workers c. Other _____

36). Which special unit would most likely address human trafficking issues?
a. Human Trafficking Unit b. Vice **c. Drug** d. Regular patrol

38). What type department can best deal with human trafficking?

a. Local or City b. County c. State **d. National** e. Combinations

Section 3: Perception with regard to crime and the involvement of trafficked individuals

1). Can you describe any special problems human trafficking has presented for your community? (Use the back if you require additional room or attach a separate sheet).

2). Have you had any significant human trafficking cases you can describe?

3). Can you describe how the victims were transported during trafficking?

4). Do you make effort to screen illegal foreign workers, prior to deporting them, to determine if they were trafficking victims?

5). How do trafficking cases most often come to your department's attention?

6). What countries do victims most often come from?

Section 4: General comment

Please discuss anything that we have omitted in this research that can contribute to this study.

Thank you for your contribution

About the Author

Mark M. Lanier received his interdisciplinary doctoral degree from Michigan State University with concentrations in Criminology, Sociology and Psychology in 1993. He is currently Professor and Associate Director of the Cyber Institute at the University of Alabama. He has held numerous administrative roles including chairperson, Dean's assistant for special projects, graduate director, IRB chair, and is co-author of 3 Ph.D. degree proposals. He has over 100 scholarly publications, including 12 books, most recently, *Research Methods in Criminal Justice and Criminology: A Mixed Methods Approach* (2014) for Oxford University Press with Lisa Briggs and *Essential Criminology* co-authored with his mentor Stuart Henry, which is in the 4th edition (2014) with Desire' Anastasia. The book he is most proud of however is a research method text (2014) that he co-authored with 3 undergraduate students. Dr. Lanier has been involved with over $25 million in funded research related to law enforcement and HIV/AIDS. He has received both research and teaching awards as have a large number of his students. Dr.

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Societal Issues in Social Studies and Science Education: Promoting Responsible Citizenship

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ABSTRACT

Pedagogies that promote authentic student involvement are increasing as communities continue to grow and to change. In this manuscript, teacher candidates in an elementary education methodology class involving social studies and science instruction became engaged in a Science, Technology, and Society (STS) planning investigation to understand the impact science and technology have on society. Involving teacher candidates in the Science, Technology, and Society (STS) process through focusing on the impact of a local development, the teacher candidates became engaged and began to understand the impact science has on the community. Through the planning process, teacher candidates became aware of the importance of implementing STS investigations with future classes of elementary students to promote scientific literacy and responsible citizenship.

Key Words: Science, Technology, and Society, social studies, community, scientific literacy, responsible citizenship

Introduction

Science-Technology-Society (STS) is defined as a curriculum that integrates economic, ethical, social, and political aspects with scientific and technological developments. STS principles demonstrate how personal and social perspectives are related to societal as well as community issues and presents information about how societal issues affect many members of the community. The *National Science Education Standards* discuss the importance of students achieving scientific literacy (NSES 1996, p.21). "Understanding the relationship among science, technology, and society is essential for achieving basic science literacy" (Yager & Akcay, 2007,

p.13). In addition, the *National Social Studies Standards* (NCSS) also includes a thematic strand specifically addressing how to incorporate science, technology, and society. According to *National Council of Social Studies (*NCSS), "an understanding of science and technology in their social contexts allows learners to question and analyze the impact of science and technology on society, both in the past and the present, as well to evaluate what the future may bring in these areas" (Adler, 2010, p. 150).

"The STS framework is based on an interdisciplinary constructivist philosophy that promotes the genuine and active engagement of students in the learning process" (Amirshokoohi, 2010, p. 57). Therefore, "the central premise of STS teaching is helping students develop the knowledge, skills, and effective qualities in order to take responsible citizenship action on science and technologically oriented issues" (Hassard, 2005, p. 400). Additionally, in the 2012, *A New Framework for K-12 Science Education: Practices, Crosscutting, Concepts, and Core Ideas*, present the idea that elementary students should be prepared to be responsible citizens in a complex and increasingly technologically rich world. Therefore, educators must present broad societal issues to in elementary classrooms. This article describes using the STS curriculum as a means for teacher candidates to learn about the importance of science, technology, and society and to see how to plan an investigation that would incorporate social studies and science.

Using the Four Phases of STS in the Undergraduate Classroom

Dass' Four Phases of Science, Technology, and Society are presented to the teacher candidates. Dass' four phases include (a) invitation, (b) exploration, (c) proposing explanations and solutions, and (d) taking action (Dass, 2005). Dass states, "recent science education reform efforts have focused on science instruction that enhances student understanding of the nature of science, enables them to critically analyze scientific information as well as to apply it in real-life situations, and sets them on a path of life-long learning in science" (Dass, 2005, p. 95). After discussing Dass' research and the four phases of Science, Technology, and Society, teacher candidates realize elementary students need to analyze real-life situation within the local community.

Invitation Phase

Teacher candidates begin by thinking about the connections between science, technology and society. Teacher candidates relate the STS information to a controversial vehicle manufacturing plant being built in the local area. Teacher candidates begin to realize the connections and interconnectedness between science, technology, and social education. Teacher candidates research and find an area newspaper article about the vehicle manufacturing plant. After a discussion about the newspaper article, it is extremely obvious that some teacher candidates have very narrow mindsets about the car manufacturing plant. Most of the teacher candidates' attitudes are based solely on how the vehicle plant would impact the surrounding communities where they currently live. Some are optimistic about the situation having family members who were hopeful about job opportunities, while others are quite disgruntle due to family members being coerced into selling their land to allow room for the vehicle plant and highway systems.

During the invitation phase, teacher candidates return to the STS acronym and discuss how each one relates to the car manufacturing plant issue. For the science portion, conversations include the physics behind the construction of the plant such as gravity and force. Environmental science is explored through discussions about erosion including finding the correct soil type that exists where the facility is built and if additional soil is needed in the area. Life science is examined and teacher candidates became keenly aware of what wildlife would be affected by the construction of the plant. In addition, during post-construction of the plant, the teacher candidates examine the physics behind the vehicles that are produced at the plant.

For the technology portion of STS, teacher candidates include plans to guide students to the idea of "quality control" behind the vehicle manufacturing plant. The teacher candidates plan discussions about how the vehicle manufacturing plant mass-produces vehicles with a goal that all models would be exactly the same. In addition, teacher candidates include grand discussions about safety concerns and the technology used in testing the vehicles for safety and the crash dummies simulations.

Also included in technology portion is the importance of communication within the different departments of the plant. At the car manufacturing plant, the Information Technology (I.T.) is of vast importance to share real time production data not only within the main factory, but also with supplier plants for scheduling and shipping purposes. While discussing the technology portion of the plant, teacher candidates begin to realize the importance of the marriage of science and technology for the success of the plant.

For the society portion, teacher candidates want elementary students to understand the big picture of how the plant affects more than what meets the eye. Plans are made to question elementary students and ask them to consider all the citizens as well as the important societal issues surrounding the car manufacturing plant. In addition, teacher candidates think about how in a community citizens engage in responsible civic action on issues and problems that face the community.

Exploration Phase

With a solid understanding of the meaning of STS and how it directly applies to the car manufacturing plant, teacher candidates plan to use a familiar science approach—inquiry learning. Teacher candidates plan a class discussion that includes guided inquiry. Questions such as these are planned for the elementary students, "What are the societal needs behind the plant?" "Why were the Community Development Foundation and the state governor aggressively recruiting the plant?" "Do they believe it would help make the state more industrial and provide a boost in economic growth?" Teacher candidates determine ways the elementary students could gather information from local resources and plan small group brainstorming activities including using resources such as: Internet, newspaper articles, journals, guest speakers, etc. Teacher candidates realize through all of the informational reading and research, elementary students would see how different citizens and organizations are affected by the vehicle manufacturing plant.

Next, teacher candidates plan discussions for students about the plant and how each group of citizens would be affected in both positive and negative ways. In addition, teacher candidates create an Observational Checklist to guide plans for the Open Forum where students would be involved in a role playing situation (see Appendix B).

Proposing Explanations and Solutions Phase

During the proposing explanations and solutions phase, teacher candidates plan class discussions for elementary students to brainstorm thoughts about which groups of citizens would be most affected. Each group of citizens affected by the car manufacturing plant would be charted. This list would include people such as (a) local business owners, (b) farmers/landowners, (c) environmentalists, and (d) new employees. Plans include having the elementary students divide into four groups that represent each group of citizens. After engaging in the topic, teacher candidates would include plans that encourage elementary students to synthesize information and form opinions about the plant and how each group would be affected (see Appendix B).

Action Phase

In the final action phase, teacher candidates include a role-playing activity where elementary students create a town meeting. Each group of responsible citizens presents the positive and/or negative views of how their group would be affected. One elementary student could portray a newspaper reporter and circulate around the room asking each group's opinion. Group discussion activities include plans where students present either pro or con views in open forum. With these ideas in place, teacher candidates create a checklist as a valuable evaluation instrument to assess the group discussions (see Appendix B).

Conclusion

Dass' Four Phases Approach of Science, Technology, and Society (Dass, 2005) successfully allowed teacher candidates to plan an inquiry investigation for social studies and science. Groups were able to take a stance and actively defend positions related to their own community and to appreciate the influence large companies have on society. The STS strategy allowed teacher candidates to gain a broader mindset and to realize the effect on the local community. Discussing global awareness and the importance of scientific literacy and how it affects society proved to be an important issue and teacher candidates realized the need to address these ideas with elementary students. Through the STS teaching approach, teacher candidates could see how vital issues such as the unemployment rate, energy crisis, environmental concerns, and health and medical ethics all relate to our growing population around the world.

By providing a local issue such as the vehicle manufacturing plant, teacher candidates were able to appreciate and consider all aspects and the impacts on the community. Through planning this investigation, teacher candidates realized the interconnectedness of science, technology, and society. In addition, teacher candidates realized the importance of including projects for elementary students that uses a local community problem or societal issues.

Therefore, four goals were accomplished through the STS investigation. Through planning the STS investigation, the teacher candidates' successfully broaden their mindset to a view of how the plant affects all the people in the community as well as the state and even the nation. Secondly, with the broader mindset, teacher candidates understood the value and the importance of integrating science and social studies content in the elementary classroom. Thirdly, teacher candidates could see how societal issues impact the lives of everyone in society and realize when advancements in science occurs society is affected in many ways much as a ripple effect. Fourthly, teacher candidates could see how using issues that are socially and personally related to elementary students would serves as a way to promote responsible civic action in the local schools and communities (see Appendix C).

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Appendix A

Four Phases of Science, Technology, and Society (Dass, 2005)

Invitation	During this phase, students brainstorm, search, and select issues, questions, or problems (henceforth referred to as TOPIC) based on real life situations, which formed the basis for the rest of the explorations.
Exploration	Students explore topics in terms of two components: (1) Identifying critical questions that need to be addressed in order to explore the topic at the high school level; and (2) Gathering and analyzing scientific information and/or data needed to address their critical questions.
Proposing Explanations and Solutions	During the third phase, students synthesize information to formulate hypotheses, design explanations, and propose solutions.
Taking Action	Students propose explanations and solutions and take specific positions and suggest appropriate civic actions.

Appendix B

Observation Checklist: Open Forum

The groups:	Completed:
Decide on your group's title (landowner, farmers, business owners, etc.)	Title: 5pts.
Assign roles for each member	List all Members: 5pts.
Display relevant research during skits/role-playing	List all Research Facts: 10pt.
Interact with other groups in a respectful manner	List each Group Members' Role: 5pts
Teacher Comments:	____/30

Appendix C

Teacher Reflections

The STS approach is an excellent teaching strategy. It really made me think a lot deeper about the two subject areas of science and social studies. Beforehand, I only thought about job opportunities. Many of us neglected to think about all of the other people that would be affected by the vehicle manufacturing plant moving into our local community.
STS is a innovative strategy to use in the classroom because it helps students realize that they can become more involved in their community. Using this strategy would help students understand things that are going on around them in the community.
The STS approach is an excellent teaching strategy because it: 1) incorporates more than one content area, 2) engages students by giving students overall questions that makes them think, 3) creates hands on activities to set the learning into the students mind.
STS investigations helps students to realize the need for higher-level thinking about many different topics surround society, especially ones dealing with our community where they live.
STS is a beneficial teaching strategy because it allows students to be more involved in the community and aware of situations around them. This allows students to gain a deeper understanding of topics which increases interest and involvement related to important ideas in the community. Students would be allowed to express ideas without criticism and this would allow for a better educational experience.

Impacts of Nomadic Pastoralism, Cultivation, and Tourism on Desertification in the Sudano-Sahelian Region of Africa

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ABSTRACT

The Sudano-Sahelian Region of Africa shows evidence of desertification which includes: eroding hillsides, denuded plains, large erosion shelves, and deep sheer-sided gulleys. These features manifest an imbalance between humans and resources that support them. The paper uses appropriate examples to show increase in population has contributed to the overuse of resources which has ultimately led to the process of desertification. Specifically the role of pastoralism, cultivation, and development of tourism are examined.

Introduction

According to UNEP (1992) desertification is defined as "Land degradation in arid, semi-arid, and dry sub humid areas resulting mainly from adverse human impacts". Kerr (1998) adds that "desertification involves the degradation of the capacity of land in arid areas, in terms of its biological and economic productivity, resulting from climatic effects and human impacts".

According to FAO (2007) desertification constitutes one of the world's most alarming processes of environmental degradation, and it ranks among the greatest global environmental challenges and major impediments to meeting basic human needs in dry lands. Although desertification is a global problem, the southern margin of the Sahara desert – the Sudano Sahelian belt **(Fig. 1)** has received substantial attention in scholarly research. Mean annual rainfall in this zone is low generally averaging below 200mm. The rain fall is also very unreliable meaning that it has a high degree of variability.

Figure 1

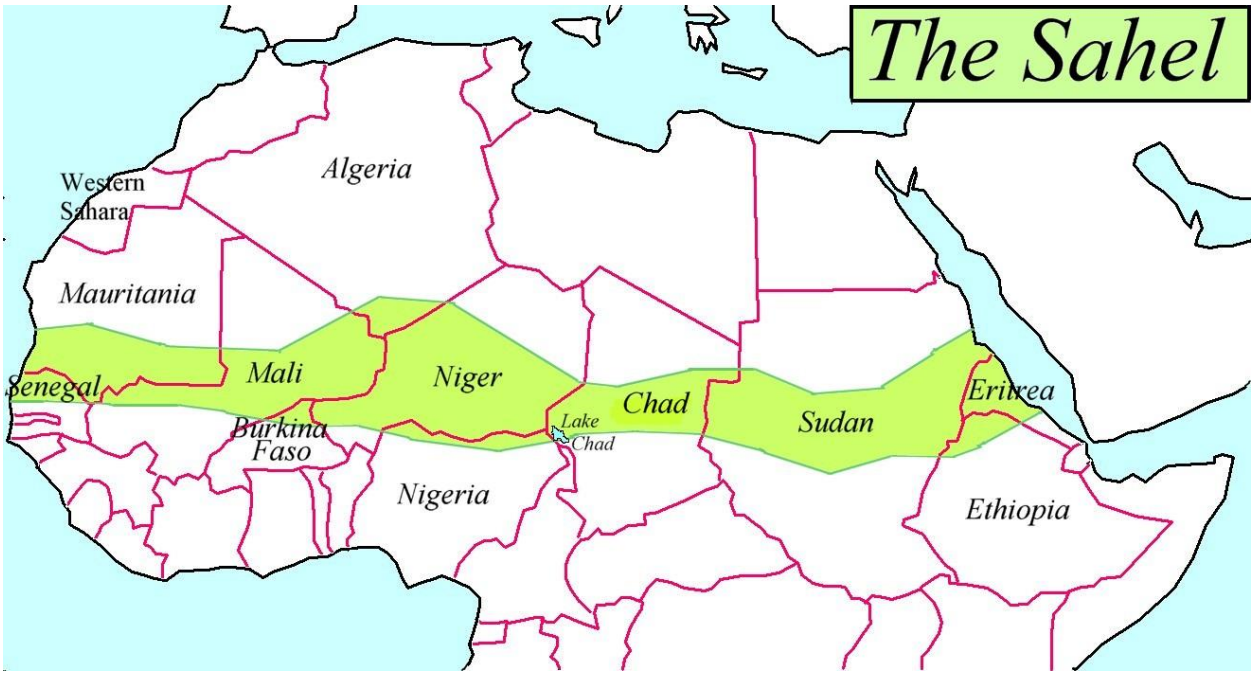
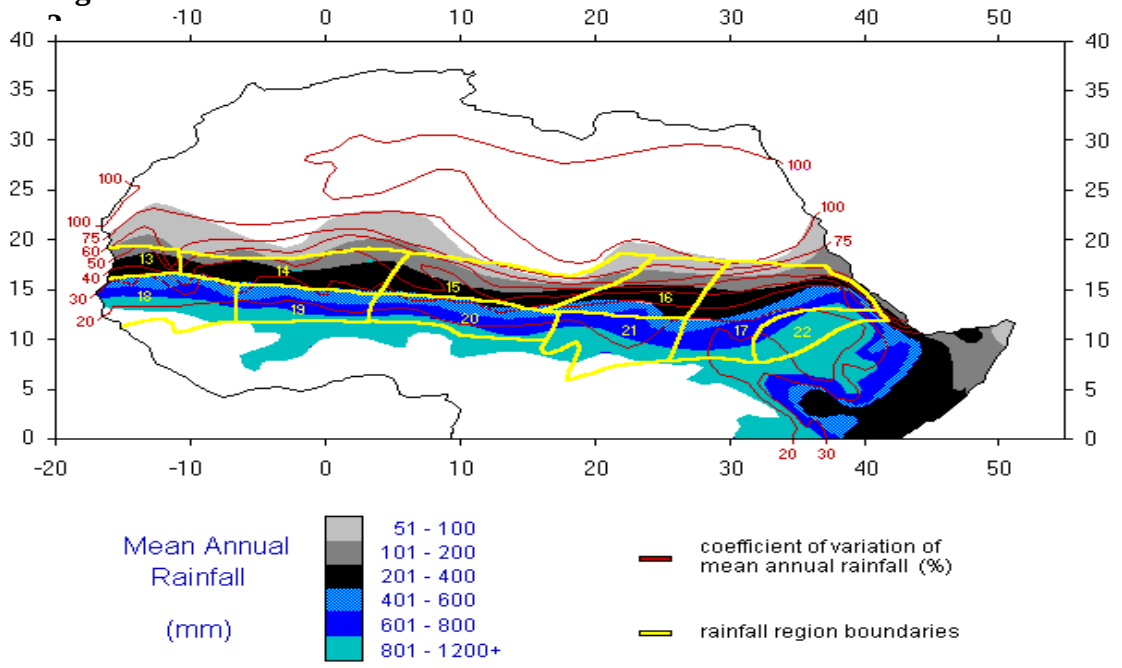


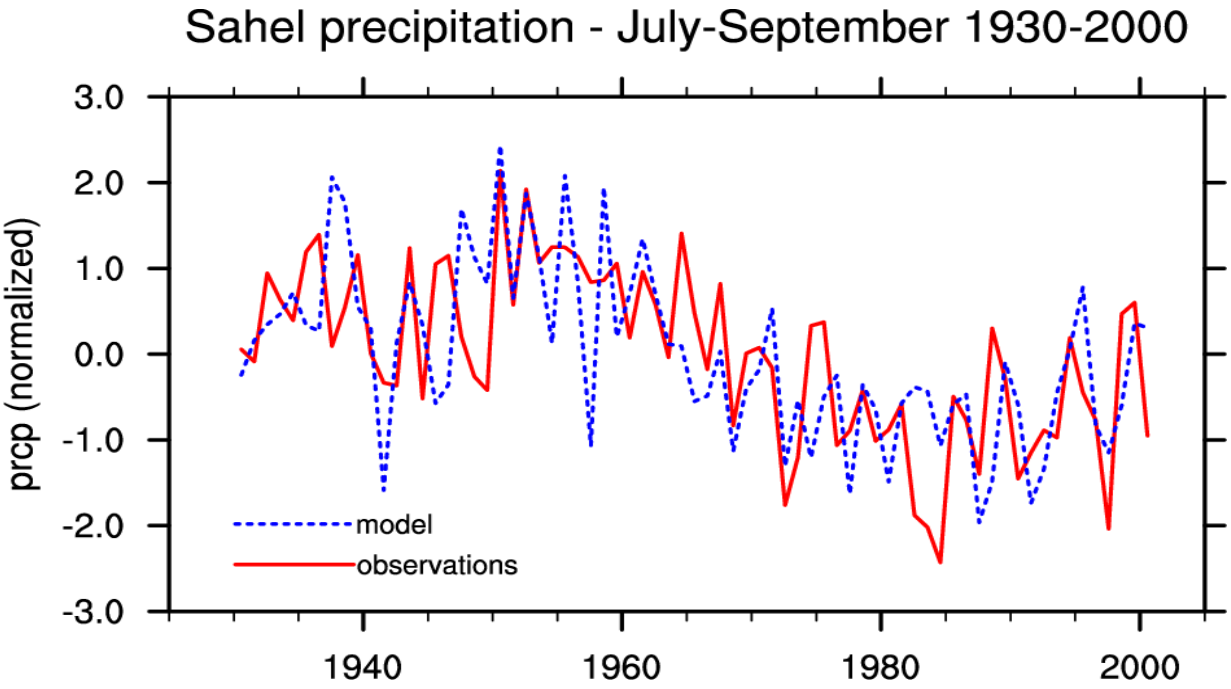
Figure 2 shows that the coefficient of variation of mean rainfall is between 20 and 25%.

Figure



The rainfall in the Sudano-Sahelian belt reveals an overall declining trend; hence drought is a common occurrence **(Figure 3).**

Figure 3



There are signs of desertification in many parts of the Sudano-Sahelian zone of Africa. These include: rolling hillsides, denuded plains, large erosional shelves, and deep sheer-sided gulleys. These features manifest an imbalance between humans and the resources which support them. Other forms of physical destruction of the land include the drying up of the streams, unchecked gullying of cultivated slopes, sheer erosion following improper agricultural practices. All the countries of the Sudano-Sahelian belt report some degree of desertification going on as revealed through symptoms such as encroachment of sand dunes, deterioration in rangelands, forest depletion, deterioration in irrigation systems, and rain-fed agriculture problems. As shown on **Table 1** – Chad, Djibouti, Ethiopia, Mali, Mauritania, Niger and Senegal report some increase/significant increase in the rate of desertification while the remainder of the countries report some increase.

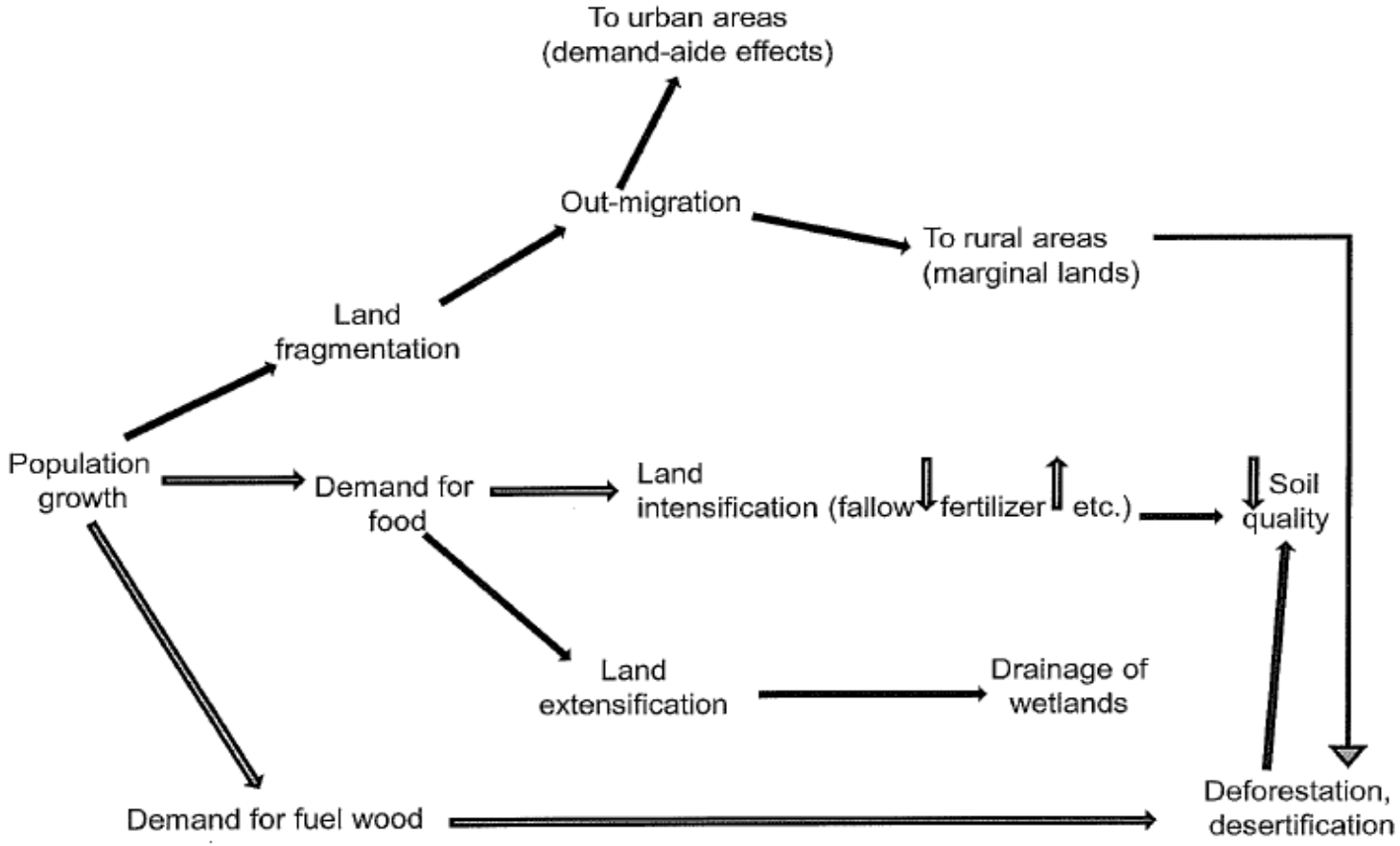
The root cause of desertification with respect to human influences is increasing in population. An increasing population in the Sudano-Sahelian region has led to pressure exceeding the capacity of the land. **Figure 4** summarizes the effects of rapid population growth which include land fragmentation, overuse of the land, deforestation and how these are liked to desertification. The paper examines various human actions which have accelerated the process of desertification namely: Impacts of colonial intervention and Western aid in pastoral communities cultivation and encroachment of farmers, development initiatives by the governments of Africa such as Tourism. The paper will show how each of the above factors has contributed to the spread of desert-like conditions, hence desertification.

Table 1: RATE OF DESERTIFICATION

Countries	Sand Dune Encroach-ment	Deterioration in Rangelands	Forest Depletion	Deterioration of Irrigation Systems	Rain-fed Agriculture Problems	General Assess-ment
Benin	o	x	x	o	x	x
Cape Verde	x	x	o	x	xx	x
Chad	xx	xx	x	xx	xx	xx
Djibouti	x	xx	x	x	N/A	x/xx
Ethiopia	x	xx	xx	x	x	x/xx
The Gambia	x	x	xx	xx	x	x
Guinea	o	o	x	x	xx	x
Guinea-Bissau	o	o	x	x	x	x
Kenya	o	xx	x	o	x	x
Mali	x	xx	xx	x	x	x/xx
Mauritania	x	xx	xx	x	x	xx
Niger	x	xx	x	xx	x	x/xx
Nigeria	o	x	xx	o	x	x
Senegal	x	xx	x	x	xx	xx
Somalia	x	x	x	xx	x	x
Sudan	xx	x	x	x	o	x
Uganda	o	xx	o	o	x	x
United Rep. Cameroon	o	x	x	o	x	x
Upper Volta	o	x	x	x	xx	x
KEY: o = Stable, x = some increase, xx = significant increase						
SOURCE: United Nations Environment Program						

Table 4

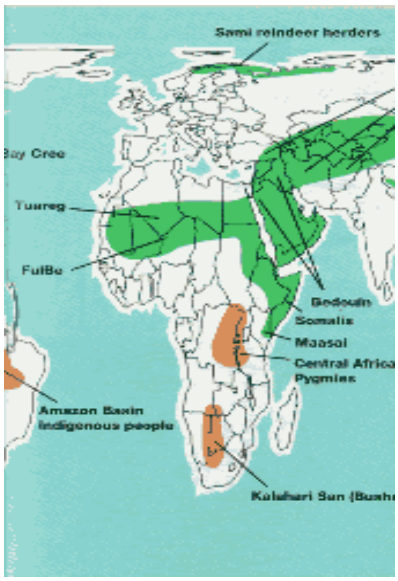
Conceptual framework of relationships between population growth, migration and desertification



Impacts of Nomadic Pastoralism

As shown on **Figure 5**, nomadic pastoralism covers a large extent of the Sudano-Sahelian belt. Examples of pastoral groups include the Maasai in eastern Africa, the Fulani and Tuareg of West Africa. The pastoral groups move from place to place in search of water and pasture. The root cause of desertification in the Sudano-Sahelian belt is liked to European intervention. "Although drought and famine were unavoidable components of life in this harsh region, the people were relatively prosperous and developed agricultural and livestock practices that allowed local populations to endure and recover from extremes of nature (Office of Technology Assessment, 1986)."

Figure 5



During the 20th century, the fragile ecological zone was not able to sustain its growing population. Increased pressure on the land made the inevitable droughts more ruinous, and the dramatic famine of the 1970s prompted urgent calls to reverse the devastating toll of desertification (Brough and Kimenyi, 2004). The failure to cope with drought in the Sahel originated in the French colonial disruption of the indigenous system of property rights and market interactions followed by aid from other nations that intensified pressure on the land.

Traditionally, two district populations have inhabited the region: Pastoralists (or nomads) and sedentary farmers, each with their own cultures but linked together by trade. Nomads raised cattle and migrated across the Sahara down to the Savanna. An intricate structure of markets and division of labor allowed them to use existing resources without destroying the environment (Brough and Kimenyi, 2004).

The Tuareg, for example were a nomadic tribe that derived income from cattle and the Trans-Saharan trade. Water wells were owned by the clan that dug them, and the use of water was strictly regulated. A clan's leader determines the length of time spent at the well and contracts with other clans, granting them rights to use its well in exchange for rights to use theirs. This provided the Tuareg with a network of wells to support their cattle as they moved along their trade routes.

Although the wells and pasturelands were controlled by the clans, cattle were privately owned. Communal ownership of the pasture led to overgrazing, but limits on the length of time spent at each well constrained the number of cattle that individual households could own. This system was efficient and insulated its people from natural catastrophes (Borough and Kimenyi, 2004).

The arrival of the French in West Africa in the late 19th century altered the agricultural patterns of the Sahel. French policies that emphasized export crops and trade from the interior to the Atlantic port cities led more merchants and farmers to abandon Trans-Saharan trade. By the 1920s the region was showing signs of stagnation.

According to Swift (1977) the French implemented a three pronged development scheme to revitalize the area: digging more wells, conducting veterinary and medical campaigns, and opening new markets in the South. As the French dug new wells, they established no clear ownership, which led to overgrazing. The veterinary and medical campaigns increased the populations of both humans and animals, putting further pressure on the land with no one to regulate the use of new wells, the larger populations intensified the level of overgrazing. The French hoped that the Nomads would slaughter more cattle for the market. Contrary to this expectation, the nomads tended to maintain the largest herds possible. The nomads were forced to move farther south searching for pasture. This extended the area experiencing overgrazing and ultimately desertification.

Western aid to the region became more prominent after the 1968-73 droughts. Medical aid programs intensified the pressure on land without providing any monitoring system. Wells aid continued to be a popular project. Thousands of wells were dug increasing the size of herds and the problem of overgrazing. Hundreds of square miles were lost from overgrazing and trampling by cattle in search of water and food.

Impact of Cultivation and Encroachment of Farmers on Desertification

We will use examples from West Africa as well as East Africa to show how cultivation practices are linked to the process of desertification. In the Sahel, slashing and burning of natural forest and bush land in order to clear land for annual agriculture is the main cause of desertification. According to Delehanty (1988) farmers continue to degrade their environment in the agricultural zone even after they have harvested the crops. A few months after the harvest the farmers cut the millet stalks and burn them leaving their fields exposed to strong winds until the next sowing season. These winds blow away the top soil, uproot seeds and seedlings and suffocate seedlings and plants where soil later accumulates.

According to Delehanty (1988) the expansion of cultivation at the expense of bush and forest has resulted in impoverished soils and extension of sand dunes. This has been the case in Eastern Niger and North East Nigeria where the land used for cultivation of millet has become barren sand dunes.

The nomads in Western Africa were forced to move south in search of better lands and the slash and burn methods they used damaged more land as they advanced. The farmers in the south

were forced to search for new farmlands to replace the eroded hills they were using. This led them "to cultivate marginal lands, which in the past had been allowed to remain fallow, sometimes as long as twenty years (Brough and Kimenyi, 2004)". Increased pressure on the land affected the farmer's ability to grow food. Droughts began to take a greater economic and human toll due to increased desertification.

Another example of encroachment of farmers comes from Narok district which is found in Kenya's semi-arid zone in Eastern Africa. Here population pressure is related to human resource imbalances in the densely settled highland regions. The natural increase of population has fostered internal migration from rural arable to rural range land areas. Population pressure on the land in the higher altitude areas forces families to move down the environmental gradient to the marginal semi-arid lands. As they settle in great numbers, migrants are pressing on the pastoralists and increasing their precariousness of survival (Sindiga, 1984). Migrants also may apply upland perceptions and technology to semi-arid areas where it is not appropriate leading to long term human environmental difficulties.

Impact of Tourism on Desertification

The development of Tourism in Kenya's semi-arid lands, particularly in Maasai Mara has contributed to the process of desertification. Beginning in 1945, the Kenyan government established a series of national parks and game reserves in Maasai land territory. "The government emphasis on developing these areas for the tourist industry led to exclusion of the Maasai herds from grazing within the reserve boundaries. Such locations hither to offered year round grazing and water, in particular the creation of wildlife conservation parks created competition for perennial surface water with wildlife (Sindiga, 1984)". Because water, especially its availability during the dry season is perhaps the greatest limiting factor to livestock, Maasai livelihood became more vulnerable. Additionally the annual migration herds of wildebeests in Maasai Mara to and from Serengeti National Park in Tanzania means Maasai livestock must compete with wild angulates during the dry season for range resources which are limited. This indeed has contributed to the accelerated process of desertification in Kenya's semi-arid lands.

Conclusion

The paper uses the examples such as the Tuareg of West Africa, and Maasai of East Africa to show how overuse of resources by pastoralists and farmers have contributed to desertification. The paper argues that colonial intervention led to the breakdown of the traditional ecosystems that were in place such as the monitoring of water use by cattle owners.

The creation of wildlife reserves and the migration of cultivators to the Sudan-Sahelian belt have heightened competition for limited resources among various categories of users. This has led to the fundamental deterioration of land and the spread of the desertification process.

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Is Your Baby a Brainy Baby?
Learning from "Educational" Infant DVD Program Content by 12- to 24-Month-Olds

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ABSTRACT

Though the AAP recommends no screen time for children under two, babies and toddlers are routinely exposed to "educational" baby videos. Thus, an exploratory one-group pretest-posttest repeated-measures quasi-experiment with 12- to 24-month-olds was performed to test learning of picture-letter pairings after several viewings of a Brainy Baby video. Results revealed no significant statistical findings; in this short term study, there was no detectable learning. Trial-by-trial analyses revealed children did not perform any better than chance on repeated posttests.

Keywords: Babies, toddlers, learning, educational, video, Brainy Baby

Introduction

Over a decade ago, the American Academy of Pediatrics (AAP) recommended that children under age two receive no "screen time" (AAP, 1999). Nevertheless, creators of such children's television programs as *Teletubbies* have successfully marketed to this "diaper demographic," encouraging companies such as Baby Einstein, Brainy Baby, Nickelodeon, and even Sesame Workshop to launch highly lucrative infant media products, some even claiming to be educational tools.

Research by Schmidt, Rich, Rifas-Shiman, Oken, and Taveras (2009), however, revealed that television viewing in infancy was not associated with language or motor skills at age three, which casts doubt on the veracity of any "educational" claims made by infant media producers. In addition, Zimmerman, Christakis, and Meltzoff's (2007a) research revealed that among children ages eight to 16 months, for each hour spent viewing baby videos there was an associated significant decrement in language development. Although the study was correlational, its publication unleashed a firestorm of controversy surrounding the infant DVD market (Iger, 2007). Therefore, this study examined the claims made by infant media creators that their content is educational by focusing on one such product: Brainy Baby's *First Impressions: Letters* video.

Educational Media and the "Mozart Effect"

Although educational toys have been a staple of childhood since World War I, at the close of the twentieth century several companies also began marketing educational *media.* Perhaps the most obvious rationale for the boom in this market was "The Mozart Effect." In 1993, Rauscher, Shaw, and Ky published a study claiming that exposure to ten minutes of Mozart increased college students' scores on a standardized test, thus the notion that "Mozart makes you smarter" (Rauscher

& Hinton, 2006, p. 233) permeated the popular media and an entire Mozart Effect industry was born. And although continued attempts to replicate this research with both adults and children have yielded contradictory results, and support for any Mozart effect for very young children is nonexistent, the appearance of books, DVDs, and music CDs such *Mozart for Mommies and Daddies – Jumpstart your Newborn's IQ* have fed into the cultural myth of an exaggerated effect of classical on infant cognition.

Capitalizing on this myth, the baby video industry is logging sales at the $1 billion mark, and the two industry leaders in the market are by far Baby Einstein and Brainy Baby (Meltz, 2006). In fact, whereas Baby Einstein may be more of a household name, Brainy Baby was the pioneer of educational infant videos. Founded in 1995, Brainy Baby began to produce the *Baby's First Impressions* videos to "introduce educational basics, such as, letters, numbers, opposites, animals and more" (Brainy Baby, 2007, n.p.). Thus, Brainy Baby is the focus of this research.

Babies and Time Spent With TV

The popularity of infant-geared media is reflected in the sheer number of hours under- two's spend in front of the small screen, which also reveals that parents are not taking the AAPs "no screen time" edict to heart. Rideout et al. (2003) reported that infants younger than one year watched an average of 1 hour 8 minutes, one-year-olds watched 1 hour 26 minutes, and two- year-olds watched 1 hour 35 minutes daily. Zimmerman, et al. (2007b) found that by three months, 40% of children regularly watched television, with that figure rising to 90% by age two. Anderson and Pempek (2005) speculated that this increase in time spent with television in the last decade may be due to the introduction of baby videos and television series in the 1990s which substantially increased the amount of foreground television—content specifically designed for infants and toddlers—available for very young children. In addition, Rideout et al. (2003) reported that a full 30% of children ages zero to three had televisions in their bedrooms, which certainly makes the small screen more accessible to these tots.

Babies' Attention to Television

Very young children are clearly finding something about television content engaging; parents in the Pierroutsakos et al. (2004) study reported their children giving full attention to about 60 minutes of television per day. Research by Barr et al. (2003, cited in Anderson & Pempek, 2005) revealed that when infant-geared programs are on, very young children spend about 50 to 75% of the time actively, overtly looking at the screen. In addition, they found a linear increase in overt looking at the screen every year for the first three years of life.

As attention to the screen is a necessary precursor to *learning* from it, Anderson's work on attentional inertia is vital to this study (Anderson, Alwitt, Lorch, & Levin, 1979). Attentional inertia refers to the fact that as the length of a look at television increases, it becomes less likely that a child will be distracted from the look. Anderson, Choi, and Lorch (1987) found that while a child was in a state of sustained attention, not only was she less distractible, but she also remembered more about the content she was viewing. Such results support the notion that if young children pay attention to educational media, they are more likely to learn from it.

Can Infants Learn from Television?

Although we know infants and toddlers watch television, debate abounds regarding whether they actually learn from what they see. Several scholars have tackled this issue, and the consensus is that children under age two can learn somewhat from electronic media, but they learn from a live model more quickly and thoroughly (e.g., Anderson & Pempek, 2005; Troseth, Saylor, & Archer, 2006). This failure to learn successfully from televised models has been termed the "Video Deficit Effect." Numerous lines of experimental research have supported this deficit, including imitation studies with 12- to 18-month-olds (e.g., Barr & Hayne, 1999), language learning studies with 9-month-olds (e.g., Kuhl, Tsao, & Liu, 2003), and emotional response studies with 10- and 12-month-olds (e.g., Mumme & Fernald, 2003). Time and again, children under two demonstrated significantly more learning in the live model condition.

The Perceptual Encoding Impoverishment Theory

One explanation for the video deficit is the perceptual encoding impoverishment theory, which suggests that because the two-dimensional input from television is "impoverished" compared to real-world three-dimensional input, the cognitive encoding process is therefore impoverished as well (Barr, Muentener, Garcia, Fujimoto, & Chavez, 2007). According to this theory, the video deficit effect is a result of poor perceptual encoding (e.g., Barr & Hayne, 1999).

Very young children have trouble transferring two-dimensions (i.e., television) to three-dimensional real-world objects. Barr et al. (2007) explained that a 2D presentation "may not match its 3D counterpart until a sufficient number of individual sources of information are available to match from one to the other" (p. 197). Carver, Meltzoff, and Dawson (2006) found that 18-month-olds actually process two-dimensional images more slowly than three- dimensional objects; recognition of three-dimensional objects comes very early in the attentional process whereas recognition of two-dimensional photographs emerges much later. Barr et al. (2007) also explained that the video deficit effect could be accounted for either by the slower processing of the two-dimensional input or the cognitive load associated with the child's transfer of information from two-dimensions to three.

The Dual-Representation Hypothesis

Coined by psychologist Judy DeLoache (1987), the dual-representation hypothesis is a second very popular explanation for the video deficit. Very young children have trouble grasping the dual reality of symbols, and this difficulty manifests as a roadblock to learning from television. After conducting several object-retrieval studies (i.e., Troseth & DeLoache, 1998), DeLoache concluded that children under age two do not have the representational capacity to make the cognitive link between content seen on television and objects in real life. The children in her studies were asked to "use a symbolic medium (a video event) to form a mental representation of an existing situation (the location of [a] toy in [a] room) and to use that representation to guide their behavior" (p. 951), and children under age 3 generally failed the task. This hypothesis has important implications for the current study.

Very young infants will respond meaningfully to mediated symbols long before they are cognitively capable of taking a symbol as a source of information about a real situation. In research with still pictures, several studies revealed children as old as 16 months trying to manipulate, pick

up, put on, or grasp objects in a picture (e.g., DeLoache, Pierroutsakos, Uttal, Rosengren, & Gottlieb, 1998). The explanation for such behavior lies in infants' inability to understand the significance of the difference between the depicted object and the real object it represents; they do not fully understand what two-dimensionality means (Pierroutsakos, & Troseth, 2003). For many children, this understanding is not complete until age five (see Jaglom & Gardner, 1981; Flavell, Flavell, Green, & Korfmacher, 1990).

Schmitt and Anderson (2002) proposed that when young children are presented with televised information, they believe that the activity is physically located "inside the box;" they think that what they see on television is limited to the space inside the TV cabinet. When asked to perform a task like object retrieval, these children must use their cognitive capacities to remember what they saw "in the box" and use that information to apply to the real-world room in which they find themselves. They must cognitively "scale-up" what they saw on TV, as the 3-D world is much larger than the 2-D world they just encountered. Due to this added cognitive burden, these children often fail the task, not remembering where the object itself is located due to the energy they are putting into the "scaling up," and thus failing the object retrieval task. Research Questions and Hypothesis

Given the attentional inertia and video deficit effect literature, the objective of this project was to assess claims made by Brainy Baby that the use of their "Letters" DVD will aid children between eight months and five years old in learning the letters of the alphabet by associating letters with familiar objects (Brainy Baby, 2007). In addition, since Zimmerman et al. (2007a) found a decrease in vocabulary as the use of baby videos increased for children ages 8-16 months, this study sought to replicate that finding. Thus, the first research question asked:

> RQ1: Is there a relationship between scores on a vocabulary test and a) the reported usage of baby videos and/or b) learning from the Brainy Baby DVD?

The second research question more directly addressed the claims made by the company:

> RQ2: Do infants between ages one and two learn from Brainy Baby's "Letters" DVD?

Further, as some imitation studies with infants found that several repetitions were necessary before children in their first and second year were able to mimic a behavior (e.g., Barr, Dowden, & Hayne, 1996), the third research question asked the following:

> RQ3: How many viewings are necessary before the infant begins to learn the material presented in the DVD?

In addition, as attention is a necessary precursor to learning, a measure of attention to the DVD content may reveal something about how well or how quickly a child begins to learn the material. Accordingly, the fourth research question asked the following:

> RQ4: Is the duration of look (eyes on screen) related to the overall learning score?

Lastly, given developmental psychology research reporting that older infants appear to learn more quickly (e.g., Colombo, 1993), this project made the following prediction:

H1: Older infants will comprehend the material more quickly than younger infants (i.e., require fewer repetitions of the DVD).

Methodology

This study was a repeated-measures quasi-experiment with multiple exposures to the stimulus with 12- to 24-month-old children. As the study was exploratory in nature, the project followed a one-group pretest-posttest design.

Sample and Recruitment of Participants

The participants were between 12 and 24 months old. A sample size of 30 was selected after consulting Cohen's (1992) statistical power guidelines; if power is set at .80 and alpha at .05, 30 participants should be sufficient to address the research questions of interest. All infants were recruited via electronic listservs and word-of-mouth snowball sampling.

Apparatus

The stimulus was a segment of a DVD created by The Brainy Baby Company entitled *Baby's First Impressions: Letters*. The DVD was edited into a four-minute, six-second segment, which consisted of three sections: an introduction, an instructional section for letters A, B, and C, and a review of the three letters. Each letter is associated with three objects: "A" with Apple, Airplane, and Arm; "B" with Bear, Baby, and Balloons; and "C" with Cat, Clock, and Car. The introduction and review included children playing with colorful foam "floormat" letters. *Procedure*

The researcher visited children in their homes, using a 9" portable DVD player to play the stimulus video. The procedure was videotaped on mini-DV. At both pretest and posttest, the experimenter asked the participants to match a three-dimensional foam "floormat" letter (A, B, or C) with a laminated 8"x10" still picture from the video clip. The test for learning was whether the infant matched the letter associated with the picture presented to them at posttest.

Pilot Testing

Pilot tests were performed separately with a 24-month-old female and a 30-month-old male. They were asked to match nine pictures with letters A, B, and C. Both children began to lose interest in the task as they got to the "C" pictures, thus in the formal experiment, only the six A and B pictures were used. Whereas the 30-month-old male did not display any observable learning after viewing the video clip twice, the 24-month-old female did correctly match the letters and pictures at posttest after the first viewing of the stimulus.

Testing Procedure

Before testing, the experimenter explained the procedure to the parent, asked the parent to sign a consent form, and requested the parent say nothing during testing to help the child. Parents were also asked to fill out a short-form version of the MacArthur Communicative Development Inventory (MCDI) (Fenson, Pethick, Renda, Cox, Dale, & Reznick, 2000) in order for the

researcher to gauge vocabulary skill. The MCDI is the same instrument used by Zimmerman et.al (2007a). For children 12 to 16 months, the vocabulary checklist asked parents to choose whether their child "understands" the word or "understands and says" the word. For children ages 18 to 25 months, parents were asked if their child "says" the word and whether their child had started or "combining words."

Each parent was asked to sit with their child and face the experimenter. The video camera was set up across from the child, behind the experimenter, to capture the child's head and eye movements. The experimenter then pretested the child, first presenting him/her with the three brightly colored 12 ½" x 12 ½" foam "puzzle-piece floormat" letters, explaining which letter was which. The child was then shown a series of six 8" x 10" laminated still pictures captured from the DVD corresponding to either A or B in the following order: Apple, Arm, Airplane, Bear, Baby, and Balloons. As each picture was presented to the child, the experimenter explained "This is a picture of a ___." The experimenter then asked the child, "Can you show me or tell me: does this picture of a _____ go with A [point to the letter A], B [point to the letter B], or C [point to the letter C]?" Once the child indicated an answer, the experimenter removed the picture and presented the child with the next picture, repeating the process until the child indicated an answer to all six still pictures. Once the pretest was completed, the experimenter played the DVD clip. When the clip ended, the child was again asked to match the correct letter with the six pictures.

If the child successfully matched all six letters, the experiment ended. If the child did not match the letters correctly, the experimenter attempted to show the DVD clip again and administer a second posttest. As research has suggested infants as young as six months can imitate an action with an object seen on video after six trials (Barr et al., 1996), each infant was allowed a maximum of six viewings and posttests before the experiment was terminated. Due to lack of attention, issues with temperament and willingness to participate, and parental cessation of the testing before six trials were completed, most children completed only one or two trials. *Coding*

Videotaped trials were coded by two coders. Each coder indicated whether the child gave correct or incorrect answers to each picture-letter question for the pretest and all subsequent posttests. In addition, coders were used a stopwatch to record the amount of time each child's eyes were looking directly at the video screen while the clip was playing. To assess intercoder reliability for these measures, the two coders independently coded the pilot test participants. The coders had 100% agreement on all pretest and posttest responses and a t-test revealed no significant difference in recorded stopwatch time between the two coders, $t(1) = -2.058$, $p = .14$.

Data Analysis

Task performance was descriptively analyzed trial-by-trial, and repeated-measures

ANCOVAs were employed to analyze the pretest-posttest scores.

Results

Demographics and Vocabulary

Thirty children participated; demographic data can be found in Table 1. The average age of participants was 19.17 months, with 16 males and 14 females, and one-third were "only children." Parents were also asked how frequently their children viewed television: 10% "never" watch, 60% "occasionally" watch, and 30% watch every day.

As noted previously, the recent controversial study by Zimmerman et al. (2007a) linking the viewing of baby videos with decreases in language utilized the MCDI Short Form Vocabulary Checklist, and this study followed suit. On average, children in the 12 to 16 month age group understand 19 words and speak 8 words. Children in the 18 to 25 month age group speak 42 words, with nine children "often" combining words, eight "sometimes" combining words, and 5 "not yet" combining words. Not surprisingly, the only word spoken by every child in this study was "Mommy," followed closely by "Uh oh" (N = 28).

Overall scores on the MCDI were not significantly correlated with performance on the pretest or any posttests. Scores on the younger group's terms they "understand" were, however, significantly positively correlated with whether or not they viewed baby videos, $r = .779$, $p = .023$, but none of the "spoken" word scores for either age were so correlated.

Trial-by-Trial Responses

One of the goals of this project was to address whether infants between ages one and two learned from Brainy Baby's *Letters* DVD, and how many repetitions were necessary before the infant began to display comprehension of the material. To address both of these issues, it was necessary to descriptively analyze responses and response patterns for each picture (Apple, Airplane, Arm, Bear, Baby, and Balloon) for each trial. First, there was a significant positive correlation between a child's age and the number of posttest trials the child attempted ($r(28) = .545$, $p = .002$), i.e., older children attempted more trials than younger children.

Paired samples *t* tests were conducted with overall trial means. Only one t-test revealed a significant difference in means between the pretest ($M = 2.23$, $SD = 1.42$) and posttest 2 ($M = 1.5$, $SD = 1.30$), $t(25) = 2.122$, $p = .044$. Thus, scores at posttest 2 were significantly *lower* than scores at pretest, i.e., the participants scored higher at pretest than after two viewings of the video clip. The 95% confidence interval for the mean difference was .02 to 1.44.

Figure 1 displays the average number of correct responses for each letter, for each trial. At pretest, children were between 27% and 40% correct in their picture-letter pairings (by chance, one would expect a 33% correct response rate), with the smallest number of children correctly pairing "Apple" with "A" and the largest number of children correctly pairing "Balloon" with B. At posttest 1 (N= 30), the percent-correct means remained the same as pretest for three pictures: "Apple," "Airplane" and "Balloon." The score for "Bear" increased, whereas the scores for both "Arm" and "Baby" decreased from the pretest. At posttest 2 (N= 26), the scores for all six pictures decreased from posttest 1. Scores at posttest 3 (N= 15) increased from posttest 2 for "Apple," "Airplane," "Arm," and "Baby," but decreased for "Bear" and "Balloon." At posttest 4

(N= 9), scores decreased from posttest 3 for every picture except "Arm," for which the score remained the same as posttest 3. Scores at posttest 5 (N= 7) all increased from posttest

4, except for "Balloon," where no child got the correct answer. During the final posttest (N= 4), the scores for all three "B" pictures increased from posttest 5, though only one child got "Apple" correct and none of the four children who made it to posttest 6 got either "Airplane" or "Arm" correct.

At first blush, an analysis of the data presented in Figure 1 appears to show some increase in correct answers from the first posttest trial to the sixth (i.e., learning), but a closer examination reveals that not to be the case. An examination of each child's performance (for each letter, for each posttest trial) illustrates a clear lack of consistency among answers from trial to trial.
Figures 2, 3, and 4 track each child's performance during each trial (pretest and all posttests attempted). Figure 2 represents the responses of all children in the 12 to 16 month age group (N=8). Only child #21 showed a consistent increase in scores. Although some children's percentage correct increased from pretest to posttest 1, it then dropped in successive posttests.

Figure 3 represents the responses of all children in the 18 to 21 month age group (N=12). Few children in this age group show any kind of increase in scores, with many increases followed by decreases in successive trials. Figure 4 displays the responses of all children in the 22 to 25 month age group. Child #6 shows a steady increase in scores from posttests 3, 4, and 5 whereas child #14 shows an increase from trial 4 to 5 to 6. Initially, such increases appear encouraging; however, these figures do not tell the whole story.

Rather than relying on overall percent correct scores to uncover learning, a more telling way to examine response patterns is to track the correct answers for each of the six pictures individually, from posttest to posttest, for each child. When examining individual responses, it is clearly *not* the same children getting correct answers at successive posttests. So although the total "percent correct" means appear to increase, for example, for "Arm" from posttest 2 to posttest 3, when examining individual response patterns for "Arm" closely, four children correctly paired "Arm" with "A" at posttest 2, and five *different* children got "Arm" correct at posttest 3. Although one could speculate that the children who got the correct answer at posttest 3 learned that "Arm" went with "A," one would also have to be concerned that all of the children who got the correct answer at posttest 2 got it *incorrect* at posttest 3. This demonstrates a lack of consistency and the pure randomness of answers across the board.

Examining response patterns to the six pictures separately initially appears to indicate that a few children "learned" from trial to trial. However, when one tracks individual children *from picture to picture*, again the responses are random. For example, an examination of the response patterns for "Apple" appears to illustrate that two individual children (Child 6 and Child 11) "learned" that "Apple" goes with "A"; i.e., they both got the answer incorrect at pretest, and then correct at each subsequent posttest. However, when followed from picture to picture, these children did not appear to learn any other of the other picture-letter pairings. For example, Child 6 knew "Arm" at pretest whereas Child 11 gave both correct and incorrect responses from trial to trial, and Child 6 never got "Bear," "Baby," or "Balloon" correct whereas

Child 11 gave inconsistent answers for all three.

Overall Posttest Performance

An additional method for analyzing posttest performance is to determine if the children's overall percentage-correct score is statistically different from chance. An overall score was computed for each child, based upon the total number of correct answers divided by the total possible number of correct answers, given the number of trials each child completed. Only nine of the children's overall scores were greater than chance (ranging from 36% correct to 56% correct). However, as is discussed in the trial-by-trial analyses above, a high overall score does not necessarily indicate *consistency* in scores from posttest to posttest (i.e., a child may be getting different picture-letter pairings correct at each posttest).

In this study, there were three options to choose from at posttest. Thus, purely by chance one would expect a correct response rate of 33%, so paired t-tests were computed to determine if participants' scores were statistically different from chance. The results appear in Table 2. When the group was entered as a whole (N= 30), their scores were not statistically different from chance, $t(29) = -1.96$, $p = .06$, indicating that the group did not display any distinguishable learning. In fact, this result approaches significance for an overall decrease in correct scores. When the group was split by gender, the males' scores were not statistically different from chance, $t(15) = -.668$, $p = .51$, but the females' scores *were* statistically different from chance, $t(13) = -2.41$, $p = .03$. As the difference in means indicates, however, this result shows that the females performed statistically *worse* than chance on the posttests. Lastly, the group was split by age and compared to chance. None of these differences in means was significant.

Inferential Statistics

Rather than solely relying on percentage-correct scores for each child, the use of a repeated measures ANCOVA can give a more statistically relevant answer to the research questions. However, in order to account for responses in all six trials, "missing" responses (from children who did *not* attempt the later trials) had to be recoded because a sample size of only four children (i.e., those who made it all the way to posttest trial 6) is not large enough to properly compute the ANCOVA. Missing values were handled in two different ways: as a 0, and with variable means. For both analyses, the raw scores of correct responses (out of a possible 6) for each child at pretest was the covariate. The raw scores for all six posttest measures for each child

were input as repeated measures. First, all missing responses were recoded as zeros (i.e., indicating that a child attempted the trial but gave all incorrect responses). The epsilon ($\varepsilon = .739$) for Mauchly's test of sphericity indicated that the sphericity assumption was violated for this analysis, so the F-statistic with Huynh-Feldt correction is reported. This repeated measures ANCOVA was not significant, $F(3.69, 103.44) = .548$, $p = .687$. For the second analysis, all "missing" responses were recoded with the means for that variable. Again, the epsilon ($\varepsilon = .703$) for Mauchly's test indicated sphericity was violated, so the F-statistic with Huynh-Feldt correction is reported. This ANCOVA was also not significant, $F(3.51, 98.37) = .705$, $p = .573$.

As both variations were not significant, the third ANCOVA analysis only took into consideration the first three posttest trials. As half of the children in the sample completed all three posttests (N= 15), the sample was large enough to complete the test without having to recode missing values. Sphericity was not violated in this analysis and the repeated measures ANCOVA was also not significant, $F(2, 26) = 1.136$, $p = .337$. As a last attempt to capture some learning from trial to trial,

ANCOVAs were run on the first five posttest trials individually, using the pretest as a covariate. The test could not be run on posttest 6 because of the small sample size. Again, sphericity was not violated and none of the ANCOVAs were significant.

Additional Research Questions and Hypothesis

Although the repeated measures ANCOVAs demonstrated no statistically significant learning, there were still research questions remaining to be addressed. Research question 4 asked: Is the duration of look (eyes on screen) related to the overall comprehension score? The overall mean amount of time children actively watched the screen during all viewings of the video was 178 seconds. Means for individual posttest viewings are as follows: Posttest 1 M = 213.97, SD = 20.07; Posttest 2 M= 202.5, SD = 31.37; Posttest 3 M = 162, SD = 67.79; Posttest 4 M = 164.11, SD = 70.57; Posttest 5 M= 151.57, SD= 62.98; Posttest 6 M = 172, SD = 38.48. The length of look after the pretest was significantly correlated to both the length of look after posttest 1 ($r(24) = .661$, $p = .000$) and posttest 2 ($r(13) = .688$, $p = .005$), but not correlated to the length of look after any other posttests. The lengths of look after posttest 1 and posttest 2 were also significantly correlated with each other ($r(13) = .714$, $p = .003$), but no other length of look times from other trials were significantly correlated with each other.

A Pearson correlation was performed on each trial separately to determine if there was any significant relationship between the number of seconds a child viewed the video and the score on each posttest. None of the correlations were significant.

The hypothesis predicted older infants would comprehend the material more quickly than younger infants. As a first step to address this hypothesis, correlations between age group (12-16 months, 18-21 months, and 22-25 months) and performance at each trial were run in order to highlight any significant relationships. Correlations show a significant relationship between age and score on pretest ($r (28) = .369$, $p = .045$) but no significant relationships with any of the posttests. Thus, the hypothesis was not supported.

Discussion

This study involved 30 children in their second year of life in a repeated measures pretest-posttest quasi-experiment with multiple exposures to the stimulus. There was a significant positive correlation between age and the number of posttest trials a child attempted, but none of the inferential statistics regarding pretest and posttest performance were significant. As the results demonstrate, there is no indication of learning in this study, despite some children watching the educational video six times. Responses to the six picture/letter pairings at pretest and at each of the posttests were random, and no child demonstrated a consistent pattern of correct answers. The duration of time a child spent actively looking at the screen while the video was playing was not related to the child's overall score at each posttest; in fact, some children watched the video almost all the way through and never got a correct answer at posttest. Lastly, the hypothesis that older children would learn faster than younger children was not supported.

Attentional inertia research (e.g., Anderson et al., 1987) shows when children maintain a look at television for more than 15 seconds, they are less distractible and can remember more of the

content. Maintaining sustained attention was not a problem in this study, thus attentional inertia research would indicate that children should have been able to give correct answers at posttest. However, not only was there no correlation between each "eyes on screen" measure and its companion posttest score, posttest scores across the board showed no learning. This result provides further evidence that the participants in this study did not learn from the stimulus.

The results from the trial-by-trial analysis and the failure of any of the inferential statistics to reveal any statistically significant findings clearly support Anderson and colleagues' video deficit effect. As noted above, in its most basic form the video deficit refers to the fact that very young children learn less from television than from real-life models or experiences (Anderson & Pempek, 2005). For some reason, infants and toddlers have difficulty learning from televised models, though no researcher has yet pinpointed why. Two prominent theories have emerged to explain this video deficit and the results of the current study could support either. As the perceptual encoding impoverishment theory suggests that 2D input from television is "impoverished" compared to 3D input, perhaps the failure of the children to learn from the video was simply an issue of poor perceptual encoding. However, the pictures used in the study were designed to be simply 2D replicas of "screen shots" from the video, so the transfer should have been easier for children to make (i.e., two-dimensions to two-dimensions).

The results of this study also show clear support for the dual representation hypothesis. According to DeLoache (1995) children who participated in this project fall into an age group in which the lack of understanding of the dual reality of symbols is a major roadblock to learning from televised media. The participants suffer from a "dual representation" difficulty in that they do not make the link between what they see on the television screen and what they are presented with in three-dimensions. They do not see the video as presenting them with relevant information about the world.

A few of the older children in the sample (closer to age two) did display a basic understanding that the letters and pictures used at posttest were the same ones shown and used by the children in the video. Coders noted anecdotally that some children appeared to notice that the pictures being used at posttest were the same objects seen in the video. For example, a 22-month- old pointed to the DVD player when shown the pictures of the airplane and the arm at the first posttest, which the coder took as an understanding that the picture being shown at posttest was the *same* as the one just seen in the video. However, the child still chose the wrong letter to match with both pictures at posttest. These children were the exception rather than the rule, but one could argue that for these few, a basic understanding of the dual nature of the symbols was emerging. Nevertheless, these children still performed poorly at posttest.

Practical Implications

These results, showing a lack of learning from the *Letters* DVD, can inform the ongoing debate about educational baby videos both in the boardroom and in the living room. Given the results, both the creators of the videos and their consumers can begin to (or continue to) look with a skeptical eye at the educational promises being made both implicitly and explicitly about these products. Perhaps there is some educational benefit to the *Letters* video, but it was not apparent given the children's performance. As such, producers must be careful to not exaggerate educational claims about their videos, and parents should perhaps lower educational expectations from such products. That being said, there are other issues highlighted by the results of this study that can be

of practical use to the companies that produce these videos, such as the age range the products are marketed to, and the interactive use of the products between parent and child. Both are discussed below.

The range of ages for which these products are produced may be part of the reason why something touted as "educational" does not appear to inspire learning. As educational television expert Amy Jordan explained in an interview, the range of ages that media products are listed as "appropriate for" should be carefully selected. She explained, "To be truly educational, you have to have a very narrow audience" (quoted in Guernsey, 2007, p. 120). Infants and toddlers undergo major changes emotionally, socially, and cognitively as they develop, and as such something "educational" for a 2-year-old may not make any sense to an 18-month-old. However, focusing on the learning needs of very narrow age ranges is certainly not in the best financial interest of media companies who need to justify spending millions of dollars on product development (Guernsey, 2007). Thus, consumers are left with products like the DVD used in this project which is listed as age-appropriate for eight months to five years. Perhaps therein lies the problem: just because it is "appropriate" for that age group does not necessarily mean it is "educational" for the whole age range. Producers of infant DVDs should take note of this issue.

Limitations to the Study and Future Research

All research projects suffer from limitations. The design used here was not a true experiment, with no random assignment and no control group. Thus, the results cannot be generalized to the infant population as a whole. Instead, this research should be viewed as exploratory, or an important first step in uncovering the learning curve associated with very young children's educational media consumption.

The sample itself can also be viewed as a limitation. In the realm of infant research, the sample size of 30 is acceptable; in fact, recent published studies with infant participants have sample sizes of 24 (Goertz, Kolling, Frahsek, Stanisch, & Knopf, 2008) and 39 (Santesso, Schmidt, & Trainor, 2007). It can be quite difficult to recruit participants for research involving very young children, as they do not yet attend preschool and generally do not belong to any organizations. However, in mass communication a sample size of 30 is often viewed as inadequate. Additionally, another concern is the homogeneity of the sample. Only one child was non-Caucasian and the majority of child participants came from homes with highly educated parents with a household income of more than $50,000 per year. Future studies should make every effort to recruit a more diverse sample.

Another limitation was that not all of the participants completed all six posttest trials. Although this could hardly be helped as many of the children became fussy or disinterested, it made statistical analyses quite difficult. Future studies should account for this drop-off.

The big question of "can infants learn from television?" was the impetus for this study, however the method used only captured part of the equation. This project assessed the capacity to learn in the short term, over a very few exposures to the content. Although no learning was discernable in the short term, there is still the possibility that given days or weeks with the DVD, the participants would have displayed some learning of the content. Promising research in language acquisition in infancy such as Newman and Ribar (2006) suggests that some learning can take place from video

over the long term; these researchers found that 12-month-old children can learn novel words (tested by a "head turn" procedure) from speech overheard on video after being exposed to the video ten times over a two week period. Though Newman cautions that the evidence only shows that infants can distinguish between a word they heard on a video versus a word they did not, it nevertheless points to the possibility that children in the second year of life can perhaps learn after repeated viewings of a video, over a period of days and weeks. Future research with mainstream educational baby videos should test whether repeated viewings of videos over several weeks can have such an effect with children under two.

Additionally, future research can utilize the same methodology as the present study, but recruit older participants. As some studies (i.e., Wright et al., 2001) suggest it is some time between a child's second and third birthday when she can begin to learn from video, this is the perfect age group to test as a follow-up. Once children are identified who learn from the DVD, a learning curve can be established that demonstrates the age at which learning becomes possible.

Summary and Post Script

In sum, this study found no detectable learning in the short term using quasi-experimental methodology. The results not only make theoretical contributions to the ongoing discussion of the video deficit effect, but are important in practical circles as well, informing debates among parents and producers alike about the benefits of educational videos for babies.

This research was very much exploratory, although studies of the video deficit effect, the perceptual encoding impoverishment theory, and the dual representation hypothesis appeared to point to a slim chance of uncovering any learning. However, in the literature search no other research was uncovered in which the baby videos available to mainstream consumers were tested for their educational value. Accordingly, this project makes a unique contribution to the field, even though no significant results were uncovered. It is this very *lack* of significant findings that supports the video deficit and points to the need for further research in this field.

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Table 1

Child Demographics

Variable	Frequency
Age:	
12 Months	4
14 Months	1
15 Months	2
16 Months	1
18 Months	2
19 Months	5
20 Months	2
21 Months	3
22 Months	3
23 Months	2
24 Months	4
25 Months	1
Gender:	
Male	16
Female	14
Number of Siblings:	
None	10
One	9
Two	8
Three	3
Television Viewership	
Never Watches TV	3
Occasionally Watches TV	18
Watches TV Every Day	9
Has Ever Seen a Baby Video	
Yes	21
No	9

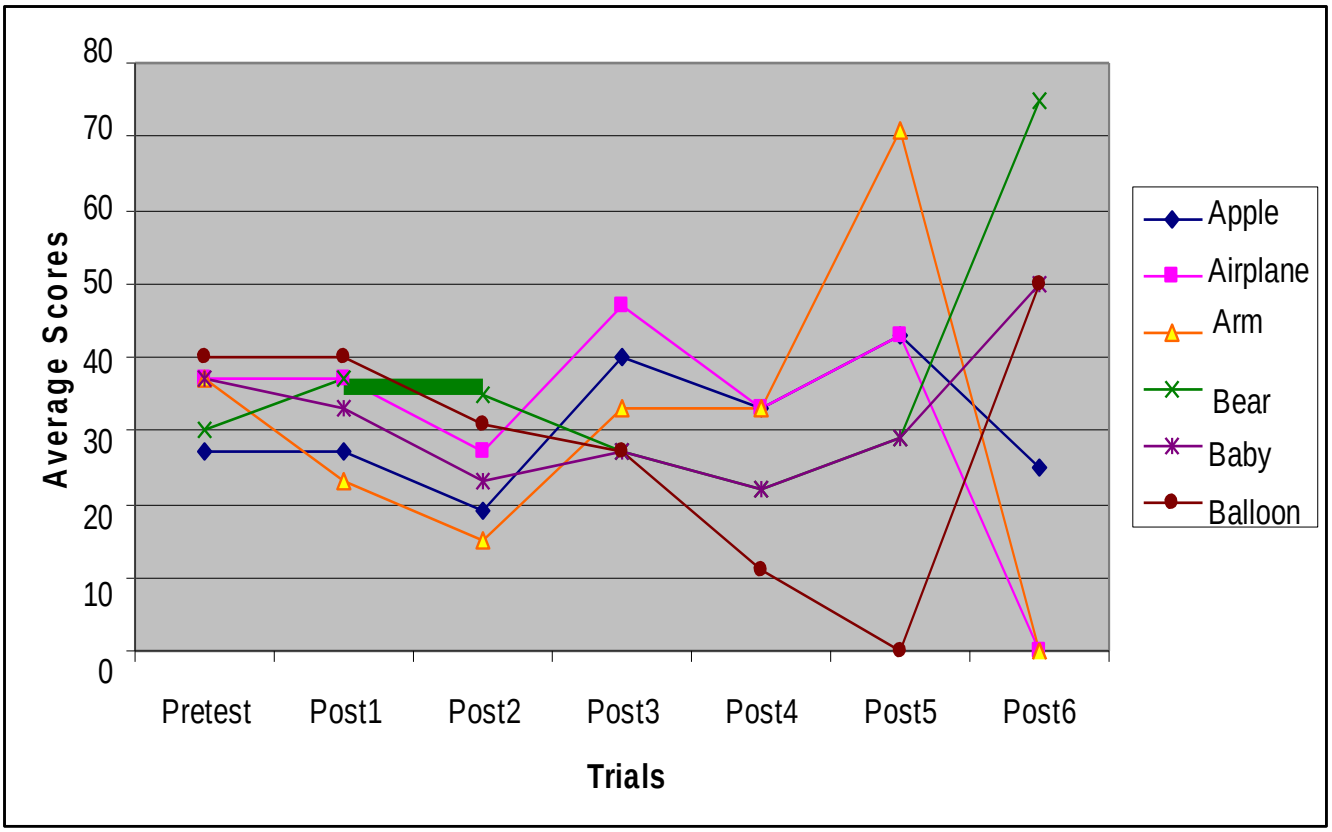

Figure 1
Correct Response Averages per Picture per Trial (Expressed in %)

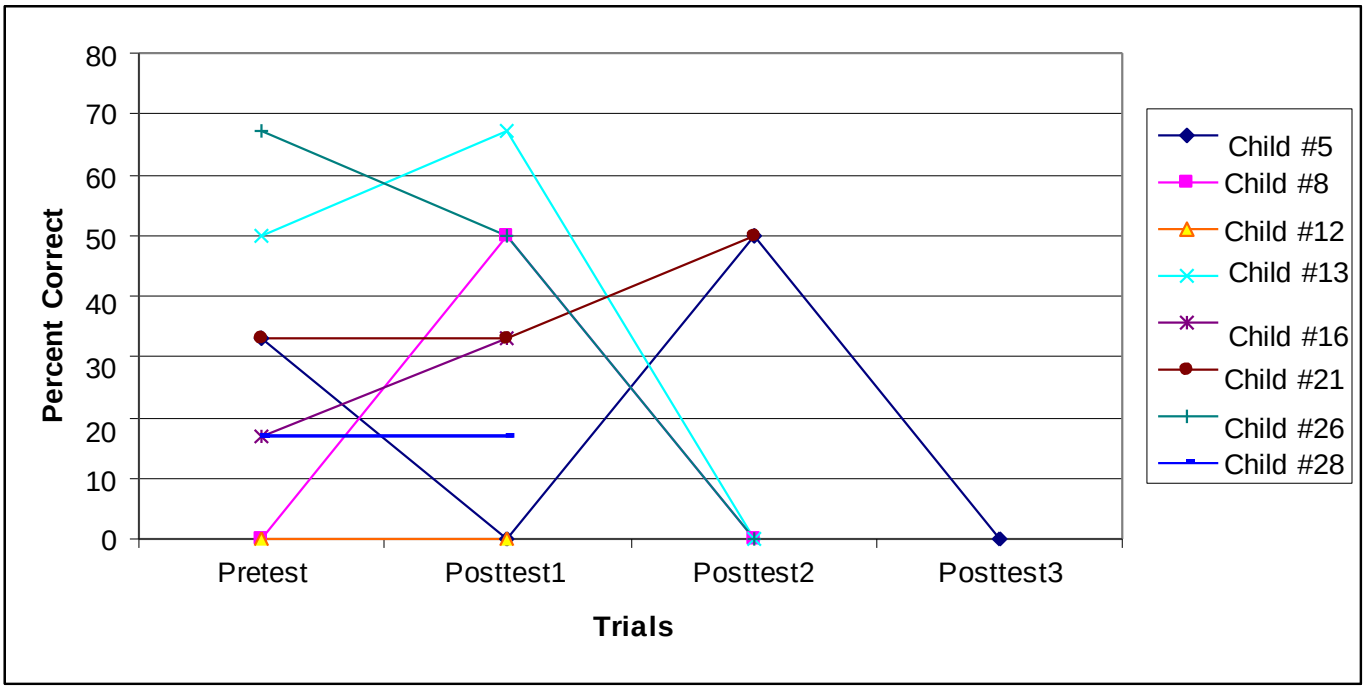

Figure 2
Percentage of Correct Answers for Children 12- 16 Months (Per Child, Per Trial)

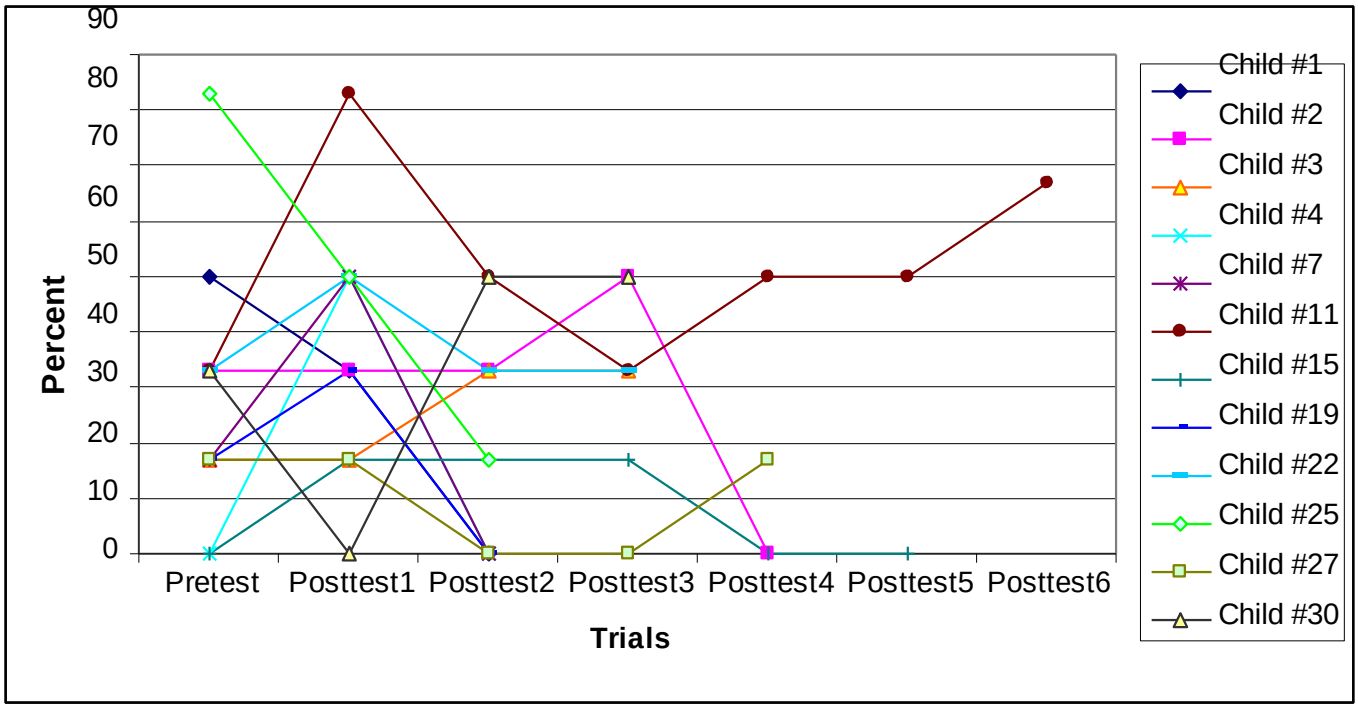

Figure 3
Percentage of Correct Answers for Children 18-21 Months (Per Child, Per Trial)

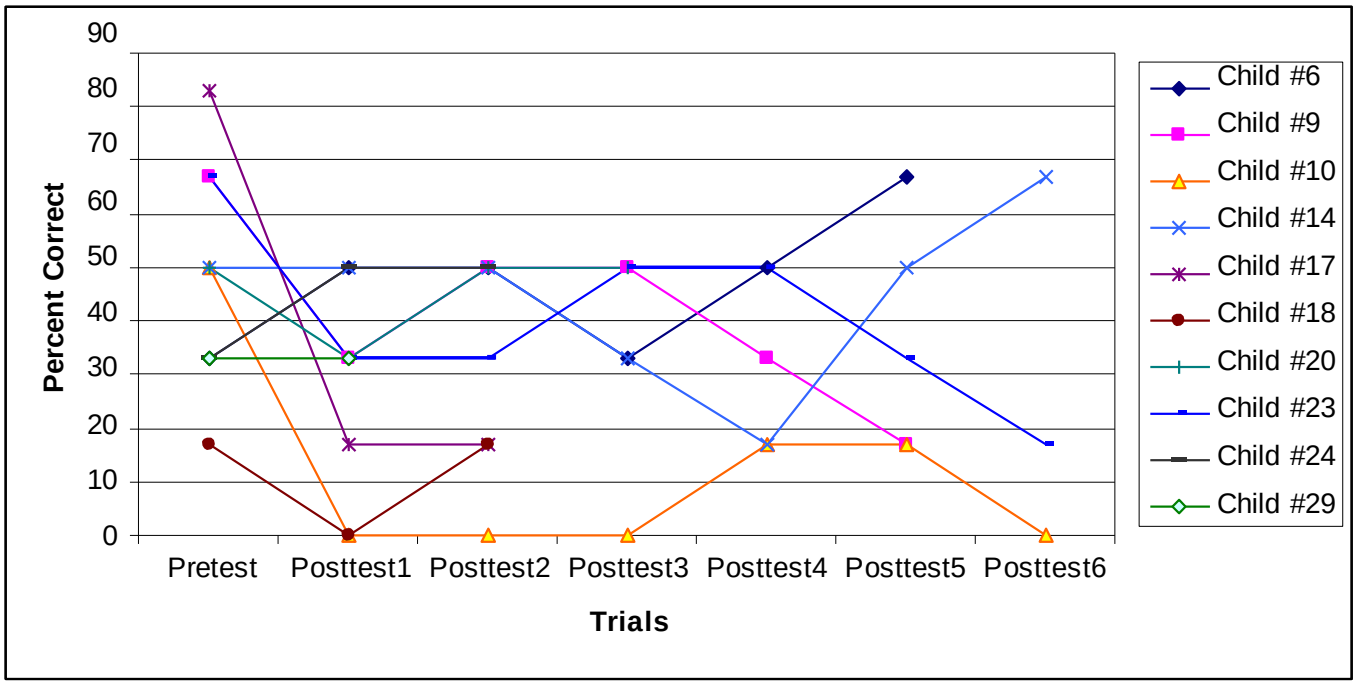

Figure 4
Percentage of Correct Answers for Children 22-25 Months (Per Child, Per Trial)

Table 2

Paired T-Tests Comparing Percentage Correct Scores with "Chance"[1]

T-Test Pair	Mean	SD	t	Sig.
Overall Sample:				
% Correct For the Group	.28			
	.14 vs.			
% Correct by Chance	.33	.00	-1.96	.06
Split by Gender:				
% Correct For Males	.30			
	.16 vs.			
% Correct by Chance	.33	.00	-.67	.51
% Correct for Females	.25			
	.12 vs.			
% Correct by Chance	.33	.00	-2.41	.03
Split by Age:				
% Correct for 12-16 Months	.24			
	.13 vs.			
% Correct by Chance	.33	.00	-1.98	.09
% Correct for 18-21 Months	.27			
	.13 vs.			
% Correct by Chance	.33	.00	-1.66	.13
% Correct for 22-25 Months	.33			
	.17 vs.			
% Correct by Chance	.33	.00	-.10	.93

[1]The probability of getting correct answers purely by chance is 33%; these t-tests compared the participants' "percentage correct" scores with 33% to determine if the scores are statistically different from chance.

Violent Youth Offenders' Motivation to Change: Investigating Gang Alliance, Family Abuse, and Substance Abuse Influences

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ABSTRACT

Treatment process for juvenile offenders can be better guided by understanding their motivation for change. In this regard, this study is guided by two questions.

1. How does a history of substance abuse, gang alliance, and family abuse predict motivation to change in adolescent boys in the capital and serious offenders' program? and
2. Does Locus of Control predict motivation to change in adolescent boys in the capital and serious violent offenders' program?

Two premises namely - Social Learning Theory and the Locus of Control hypothesis guided this study. Secondary data on 120 male violent youth offenders' between the ages of 14 and 20 who resided at a rehabilitation treatment facility in Texas between 2007 and 2012 was used. All participants were adjudicated for serious felonies - a stipulation for admission into the program. The findings of this study revealed that there is correlation between gang affiliation and drug abuse; family abuse and motivation for change in the pre-contemplation stage (denial); and between family abuse/age permutation and motivation to change. Results are discussed, along with implications for future research. These findings represent the initial study conducted with these data examining stages of change among serious and violent youthful offenders in a penal environment.

Introduction

The high costs of juvenile delinquency, combined with the futility of *penalty-only* intervention have refocused much policy on delinquency rehabilitation. Delinquent youth can be motivated to change if predictors' linked to the eventual delinquency (risk factors, aggressive and antisocial behaviors) are addressed. The National Center for Juvenile Justice (2003) documented that youth violence in the USA have increased drastically evidenced by over 5,000 daily delinquency cases in 2012. Youth crimes are categorized as: status offense; (not considered offenses if committed by an adult (e.g. truancy, running away, alcohol possession)

and delinquency offenses (e.g. homicide, rape, burglary, theft, drug violations, weapons offenses) which is considered criminal regardless of age (Snyder & Sickmund, 2006).
Although majority of delinquent children have been exposed to risk factors, no one specific risk factor leads to delinquency. Delinquency risk factors develop in several domains; these include family (e.g. parent's criminal behavior, poor child-rearing practices), school (e.g. peer pressure), community (e.g. gang alliance at different stages of social development), media (e.g. video games), and the youth's own disposition (e.g. difficult temperament). The number of risk factors to which the child is exposed places him at a greater probability of early juvenile offending (Dodge, Bates & Pettit, 1990). As such, when it comes to risk factors, it is more so the complexity of the combinations of these risks during critical develop-mental milestone which increase the prospect for antisocial and violent behavior (Furlong & Morrison, 2000).

Purpose of the Study

Thus, the purpose of this study is to investigate motivation to change among a group of violent juvenile offenders in a residential treatment facility participating in a rehabilitation program in Texas. Since motivation to change is linked to rehabilitation program success, this study aims to investigate how individual factors (e.g. drug use, Locus of Control), family factors (i.e., family abuse), and peer/ community factors (e.g. gang attachment) influence youths' motivation to change; and, their eagerness to replace their typical pattern of delinquency with healthier behaviors and response strategies.

Research Questions

The research questions guiding the study are:

1. How does a history of substance abuse, gang affiliation, and family abuse predict motivation to change among youth in the capital and serious offenders' program? and
2. Does Locus of Control predict motivation to change in adolescent boys in the capital and serious violent offenders' program?

Conceptual Framework

Social Learning Theory

The assumptions of learning theories on offending youth behavior is a belief that it is a set of behaviors similar to pro-social behaviors learned primarily from family and peer group. There is evidence that media (television, films, and video games) are other possible sources that influences offending behavior. Bandura (1973) posits that behavior is learned by observation; hence if the observer sees the behavior receiving penalty he should be less motivated to imitate or repeat the behavior. For this reason criminal behavior is regarded as no different to other behaviors in social learning theory.

According to Akers and Jensen (2006), the social learning theory of crime and deviance address four dimensions, namely: differential association, definition, differential reinforcement, and imitation. Differential association refers to individual's direct interaction with other they are associated with who engage in specific behaviors and express norms, values, and attitudes that are responds positively supportive to those behaviors. Definitions refer to the attitude of the individual; for example how they rationalize a behavior, make excuses and/or justify it. The anticipated social consequences that follow behaviors are referred to as differential reinforcement. When there is an increase in the frequency, probability and value that a behavior will be rewarded there is greater likelihood that the behavior will occur and be repeated.

Imitation refers to engaging in behavior after directly or indirectly observing similar behavior. Initiation of the behavior is the start of social reinforcers and consequences given will determine the replication of the behavior and the frequency of it. These premises are noteworthy because if deviant behaviors persist over time, it is a function of continuity and discontinuity in the person's patterns of associations, definitions, and reinforcers. However, although the majority of models and reinforcements available in the environment appear to endorse non-criminal behavior, clearly there is more to offending than social learning theory would imply (Howitt, 2009).

Locus of Control Theory

Locus of Control is a personality theory that refers to an individual's perceptions about the main reasons of events in his or her life. It is best described as a self-appraisal of the causal role a person has in determining outcome of specific events based on a belief contingent on actions (internal) or events out of our control (external). Implicitly, from rewards and punishments possibilities individuals develop a belief causal to their actions (Lefcourt, 1982). Hence, offenders tend to have an external Locus of Control, explaining that the behavior they engage in is controlled by influences over which they have no personal control (Mamlin, Harris, & Case, 2001; Kumchy & Sayer, 1980).

If an individual is feeling helpless in making any effect on important events in their life, then the individual may resign to display of a lack of concern and involvement. The link here is that reinforcers are individually interpreted based on the accumulation of perceived personal experiences in one's life. A generalized expectancy is then developed by the youth regarding the characteristics of the causal relationship between con-sequences and the behavior. There is then the potential effect of this expectancy on a variety of behavioral choices in an overabundance of life situations (Ozmete, 2007).

The preference is on having an internal Locus of Control which allows an individual to be referred to as their self-agency, personal control, and self-determination. Those who are 'externals' believe they have less control over their fate, and will experience more stress and be prone to depression (Myers, 1992). With this in mind, the Locus of Control is a vital factor to consider as it may influence whether youth feel in control or a sense of vulnerability regarding their life experiences.

Risk Factors

Motivation to Change. Motivation to change is a very significant factor for the youth to benefit from intervention programs. An example of this can be seen when; one offender might be motivated due to the financial or health problems that his drug habits cause, while another for the consequences, of being involved with the legal system. Motivation is a good predictor of change in the criminal justice arena (Ginsburg, Mann, Rotgers, & Weekes, 2002). Motivation to change behavior progress in five stages- (a) Pre-contemplation (no consideration to change, does not heed advice, denial); (b) Contemplation (youth is not aware that a problem exists, no commitment for action); (c) preparation (begins to prepare for the change, individuals place a time on when the behavior change will take place); (d) action (actively engaged in modifying behavior or environment); (e) main- tenance (preventing relapse and incorporating the new behaviors over long-term). There is research that shows that behavior change is significantly higher for stage-matched interventions (Prochaska, DiClemente, Velicer, & Rossi, 1993).

Family Abuse. Converging evidence on family abuse and crime relationship have found that there is an association between childhood abuse and delinquent behavior. According to Wisdom (1989), 15% - 30% of children who are maltreated went on to engage in delinquent behavior. The area of greater significance was found in serious and violent crime committed by the youth in comparison to minor crimes, (English, Wisdom & Brandford, 2002). Children who are verbally and physically abused adopt behaviors which are either aggressive and or passive compliance, as well as avoidant behavior. Green (1976) posits that abused children use aggressive behavior in an effort to remain less anxious and not appear helpless. Negative behaviors such as lying, stealing, low self-esteem, emotional maladjustment, dependency, under-achievement, depression, aggression, learning disorders, homicide, and suicide have all shown a strong relationship to physical and emotional abuse in children (Thomas & Penn, 2002).

Gang Involvement. Affiliation with gangs is a risk factor for delinquent youth. Juveniles who commit offenses by themselves tend to be associated with a deviant group/s and the more risk factors that the youth is exposed to, the greater the likelihood of them joining a gang (Howell & Egley, 2005). According to Elliott & Menard (1996) gang membership brings powerful influence along with excitement in their delinquent activities. Further, because gang membership brings geographic power and control, the ‘belonging to’ feeling comes with a sense of honor and pride, which then makes them refer to their gang as family. It provides a feeling that they are making a contribution to a bigger cause than just themselves (Thornberry, 1998).

Methodology

Study Participants

The data for this study came from a violent youth offenders program in Texas. An intensive closed group format designed to assist youth in improving their interpersonal functioning, cognitive skills, developmental and emotional regulation skills and appropriate expression of

feelings form a key part of rehabilitation. Participants for the rehabilitation program are determined after an assessment by a juvenile court that the youth meets a high need for serious violent offender treatment.

A sample of 120 male youth offenders between the age of 14-20 who were adjudicated for violent offences between 2009 and 2012 were selected to participate. Participants completed the pre-test questionnaire on Locus of Control using the Norwick-Strickland Locus of Control Scale (Norwick & Strickland, 1973). The 40-item measure assesses respondent's belief that events and situations result from their own actions or by luck of fate. They had also completed motivation for change using the Rhode Island Change Assessment (URICA).This instrument is a 32-item scale, which assesses attitudes toward a change in behavior.

Data Collection Procedures

The Texas Juvenile Justice Department (TJJD) provided the data for the study. All youth adjudicated to the program are initially evaluated at intake. Information is collected on each youth's delinquency, medical, psychological, and familial histories. Official records self-report by the youth individual interview and behavioral observations were used to complete the assessment. Additional data is collected one week prior to a youth's formal admission into the program and one week after completing the program. Both the pretest and the posttest ask questions about ethnicity, offense, victim's gender, relationship to the victim, weapon used, number of co-actors, and drug use history before the crime, gang involvement, family environment, Locus of Control, and change motivation.

Program therapists using standardized instructions gather this pretest and posttest information. Youth with limited reading abilities may have their tests administered orally, but all other youth are given a pencil, survey, and answer key packet, and are instructed accordingly. All data is coded so that no juvenile is identifiable. Pretest and post-test answer keys are filed by group leader name and group start and end dates, and are archived and supervised by a program director who gave permission to use the data for this study. For the purposes of this study, only demographic, intake and pretest data relevant to 1997-2012 were used. Information were mined to excel and later exported to SPSS for analysis.

Instrumentation. To assess stages of change, Prochaska and DiClemente's general stages of change measure known as the University of Rhode Island Change Assessment (URICA) was used (DiClements & Hughes, 1990). The URICA is a 32-item scale that assesses attitudes toward changing problem behaviors, with eight items assessing each of four stages. This instrument uses the Likert scale from 1 (strongly disagree) to 5 (strongly agree) to assess five stages of change. A complete picture for motivation to change was obtained from the composite readiness score. As a result of the evidence on the composite readiness score giving a fuller picture on motivation to change, this study calculated this score. The Cronbach's alpha reliability here is **.**67

Gang Affiliation and Abuse history. The correctional care directory records show the family system's composition. Included in the family records are history of the youth physical, sexual and emotional abuse by the parents and extended family, their alcohol and drug use, their

marital and legal status, and the person/s that most influenced the youth and family history of domestic violence. Reasons from removal from the home are also specified in these records. If the youth has had any history of family abuse he was coded a '1' in the data base. If the participant had no history of family abuse, he was coded as '0'.

A substance use variable was created for each participant. They were each given a code for drug use (1) and no drug use (0). This information was gleaned from the demographic data each youth provided and from the TJJD which classified each youth as having no drug use history, or high, low or moderate treatment need for drug and alcohol use. The gang use variable was created by giving each participant a code '1' for gang affiliation and '0' for no gang affiliation. This information was gleaned from the demographic sheet in response to: "Were you involved in a gang before coming to TJJD? " and from the TJJD which classified each youth as having no need, high need, low need or moderate need for gang intervention treatment. A moderate to high treatment need were coded with a '1' warranting intervention.

Demographic variables. Race and age are the only two demographic variables \available from the dataset. To indicate their race, respondents choose from the following list of categories: African-American, Hispanic, Caucasian, and other. Respondents provide their age by recording their dates of birth. All reporting remain anonymous and no individual is identifiable in any form.

Locus of Control. To assess youth's Locus of Control, Giddings uses the Nowicki-Strickland Locus of Control Scale (Nowicki & Strickland, 1973). This instrument has 40-items that assess the respondent's belief that situations they experience are based on their own action or by external forces. The reliability and validity of this measure have been examined and found to have psychometric soundness. The concurrent validity of this Locus of Control measure was found to be **.**61 (Miller, Fitch, & Marshall, 2003; Fisher & Corcoran, 1994).

Data Analysis

Hypothesis 1A, 1B, and 1C. *Three of the hypotheses were related to whether (a) gang alliance, (b) substance abuse, and (c) family abuse were linked to lower levels of motivation for change.*
A t-test was performed in each instance comparing abuse and no abuse, gang affiliation and no gang affiliation on each of the five motivations to change variables, namely: pre-contemplation subscale, contemplation subscale, action subscale, maintenance subscale, and total scale.

Hypothesis 1D. *The combined effect of gangs, family and substance abuse can predict motivation for change more powerfully than the additive effects.*
It was assumed that the predictor variables drug use, family abuse, and gang involvement often coexist and would be correlated with one another. In a multiple regression, each regression coefficient can quantify the independent effect of each predictor on the dependent variable so z-scores for all variables in the regression analysis instead of original scores were useful. Statistically significant interactions were interpreted as support for this hypothesis. The beta coefficients provided information on the size and direction on any significant effects that emerge.

Hypothesis 2 *Locus of Control (internal) is positively correlated with motivation to change.* The correlation between Locus of Control and motivation to change was tested with Pearson's correlation to determine if Locus of Control (internal) was associated with higher levels of motivation to change. An R value that is statistically significant and positive was interpreted as providing support for this hypothesis.

Results

The means, standard deviations, and zero-order correlations among variables were done for 120 participants (capital and serious violent offenders') sampled. The mean age was 18.02 with a standard deviation of 1.10. Motivation for change in the sample had a mean score of 8.33 with a standard deviation of 2.69. The minimum score was 5.14 and the maximum score of 12.86. The mean score for Locus of Control for the sample was 16.31 indicating a high internal Locus of Control. Table 3 shows descriptive statistics for the categorical variables.

Table 3

Descriptive Statistics for Categorical Study Variables

Study Variables	Frequency	Percent
Offense		
Murder	27	22.5
Aggravated Robbery	64	53.3
Manslaughter	9	7.5
Aggravated Assault	16	13.3
Deadly Conduct	4	3.3
Race		
Hispanic	50	41.7
Caucasian	12	10.0
African American	56	46.7
Other	2	1.7
Family Abuse		
Yes	79	65.8
No	41	34.2
Drug Abuse		
Yes	101	84.2
No	19	15.8
Gang Affiliation		
Yes	81	67.5
No	39	32.5

The results of the correlational analyses revealed that the only variables that were significantly correlated were a history of gang affiliation and drug abuse ($r = .33$, $p < .001$), and history of family abuse and pre-contemplation, ($r = .21$, $p < .05$)

Research Question 1 – Hypothesis 1A, 1B. The t-test comparing gang and non gang affiliation and history of drug abuse being associated with lower levels of motivation for change on the five motivations to change subscale (pre-contemplation, contemplation, action, maintenance and total scale) each produce means that were significantly different with all the subscales with a 95% confidence interval. This hypothesis was not supported; motivation to change was the same whether a youth was in a gang or not, and whether the youth had a history of drug abuse or not.

Research Question 1– Hypothesis 1C. The t-test on family abuse and the five motivations to change subscale show that only one of the means was significantly different. Participants with a history of family abuse were lower on the precontemplation subscale that those without a history of family abuse with a 95% confidence interval. This hypothesis was only partially supported. ***Research Question 1 – Hypothesis 1D*.** Regarding the multiplicative effect of all variables together predicting motivation for change more powerfully than the additive effects; A hierarchical multiple regression (gang affiliation, family abuse, drug abuse, and Locus of Control entered on the first step, two-way interactions entered on the second step, three-way interactions entered on the third step, and the four-way interaction term entered on the fourth step) show no significant main effects. The hypothesis was not supported, neither additive nor multiplicative effects predicted motivation to change in this sample**.**

Research Question 2 – Hypothesis 2. The zero order correlation between Locus of Control and motivation to change showed no statistical significance, ($r = -.12$, $p = .197$). Thus, there is no relationship between Locus of Control and motivation to change in this sample. It becomes important whether the relationships of Locus of Control, drug use, gang affiliation, and family abuse with motivation to change varied as a function of the four demographic variables assessed. Although none of the demographic variables interacted with Locus of Control to predict motivation to change, offense type as a main effect variable was near statistical significance. Post hoc analyses revealed that the mean change for the deadly conduct group was lower than all other groups.

Discussion

An interesting finding of this study was that almost none of the expected relationships emerged. Although the hypotheses were grounded in existing literature on juvenile delinquency, except for a relationship between pre-contemplation and family abuse history, motivation to change was not associated with any of the variables examine in this study. For participants with a history of family abuse, motivation to change appears to increase with age. However, for those without a history of family abuse, motivation to change was lowest for older participants. Interestingly, motivation to change was the same for younger adolescents regardless of family abuse. The difference in motivation level was for the older adolescents; if the older adolescents

had been abused, they had higher levels of change motivation but if they had not been abused they had lower levels.

The Office of Juvenile Justice and Delinquency Prevention (1999) implied that by virtue of the amount of juveniles prosecuted in adult criminal court there is something different about today's youth. As such the correlates of their antisocial behavior may be different. Future research should investigate whether predictors listed in the literature are equally predictive for serious and violent youth compared to other delinquent youth. In this regards, it may explain some of the hypotheses test results. Further, the restricted range on the motivation to change dependent variable could have prevented significant results from emerging. Although the motivation to change variable could range from zero to 40, in this sample it ranged from five to 12, a narrow span that might not provide enough variability in the dependent variable to allow for significant relationships.

Ideally, the variables used in this study would have been assessed continuously so that they would reflect, for example, level of substance abuse rather than presence or absence. Research shows that a lot of valuable information is lost when variables are dichotomized. A longitudinal design that assesses youth before intake and at several points after intake would allow for more differentiation. Theories that see individuals as malleable and crime as a consequence of developmental processes or stages that one moves into and out of suggests the importance of conducting a longitudinal study (DeLisi, 2007).

The results for capital and serious violent offenders' pre-test scores indicated 65.8% of this sample had a history of family abuse, while 34.2% had none. For drug abuse 84.2 % had a history of drug abuse only 15.8 had no history of drug abuse, and for gang affiliation 67.5% had been affiliated to a gang and only 32.5 had no history of gang affiliation. This could be an explanation why variables in all the hypotheses relating to question one did not show statistical significance.

However, significant relationships did emerge in this study: (a) participants with a history of family abuse had less intention of changing their behavior compared with those without family abuse; (b) participants whose offense was deadly conduct (e.g., murder, manslaughter, aggravated assault) were lower in overall motivation to change than all other offense groups; (c) age interacted with family abuse in the prediction of motivation to change than for adolescents without a history of family abuse. The results of the correlational analyses revealed that the only variables that were significantly correlated were a history of gang affiliation and drug abuse, ($r = .33$, $p < .001$). It is purported that the abuse of drugs develops compulsive drug seeking use.

According to Ginsburg, Mann, Rotgers, & Weekes (2002), motivation has five characteristics. First, motivation can be a strong predictor of how likely a person is to initiate change and carry through with the action; though not a guarantee, motivation does increase the likelihood of an action. Second, motivation is behavior specific; just because a person is motivated in one area does not mean he or she will be motivated in other areas. The positive correlations indicate that the more gang affiliation the more drug use and the more family abuse the more pre-contemplation. Whether family abuse history was associated with change motivation in this

sample depended on which aspect of change was being investigated; pre-contemplation was associated with family abuse but the other aspects were not.

Conclusion

In conclusion, this study confirms that serious and violent offending youth are not motivated to change, despite the fact that successfully completing the program is necessary to avoid prison. This has implications for treatment; counselors should be prepared to experience resistance and learn to manage and breakdown that resistance to that youth can progress along the change process. Many youth have difficulty connecting their behavior with a successful outcome. They have difficulty realizing that if they engage in bad behavior outside the group session, it means they are not progressing in treatment. More research is needed to help in this regard. Unraveling the links between motivation to change and the influence a history of gang involvement, family abuse, and substance abuse, along with Locus of Control, and how these interfere with the change processes of the capital and serious violent offending youth should remain a top concern for clinical researchers in the field.

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The Relationship among Executive Functioning, Personality and Academic Success for Students Attending a HBCU

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ABSTRACT

This study examines the relationship between personality types and academic functioning among students at a HBCU. One hundred and sixty-three Bowie State University students between the ages of 16 and 50 years were recruited from Psychology classes as research participants. Participants were given a Demographic Questionnaire, McCrea and Costa's (1992) NEO-FFI inventory to measure personality types, and the D-KEFS Color Word Interference Test to measure cognitive flexibility. GPA was taken from students' academic records. It was hypothesized that there would be significant relationships between personality types and GPA, and cognitive flexibility and GPA. Results indicated that there were no significant relationships between personality types and GPA or cognitive flexibility and GPA. The information gained from this study will help educators understand the impact of personality types on students' learning and processing of information and the difficulty involved in measuring academic achievement and success utilizing students' GPA.

Introduction

The purpose of attending college is still rooted in the belief that it is the way to economic prosperity and social advancement. Although research suggests college graduates typically earn more than individuals with a high school education (National Center for Education Statistics, 2013), a college education is supposed to expose individuals to different experiences in an effort to generate well-rounded, critical thinkers that are intrinsic lifelong learners. Personality traits such as conscientiousness, adaptability, independence and curiosity, and skills such as time management, emotion and behavior regulation, among many others, are considered to be necessary for successful matriculation through the college years. Unfortunately, it is often difficult to ascertain the exact traits which are considered necessary to ensure academic success. In addition to personality traits, a students' cognitive flexibility, often referred to as executive functioning, also seems to play an important role in their academic success. Individuals with certain personality types and/or deficiencies in executive functioning may experience difficulties

adjusting to the demands of college, which, in turn, often hamper their academic success and overall life satisfaction. .

Executive functioning (EF) is a hierarchical mental process that governs cognitive abilities such as shifting, updating/monitoring, and inhibition in order to accomplish purpose-driven tasks (Miyake, Friedman, Emerson, Witzki, Howerter, & Wagner, 2012). Prior research suggests that planning, volition, attention, emotion and behavior regulation are mediated by executive functioning. These cognitive abilities have been shown to be essential to academic success. Previous research has suggested that executive functioning and academic performance are related. Vitsu-Petra, Cheie, Benga, & Micles (2011) examined the relationship between executive functioning and academic performance in fifth and eighth graders using a MATH test. Results indicated that memory and attentional shifting, both components of executive functioning, were positively correlated with academic performance. In a related study, St. Clair-Thompson & Gathercole (2006) examined executive functioning and school achievement in adolescents with specific emphasis on the three components of cognitive shifting, updating and inhibition during an academic achievement test. Results indicated that inhibition was positively correlated with academic achievement. However, many studies of executive functioning and academic success focused on its development from middle childhood through adolescence in an effort to establish age differences. In addition, many of the studies did not include a representative sample of African-Americans or other ethnic groups because of their small sample sizes. This imposes a limitation in the use of current research on executive functioning to predict how diverse groups in college may perform academically.

While research has established a specific link between executive functioning and academic success, there is a larger body of research where personality is seen as a predictor of academic success. By definition, personality is the essence of who we are, what we feel, and how we behave (Funder, 2013). It is defined as a pattern of psychological characteristics or traits which are influenced by genetics, experiences, and culture and describes individuals and their behavior (Funder, 2013). Although one's personality is usually idiosyncratic, psychologists (Costa and McCrae, 1992) have formulated a five-factor model which suggests that openness, conscientiousness, extroversion, agreeableness, and neuroticism are the primary factors of personality.

O'Connor and Paunonen (2007) reviewed literature on the Five Factor Model of Personality as a predictor in academic success among post-secondary students. The goal of their study was to determine what facets of personality predict academic success. They believed that behavior is reflected in personality traits which in turn influence our habits. Also, personality reveals the actions of an individual and not their ability. However, personality is likely to be more relevant than cognitive ability when considering the context of higher education.

These researchers examined the literature on each of the five major domains of personality as well as smaller personality traits. The Revised NEO Personality Inventory (NEO-PI-R, Costa & McCrae, 1992), the NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1992), the Big Five Inventory (BFI, Benet-Martinez & John, 1998; John, Donahue, & Kentle 1991), the Personal Style Inventory (PSI; Lounsbury & Gibson, 1998), and the 5 PFT (Elshout & Akkerman, 1975) were used in the studies to measure personality. Their findings revealed that

conscientiousness was the only factor linked to academic success in higher education. Higher levels of conscientiousness were positively associated with GPA.

In an effort to gain more information on narrow personality traits, O'Connor and Paunonen (2007) examined studies that used the NEO-PI-R, the Personality Research form (PRF; Jackson, 1984) and the Jackson Personality Inventory (JPI; Jackson, 1984). The results suggest that narrow personality traits are more relevant to predicting academic success. For instance, self-discipline, a trait of conscientiousness, is positively related to academic success. Gregariousness, a trait of extraversion, is negatively correlated to academic success. Impulsivity and anxiety which are facets of neuroticism, were found to be negatively associated to academic success.

Trapmann, Hell, Hirn, and Schuler (2007) analyzed data from 58 articles with varying sample sizes (21 - 1,842), in order to determine what impact, if any, the big five personality factors have on academic success (grades, retention, and satisfaction). They believed their findings would show how individual differences within the big five personality traits (openness, conscientiousness, extraversion agreeableness, & neuroticism) affect academic achievement. Results showed that conscientiousness was closely related to academic achievement. However, extraversion, openness, and neuroticism were not predictors of academic success but neuroticism was correlated with academic satisfaction. Because of the lack of data, conclusions about retention and personality could not be drawn.

Taking into consideration that personality and some components of executive functioning are linked in the frontal lobe of the brain, it is important to highlight their role in the cultivation of academic success. Individuals that have high levels of openness (imaginative and curious) with modest EF may possess ideal characteristics for academic success. However, individuals that have neurotic tendencies such as anxiousness, depression, and anger, regardless of the level of EF, might lack characteristics that institutions of higher learning seek.

Given the paucity of studies that include a representative sample of African-Americans or other ethnic groups, the purpose of this study is to examine the relationships among EF, personality and academic success as they relate to college students at a HBCU. It is hypothesized that: (1) There is a relationship between personality type and academic success as measured by grade point average (GPA), and (2) there is a relationship between EF, as measured by cognitive flexibility, and academic success.

Method

Participants

A convenience sample of 163 students from a Historically Black University in the southeastern United States served as the sample for this study. Participants were recruited from a General Psychology course and other general courses at the university. These participants ranged in age from 16- 55 years with a mean age of 23.2 years. Participants were predominantly African American and consisted of 122 females and 41 males. The average grade point average (GPA) for participants was 2.99 with a range of 1.25 to 4.00. Demographics of the sample were

consistent with the university's gender composition. Students were asked to provide written consent in order to participate in the study and were awarded extra credit towards their course grade for their participation. Table 1 includes demographic information for the student sample.

Table 1

Demographic information for participants

	N	%
Total Number of Students	163	100
Gender		
Male	41	25.2
Female	122	74.8
Race		
African American	141	86.5
Hispanic	4	2.5
Caucasian	5	3.1
Biracial	7	4.3
2 or More Races Specified	4	2.4
Other	2	1.2
Year in School		
Freshman	52	31.9
Sophomore	26	16.0
Junior	30	18.4
Senior	41	25.2
Not Specified	14	8.5

Measures

Demographic Questionnaire.

A general questionnaire was used to acquire demographic information and other background information such as socioeconomic status, age, educational status, GPA, history of learning disorders, medical or psychiatric problems.

Personality

An abbreviated, 60-item version of the NEO Personality Inventory-Revised (NEO-Five Factor Inventory, Costa and McCrae, 1992) was used to measure the five major domains of personality which include Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. This test demonstrates good internal consistency (coefficient=.86, -.93) and convergent and discriminate validity (Costa and McCrae, 1992). Participants were required to respond to statements about their personality, ranking them on a 5-point Likert scale (1=strongly disagree to 5=strongly agree). Each statement related to a specific domain and each of the five domains

received a score which ranged from high to low. Inventory items included statements such as "I laugh easily", "I am not a cheerful optimist".

Executive Function.

The D-KEFS Color-Word Interference Test, a subtest of the Delis- Kaplan Executive Function System was used to measure cognitive flexibility, a component of executive functioning**.** This test is based on the Stroop Test (1935). It examines the ability to inhibit an over learned verbal response such as reading the ink color, in order to generate a conflicting response of naming the dissonant ink colors in which the words are printed. The test has four components that assess different executive functioning skills: *Condition 1:* basic naming of color patches; *Condition 2:* basic reading of color-words printed in black ink; *Condition 3:* reading the words in order to name the dissonant ink colors in which those words are printed (e.g. the word red is written in blue ink); *Condition 4:* switch back and forth between naming the dissonant ink colors and reading the words (evaluates both inhibition and cognitive flexibility.) This subtest has a test-retest reliability of .79-.90.

Procedure

Students were notified about the study via in-class announcements and also through an announcement on Blackboard. Once students agreed to participate in the study, they were asked to report on an assigned date to the psychology laboratory where the IRB approved consent form was read and signed. Students completed the demographic questionnaire first followed by the NEO-FFI. After completion of the questionnaires, students were taken individually to a private room within the psychology laboratory where they were given the D-KEFS Color Word Interference Test. Students were then debriefed, awarded their extra-credit points and dismissed.

Results

Hypothesis 1

Pearson correlations were utilized to determine if there were relationships between personality types (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) and GPA. As shown in Table 1, there were no significant relationships between personality types and GPA. However, there were significant correlations between each of the personality types for participants. Hypothesis 1 was not supported.

Table 2

Summary of Correlations between Personality and Academic Success

Variable	1	2	3	4	5	6
1. GPA	-					
2. Neuroticism	-.07	-				
3. Extraversion	-.00	-.21**	-			
4. Openness	.11	.01	.16*	-		
5. Agreeableness	.11	-.28*	.26**	.02	-	
6. Conscientiousness	.07	-.26**	.27**	-.01	.30**	-

Note. *$p < .05$; **p<.01

Hypothesis 2

A Pearson correlation was utilized to determine if there was a relationship between cognitive flexibility and GPA. Results indicated no significant relationship between these variables[r(148)= -.12, p<.05]. Therefore, Hypothesis 2 was not supported.

Discussion

Prior research on personality types and academic success has shown varying, inconsistent, and inconclusive results throughout the years. What has been most consistent is the difficulty that researchers have had in measuring academic success utilizing grade point average (GPA) and predicting the impact of personality types on students' academic abilities. The current study found no relationship between personality types and academic success using GPA as a measure of academic success. Although previous research did not cater exclusively to students of African-American decent, results of the current study, which utilized a predominantly African American college population, indicated that there were no significant relationships between the two variables. Whereas personality might dictate how we think, feel and behave, cognitive ability also depends on genetics, experiences, and culture and how those variables interact with personality in a totally unique way for each individual. Prior educational opportunities and

challenges will also play important roles in the relationship between personality types and academic success.

Of the fifty-six research projects reviewed by Trapmann, Hell, Hirn, and Schuler (2007), only Conscientiousness was closely related to academic achievement. The other personality domains of the Five Factor Model of Personality were not predictors of academic success. The lack of relationship between personality types and academic success could be partially related to how academic success is measured. The traditional way of measuring academic success has been through grade point average or performance on several achievement tests. However, GPA is calculated by performance on several different tests and tasks from different courses, different instructors using different assessment strategies to include multiple choice exams, essays, true/false statements, and class projects. In addition, there has been an over-dependence on the test banks from publishers. There are no consistencies in grading among the various professors, therefore, an A performance in one class may be considered a B or C performance in another depending on the grading criteria. Until there are consistencies in grading and in the rubrics used, there will always be problems in using GPA as a measure of academic success.

Hypothesis 2, which examined the relationship between cognitive flexibility and GPA, was also not supported. According to Bloom's Taxonomy, the skills required for academic success include remembering, understanding, applying, analyzing, evaluating, decision-making and problem solving. In order to engage in the skills embedded in Bloom's taxonomy, students need a certain level of cognitive flexibility. There is some dissonance in the way in which students are assessed and the skills that are required according to Bloom's taxonomy. Current assessment methods involve teaching to the test, memorization, cue-recall and remembering isolated facts, which do not allow for understanding, analyzing, problem-solving and decision making skills, in other words, cognitive flexibility. Academic achievement as measured by GPA also does not account for students' learning styles and testing styles. In addition, academic achievement may also not reflect one's executive functioning. Therefore, cognitive flexibility does not always match students' academic skills and abilities and is therefore not a good predictor of academic success. And, depending on the course, a student's academic abilities may only tap into one or more aspects of executive functioning which may not be measured by the specific task utilized in the present research.

If GPA is not an accurate indication of academic achievement, then the question becomes, what is a reliable substitute for measuring academic achievement, especially among college students? One suggestion is to streamline the calculation of GPA using only the major subject courses. Factor analytic studies show that specific major subject areas tap into specific functioning that allow for different types of reasoning and executive functioning skills that may differ from one subject area to the other. Utilizing the courses under a specific subject area may give a better indication of a student's true abilities rather than the overall GPA. In addition, when looking at the collective GPAs of students, it must be acknowledged that they include students at different levels of their academic matriculation. In the present study, the population from which the sample was taken included freshmen, sophomores, juniors and seniors, full time, part time and transfer students. At this particular institution, when students transfer from another institution, their prior GPAs are not included in their current GPA calculation. In fact the GPA begins anew. Therefore, a student may have performed poorly at his/her previous school but did well that

semester during which the GPA for the study was reported. In this study, GPA is definitely not an indicator of how well a student's overall performance in school has been. In order to understand how executive functioning may affect and impact academic achievement, future researchers may have to utilize executive functioning tasks that correlate highly with academic abilities measured in subject areas. They may also have to consider alternative measures of academic success besides the grade point average.

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